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THE

Medical Times and Gazette.

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LITERATURE, CRITICISM, AND NEWS.

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XV.

TURNING IN THE ABDOMINO-ANTERIOR POSITION—INCOMPLETE VERSION, THE HEAD REMAINING IN ILIAC FOSSA; CAUSES OF: COMPRESSION OF UTERUS; TREATMENT OF—BI-MANUAL OR BI-POLAR TURNING WHEN SHOULDER IS IMPACTED IN BRIM OF PELVIS—DIAGRAMS.

Turning in abdomino-anterior positions does not differ essentially from turning in dorso-anterior positions. I have already said that the best position for the patient is on her back, and that the right hand may be used. The uterus, as in all cases, is supported externally, whilst you pass your right hand along the inner aspect of the child's arm and behind the symphysis pubis; it proceeds across the child's belly to seize the opposite knee. Drawing this down in the direction of the arrow in Fig. 73, the presenting shoulder rises out of the pelvis.

Fig. 73.

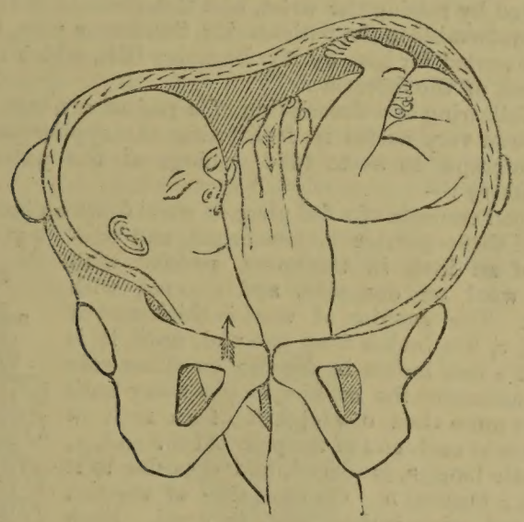


Fig. 73 shows turning in abdomino-anterior position. The operator's right hand seizes the upper or left knee. As this comes down, the child's body, rotating upon its transverse and long axes, draws the right or presenting shoulder up out of the pelvis.

There is a feature in the history of turning which has not received the attention it deserves. I have found that, notwithstanding diligent adherence to the rules prescribed, turning is not always complete. The head and part of the chest are apt to stick in the iliac fossa, the trunk being strongly flexed. Indeed, I believe that complete version is rather the exception than the rule in cases where the liquor amnii is drained off and the uterus has moulded itself upon the fœtus so as to impede the gliding round of the fœtus.

The complete version which exists as the ideal in the minds of most of those who perform the operation is not often realised. Indeed, it can hardly take place unless the bi-polar method by combined external and internal manipulation is carefully pursued. The head may commonly be felt throughout the entire process nearly fixed in the iliac fossa, and sometimes the forearm remains in the upper part of the pelvic cavity. The nates and trunk are delivered as much by bending as by version. The process is something between spontaneous version and spontaneous evolution. The two following diagrams (Figs. 74 and 75), taken from memoranda made of a case which occurred to me, will serve to illustrate both this feature of incomplete turning and the importance of the principle of drawing upon the leg opposite to the presenting shoulder.

If the head and shoulders rise enough to permit the breech to enter the brim, delivery will not be seriously obstructed.

But it not uncommonly happens in extreme cases of impaction of the shoulder in the upper part of the pelvis that, even when you have succeeded in bringing down a leg into the vagina, version will not proceed: the shoulder sticks obstinately in the brim. In such a case the bi-polar principle must be called

Fig. 74.

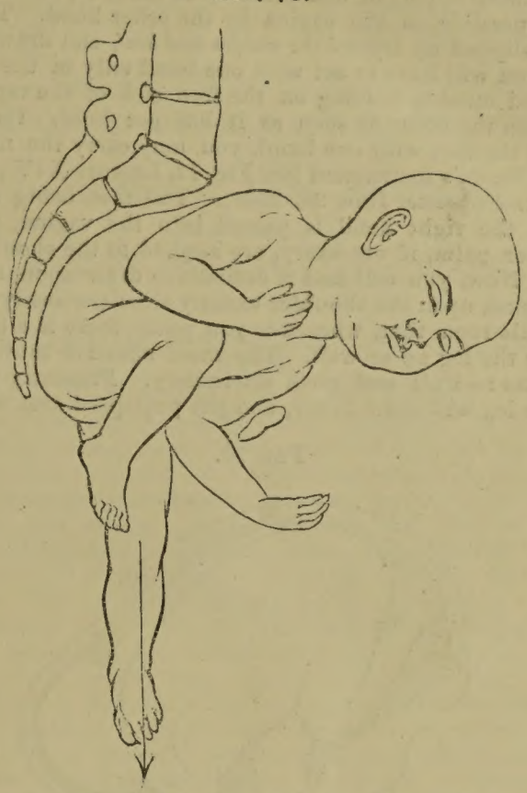


Fig 74 represents an abdomino-anterior position, left shoulder presenting. Traction was first made upon the left leg, as shown by the arrow. The effect was to bend the trunk and jam the shoulder against the symphysis.

Fig. 75.

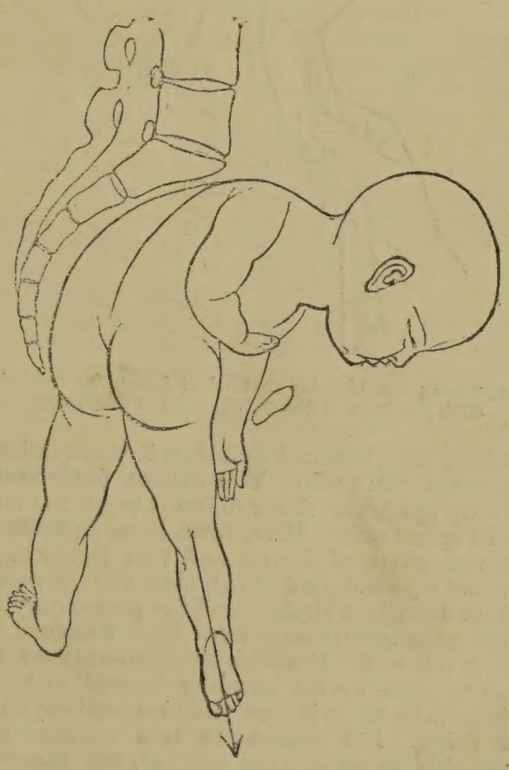


Fig. 75 represents the correction of the error committed in Fig. 74. By drawing on the opposite, or right, leg, the trunk was made to revolve on its spinal axis, drawing up the presenting arm from the pelvis, and allowing the breech to descend. Although delivery was now effected, version was not complete, as the head remained in the iliac fossa, and the hand never quitted the pelvic cavity.

into action. It is obvious that if you draw down upon the leg, whilst you push up the shoulder, you would act at a great advantage. But you cannot get both your hands into the pelvis. Sometimes you may release the shoulder by external manipulation, pressing up the head by the palm of your hand insinuated between it and the brim of the pelvis.

In cases of real difficulty, however, this will not answer. You must push up the shoulder by the hand inside. To admit of this, you pass a noose of tape round the ankle in the vagina, and draw upon this. The noosing of the foot is not always easy. To effect it you carry a running noose on the tips of two or three fingers of one hand up to the foot, held down as low as possible in the vagina by the other hand. Then the loop is slipped up *beyond the ankles and heel*, and drawn tight. Often you will have to act with one hand only in the vagina, the hand outside holding on the free end of the tape ready to tighten the noose as soon as it has got hold. Or, whilst holding the foot with one hand, you may carry the noose by help of Braun's instrument (see Fig. 72, Lecture XIV., *Medical Times and Gazette*, June 20, 1868). The foot being securely caught, the right hand is passed into the vagina, and the fingers or palm, if necessary, are applied to the shoulder and chest. Now, you will find it difficult to draw upon the tape and to push upon the shoulder exactly simultaneously. There is so little room that, whenever you push, there is a tendency to carry the leg up as well. The most effective movement is as follows:—Pull and push alternately. Presently you will find the leg will come lower, and the prolapsed arm will rise.

Fig. 76.

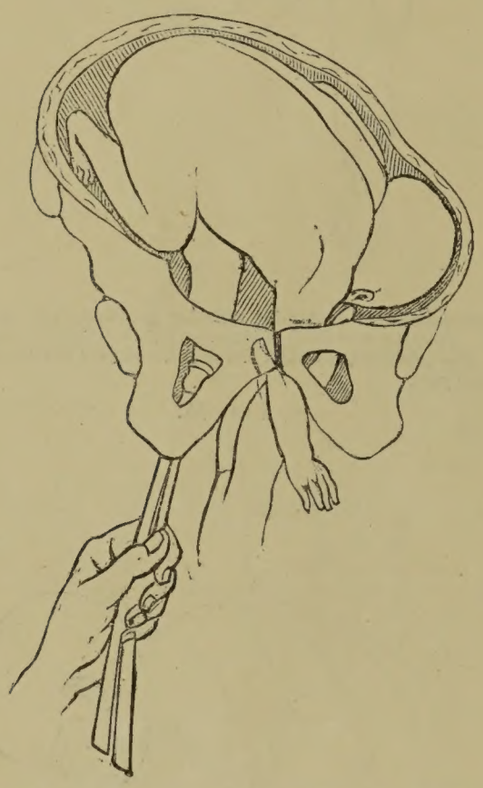


Fig. 76 represents the bi-polar method of lifting an impacted shoulder from the brim of the pelvis, so as to effect version.

In pushing the chest and shoulder, it is not unimportant in what direction you push. You cannot push backwards, or even directly upwards. Your object is to get the trunk to roll over on its spinal axis. Here, then, is an indication to carry out the manœuvre of Levret and Von Deutsch. *Push the shoulder and adjacent part of the chest well forwards*, so as to make them describe a circle round the promontory as a centre.

Various other contrivances have been designed in order to accomplish this end. Crutches or repellers have been made by which to push up the shoulder instead of by the hand. The objection to these is that you cannot always know what you are doing. But your hand is a sentient instrument, which not only works at your bidding, but constantly sends telegrams to the mind, informing it of what is going on and of what there is to do.

Venerable Academicians.—Two members of the Académie des Sciences, MM. Mathieu and Dupin, having occupied their posts for more than fifty years, the former having been elected in 1817, and the other in 1818, several of their colleagues resolved to celebrate the circumstance by causing commemorative medals to be struck, which have just been presented to them.—*L'Institut*, June 24.

ORIGINAL COMMUNICATIONS.

ON THE APPLICATION OF MAREY'S SPHYGMOGRAPH TO THE RADIAL ARTERY AT THE WRIST.

By JAMES SAWYER, M.B. Lond.,
Resident Physician, Queen's Hospital, Birmingham.

Marey, in his work on the circulation of the blood, describes as follows the application of his sphygmograph:—"The figure shows our sphygmograph placed on the wrist, upon which it is fixed by a lace thrown alternately from one side to the other over the little hooks. These hooks are placed, three on each side, along the borders of a metallic frame which forms the support of the instrument. The lace completes, therefore, on the back of the wrist, a kind of bracelet, which the metallic frame forms in front, and the whole is firmly adjusted."(a)

My friend Dr. Foster soon found this method of application capable of improvement, and long ago used a pad for the back part of the wrist, over which he applied elastic bands to fix the sphygmograph in position.

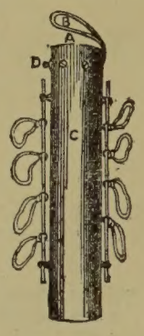
The objections to the lace of Marey are obvious. When the ivory plate of the sphygmograph is placed on the artery, it is not easily kept in position while the lace is passed from side to side over the little hooks on the framework; and when the lace is tightened the ivory plate is apt to slip from its place. It is difficult, moreover, to apply the instrument evenly, and to get an even pressure, by means of this lace.

When the forearm is laid, for the purpose of an observation, on a flat surface, the application of the sphygmograph is much facilitated by raising the wrist, and this position is very much more comfortable to the patient. Dr. Sanderson uses, I believe, a pad invented for him by Mr. Berkeley Hill, which raises the lower end of the forearm.

The following is a description of a pad of my own which I have found very useful in facilitating the application of the sphygmograph so as to take tracings of the pulse in the radial artery:—

The pad consists of a flat piece of wood fourteen inches long, two and three-quarter inches broad, and one-third of an inch in thickness, padded with cotton wool on one side, and covered with leather. The cushion of wool is thickened at a point, C, five inches from one end, until it is one and a half inches in depth; on either side of this eminence the cushion slopes away until it is not more than one eighth of an inch in thickness at each end of the pad. At the end, A, an elastic loop, B, is placed, and opposite to it there is a button, D. On each side of the pad a steel rod, nine inches long, is fixed. Each rod carries four rings, which move easily along it, and to each ring a small elastic band is attached. The end, A, of the pad has a little foot on its under surface.

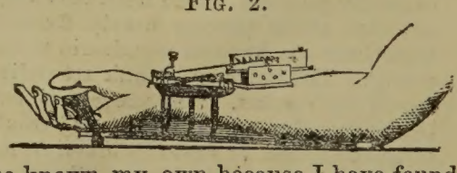
Fig. 1.



In order to apply the sphygmograph the patient's arm is bared and placed on the pad, so that the eminence, C, is opposite the lower end of the radius. The wrist is thus thrown into relief, and the hand is secured by the band, B. The ivory plate of the sphygmograph is applied to the artery, and the instrument is held in position by one hand until the elastic bands on each side of the pad are attached to the hooks on each side of the sphygmograph. There are six hooks and eight bands, for it is found that, in order to steady the instrument, two bands must be placed on the middle hook on that side of the sphygmograph which is on the radial side of the forearm.

Fig. 2 shows the whole adjusted. I am told the pad I have described is somewhat similar to one devised by Mr. Berkeley Hill, and I regret I have not had an opportunity of seeing his pad. I have ventured to make known my own because I have found its use a help in making sphygmographic observations, and in the hope that it may be found of advantage to some of my fellow-workers. The pad can be easily and quickly made by any one who will take the trouble.

Fig. 2.



(a) Marey, "Circulation du Sang," page 179.

REMOVAL OF A TUMOUR FROM THE NOSTRIL.

By J. FAYRER, M.D.,
Senior Surgeon to the Medical College Hospital, Calcutta.

A MAHOMEDAN woman, aged 30 years, was admitted into the Medical College Hospital, Calcutta, on February 19, 1868, with her face much disfigured by a tumour which distended the left nostril. She stated that it began to make its appearance about three years ago, and steadily increased for two years, when it ceased to grow so rapidly, and remained almost stationary.

The ala nasi was pushed aside, the nostril completely closed, and the nasal and part of the superior maxillary bones expanded and stretched over the growth, which was about the size of a small orange. She appeared to be in fair health, and complained of discomfort rather than pain. The tumour, where visible, had a pinkish appearance, and was smooth on the surface. There was neither fœtor nor discharge from the nostril.

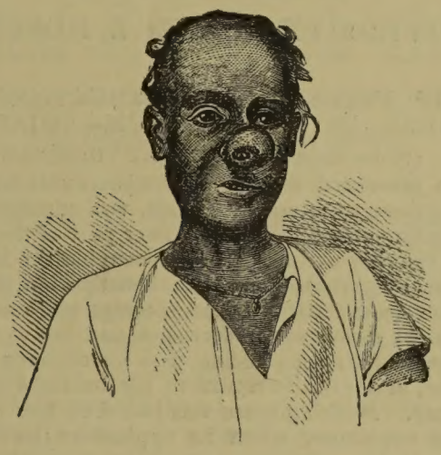
I removed it on February 24, by laying open the cheek from the nostril. On turning the parts aside, the tumour was easily isolated, and removed by avulsion from the septum nasi, to which it was attached by a pedicle. The bleeding was profuse for a few moments, but was easily controlled by pressure. The edges of the wound were stitched together with horsehair, and a light dressing of carbolic acid applied. The tumour, which was somewhat lobulated, occupied the distended nostril, but had no connexion with the antrum.

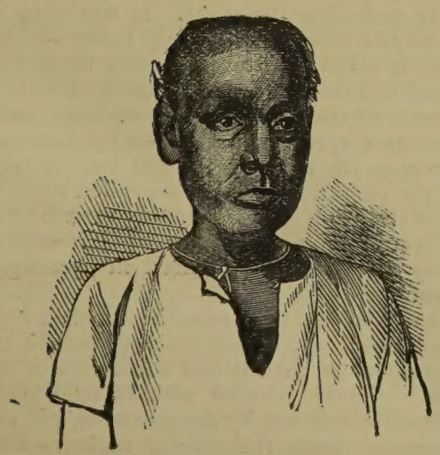
It was examined by Professor Colles, who reported it to be composed chiefly of rapidly growing cells full of germinal matter, and most probably malignant.

The wound healed rapidly, and, by carefully adjusted pressure, the expanded bones were soon restored almost to their natural condition.

On March 24 she was discharged, apparently cured, and without any sign of recurrence of the disease.

It is to be noted that she had no glandular enlargements in the vicinity of the growth, nor was there any constitutional cachexia. The family history is always a difficult subject of investigation with such people, and nothing was elicited as to any hereditary tendency to cancer. The accompanying photographs, taken before and after the operation, illustrate the appearance caused by the morbid growth.





The microscopical appearances of this rapidly growing tumour, which consisted mainly of large cells filled with nuclei or germinal matter, together with its attachment to the septum nasi, render it probable that the disease is of a malignant character, and that, therefore, relief can only be temporary. As the patient's general health was good, and the tumour was entirely removed, there can be no doubt that, even though the relief be only temporary, the operation has done good.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

RESECTION OF A CONICAL AND ULCERATED STUMP.

(Under the care of Sir W. FERGUSSON.)

THE original amputation had been performed in November last, but in consequence of ulceration taking place in the flaps the bone had protruded, and left an unsatisfactory result. The operation simply consisted in removing two or three inches of the bone, and taking a good flap from the back of the leg. Sir W. Fergusson afterwards made some clinical remarks on the subject of bad stumps, in which he stated that, in spite of recent advances in Surgery, indifferent stumps were not uncommonly met with; indeed, a certain proportion of bad stumps seemed to be looked upon as a matter of course. Those who opposed the practice of excision had brought forward every possible objection to this procedure, and spoke of amputation as a simple and successful operation; but we rarely hear of the unsatisfactory stumps which sometimes result, and which constitute an important consideration in determining the comparative value of these two methods.

EXCISION OF THE ELBOW—A DETACHED PIECE OF BONE REMOVED.

(Under the care of Mr. HENRY SMITH.)

About three months ago the patient, a healthy middle-aged woman, came under Mr. Smith's care, suffering from pain and swelling of the right elbow. The history showed that the first symptom followed the receipt of an injury to the joint, which was followed by inflammation, resulting in false anchylosis, the joint being fixed at a certain angle. An attempt was made on two occasions to break through the adhesions, but this was followed by further inflammation, and no advantage was gained. As the patient was very anxious that an attempt should be made to restore the mobility of the limb, which was perfectly useless to her, it was determined to excise the joint. The operation was performed in the usual manner, a single incision being employed. On opening the joint, the disease was found to be more extensive than had been anticipated; the cartilages were in great part eroded, and the soft parts disorganised by strumous inflammation. A piece of bone, measuring about one-third of an inch square, of a cubical form, and quite detached, was found in the interior of the joint; it was covered with a thin layer of cheesy substance. A minute examination of the ends of the bones after removal failed to show any trace of original attachment of the loose piece.

STRICTURE OF THE URETHRA TREATED BY CAUSTICS.

(Under the care of Mr. H. SMITH.)

The treatment of stricture at the present day resolves itself into three chief methods, each one having its staunch upholders. There is the gradual dilatation of the contracted passage; the sudden dilatation, as practised by Mr. Holt, of the Westminster Hospital; and there is the mode of cure, more particularly advocated by Mr. Wade, by the application of caustic to the face of the stricture, causing, first, abatement of the irritability of the urethra; secondly, "actual absorption" of the thickened tissue; and thirdly, and lastly, direct destruction of the thickened walls of the passage. This author states that he has never noticed any slough come away with the urine after caustic has been applied to the stricture, thus leading one to suppose that the potassa fusa does not destroy the tissue with which it comes in contact; but, as Mr. Henry Smith observes in his work on stricture of the urethra, "there is no reason to doubt that it has some destructive agency upon

a stricture, knowing, as we do, its powerful effect upon other tissues; and I think the effect which is produced after a free application to a stricture can hardly be explained upon the principle of absorption alone."

The following cases have all three been treated by the last-mentioned method—*i.e.*, caustic (potassa fusa) was applied—and all three have recovered remarkably well; and there seems to be no tendency to return of the constriction in Case No. 1. However, a sufficient time has not elapsed to allow of a verdict. We shall be glad to report the further progress of the cases.

No doubt caustic cannot be used in every case of bad stricture of the urethra, but it appears to be clearly indicated in those cases where there is a great deal of irritability of the urethra; in those cases where only a small catheter can be passed, owing to the "density or irritability" of the stricture; and in those cases, happily very rarely met with, where a long constriction of the passage exists of so irregular and roughened a character as to preclude all hopes of restoring it without having recourse to perineal section.

Case 1.—James R., aged 32, a labourer, living at Isleworth, was admitted into King's College Hospital August 28, 1867, suffering from severe stricture of the urethra. The man states that twelve months before he applied at the Hospital he fell while conducting a team of horses, and was run over by the cart which they were drawing. The wheels passed over the lower part of his abdomen. After this accident he was placed in bed, and next morning found he was unable to pass his urine. A Surgeon was sent for who, by an instrument, drew off his water, and left the catheter three days in the bladder. From this time the man has had much difficulty in making water, and though on several occasions Surgeons have attempted to pass an instrument for his relief, all efforts have been unsuccessful to introduce a catheter into his bladder. When admitted into King's College Hospital, Mr. Henry Smith failed in attempting to push through the stricture the smallest-sized catheter. There was much thickening of the urethra in the region of the perineum, and the patient at times complained of great pain, while the urethra was exceedingly irritable. As no instrument could be passed into the bladder, and as the man was in much pain, several leeches were applied to his perineum, and these gave great relief. The swelling subsided to a considerable extent, and he was able to pass his water in a fuller stream.

August 31.—More leeches were applied, and relief afforded.

September 6.—Similar treatment, accompanied by similar results.

The excessive sensibility of the urethra having been by this time allayed, Mr. Smith, on September 19, passed a bougie armed with a piece of potassa fusa down to, and applied it to the face of the stricture for half a minute.

September 20.—Not so much pain, and stream of water slightly increased in volume.

The potassa fusa was applied in a similar manner, at intervals of two days, up to October 1, when Mr. Smith succeeded in introducing a No. 2 catheter through the stricture and into the bladder.

October 7.—Catheter No. 3 passed.

12th.—Catheter No. 5 passed.

The man wished much to leave the Hospital, and was made an out-patient on October 23, when No. 7 catheter was passed.

The stricture had shown no signs of returning when the man ceased his attendance.

Case 2.—Henry S., aged 40, a stableman, was admitted into the Victoria Ward with stricture of the urethra, April 27, 1868. The man stated that he had gonorrhœa nearly twenty years ago, but that the difficulty in passing his water commenced about seven years since. Instruments had been at various times passed, and two years before applying at King's College he was in another Hospital, where he said he underwent the "splitting-up" operation. On admission it was found that he could hardly pass his water at all, in so small a stream did it come. But the urethra was not very irritable, though no catheter could be passed through the stricture.

April 28.—A bougie armed with caustic potash was introduced into the urethra, and pressed for a short space against the face of the stricture. Not much pain was felt by the patient at the time, and none afterwards, except when he passed his water.

May 2.—The caustic potash was again applied. No pain was felt, but some muco-purulent discharge was caused, which lasted till

May 4, when Mr. H. Smith passed a No. 4 catheter with little trouble. After the introduction of the catheter, a pill of quinine and opium was administered.

May 6.—The urethra bled a little after the catheter was passed. No. 6 introduced. Was at this date made an out-patient, as which he has been treated ever since. Now a No. 8 catheter passes easily (June 11).

Case 3.—Thomas R., a lighterman, living at Brentford, was admitted, under Mr. H. Smith, into King's College Hospital on May 7, 1868. The patient stated that he had had much difficulty in passing his water for five years, and that some obstruction in the passage had existed long before. Six months since he had been, he said, an inmate of the Westminster Hospital, and was under the care of Mr. Holt, who performed an operation upon him, and greatly relieved him for a time; but the passage gradually contracted again, and on admission into King's College Hospital he could only pass a few drops of urine after violent straining, while at times he had retention.

May 8.—As no instrument could be introduced, the caustic potash was applied in the usual manner to the face of the stricture, and a good deal of pain was complained of, both at the time and afterwards, by the patient, but no bleeding ensued, and tinct. opii ♏ xx. given at night made the man quite comfortable.

10th.—Potassa fusa again applied. This time there was but little pain accompanying the operation, and none afterwards.

12th.—Catheter No. 2 passed without very much difficulty, and without pain.

13th.—Catheter No. 4 passed easily.

15th.—It was attempted to introduce a No. 5, but the attempt gave so much pain that it was thought advisable to desist, and No. 4 passed readily.

This man has since been attending as an out-patient, and on May 29 No. 7 was introduced, giving no pain. The patient stated that he made water in a "regular good stream."

These three patients were suffering from stricture of so bad a character that no instrument could be passed, and therefore it was deemed advisable to use caustic as an auxiliary to gradual dilatation in the way of cure; but in most instances, without doubt, at least a temporary relief from the affliction can be afforded by the catheter alone. And finally, great caution should be employed in the use of caustic, both in its actual application and also in the selection of the class of cases for which it is necessary.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF INTESTINAL OBSTRUCTION DUE TO CANCER OF THE RECTUM—COLOTOMY.

(Under the care of Sir HENRY THOMPSON.)

This case presented several very remarkable features. The patient, a young man, aged 23 years, was admitted in October last for malignant disease of the lower part of the rectum. A hard and roughly nodulated mass occupied the lower third of the rectum, and gave rise to extreme constipation, great suffering following every evacuation. An attempt was made to remove the growth by means of the écraseur, and this so far succeeded that the patient was enabled to pass his motions with comparative ease, and even to return to his business in the city for a short time. Nothing more was heard of him until the day before the operation, when he applied at the Hospital with severe constipation of fourteen days' standing. On examination a mass of cancerous growth was found occupying the rectum, and completely occluding the canal. It was quite impossible to remove so large a mass, and the only thing which remained to be done was to relieve the present very urgent symptoms. Sir Henry remarked that, after consultation with Mr. Erichsen, whose experience of these cases was very large, and who had witnessed the first operation performed by Amussat, he had determined to open the colon in the left lumbar region. The difficulty of the operation entirely depended upon the degree of distension of the colon; if this should prove to be distended, the operation would prove an easy one, but if it were contracted great difficulty might be experienced in opening the bowel behind the peritoneum.

The operation was then performed in the ordinary way, and the bowel easily reached; it was much distended with flatus. After the operation the patient had a full dose of opium, and the wound was lightly covered with carbolic acid dressing. He has been greatly relieved by the operation, but suffers from a sense of pressure upon the lumbar region. There is also

considerable difficulty in passing water. The object of the operation being merely to relieve the urgent distress consequent upon the intestinal obstruction, and the progress of the disease being necessarily fatal, the case may be considered as a successful one.

A SUPPOSED PSOAS ABSCESS OPENED IN MR. LISTER'S METHOD.

(Under the care of Mr. CHRISTOPHER HEATH.)

The case was that of a young woman who was sent to the Hospital to have a psoas abscess opened. She was the subject of angular curvature of the spine, and on the inner side of Scarpa's triangle there was a soft fluctuating swelling, which received a distinct impulse on coughing, and increased in tension when pressure was made between the umbilicus and Poupart's ligament. No doubt was therefore entertained about the diagnosis. The operation was performed in strict accordance with Mr. Lister's directions; the knife was dipped in carbolic acid, and after the fluid had escaped a pad of lint soaked in carbolic acid and oil was immediately applied. The contents of the tumour proved not to be purulent, but consisted of serous fluid tinged with blood. The result of the treatment by the carbolic acid was most successful, no inflammatory action being excited, and no pus formed. As the fluid is gradually accumulating again, it is proposed to repeat the tapping with the same precautions.

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Medical Times and Gazette.

SATURDAY, JULY 4, 1868.

GENERAL MEDICAL COUNCIL.

Towards the end of his able opening address, the President of the Council referred to the probability that his term of office would expire before the next session, and he advised the Council to consider carefully and earnestly among themselves who should be his successor, so that when the time for election should come there should be no hurry or surprise. Dr. Burrows has filled the office, by no means an easy or very enviable one, with so much ability and judgment, and has so invariably and so well upheld the dignity and honour of the Council, that his retirement will cause universal regret, and it will not be easy to find a successor equally courteous, equally efficient, and equally able to guide and control the not always very manageable body over which he has so well presided.

After the President's address, the Council had the gratification of learning that certain differences which last year had prevented two of their number from sitting together on any committee, no longer existed, and that these members were now ready to do their duty.

The debate on Mr. Syme's motion for a Committee to consider and report how the various subjects of Medical education may be best taught, in what order they should be studied, and how the examinations on them should be arranged, was resumed on Thursday, the 25th, occupied the greater part of that day, and was again adjourned to the Friday's sitting. It was interrupted at 3 o'clock in order to consider certain charges made against a Mr. William Macdonald, M.D., of Argyle-street, Glasgow, accusing him "of infamous conduct in a Professional respect" in offering to procure for fee or reward the degree of Doctor of Medicine from Pennsylvania College and from the University of Giessen, and "in falsely pretending to hold a commission from the said University of Giessen for inviting young persons, aspirants for the degree of Doctor of Medicine, to Giessen." Dr. Macdonald had of course been summoned to appear before the Council, but he sent instead thereof a certificate of illness, signed by some unknown and "unregistered" Practitioner, and the Council proceeded with the case in his absence. First, however, they consumed not a little "valuable" time in considering whether the matter should be discussed in private or in public. The President, as we understood, suggested that, as some of the facts to be brought forward dealt with individuals not present, and who had not been summoned, reporters should be requested to withdraw; and Mr. Hargrave, seconded by Dr. Rumsey, proposed a motion to that effect. This, however, was vehemently opposed by many of the members, Sir Dominic Corrigan, *more suo*, going so far as to declare that if the reporters went he would go also. Dr. Acland complained of the hardship of their not being allowed to hear the opinion of their legal adviser in private; and Dr. Risdon Bennett thought that the inquiry into the case should be made in private, and the judgment in public; while Dr. Paget suggested that, after hearing the case in public, they might deliberate, if necessary, in private. On a division being taken, only three votes were given in favour of Mr. Hargrave's motion, and so the case was proceeded with in public, and rightly so, we think. Every suggestion of the President's must be held entitled to the most respectful and careful consideration; but when the Council sits in judgment on any charge against a member of the Profession, we cannot think that anything could justify their hearing the case with closed doors; even should the evidence be unfit for the public ear, the Council must, like other courts of justice, trust to the propriety and good taste of the reporters, instead of excluding the press from their judgment hall.

The solicitor to the Council having then read the rather voluminous evidence in support of the charges, and the answers to them which Dr. Macdonald had addressed to the Council in his defence, Mr. Syme and Dr. Fleming moved that the accused "is judged by this Council, after due inquiry, to have been guilty of infamous conduct in a Professional respect." To this Sir Dominic Corrigan moved an amendment to the effect that, though the Council disapproved of Dr. Macdonald's conduct, they would not meddle with him, but leave the matter to "the Universities which deny that Dr. Macdonald was authorised to act for them." This amendment was, we are happy to say, negatived. Any member of the Profession who offered to procure a diploma for fee or reward would, we take it, be guilty of "infamous conduct in a Professional respect" whether he was an accredited agent or not; no matter what his relations with the diploma-producing body might be, any or none, he still would have sinned against the Profession, and the Council could not shirk action in such a matter without most deplorably lowering themselves in the eyes of the Profession and the public. The Council have hostile critics enough already; we fear, indeed, that it might not be very difficult to find some who would affect to think that, however completely the Council might fall from their present dignity and influence, the fall could not be called a great one; but, at any rate, any lessening of the honour and respect at present their due would be greatly to be lamented, and therefore we rejoice that Sir Dominic Corrigan's amendment did not succeed. The original motion was carried, but only by the casting-vote of the President. Four of the Council, we observe, declined to vote, and in this we cannot but think they were wrong, though

they are all valued and eminent members. They were sitting as judges, and if they had any doubt of the guilt of the accused, they ought to have given him the full benefit of that doubt, while, on the other hand, if the evidence was clearly against him, their duty to the Profession and public was equally clear. We cannot understand how silence can, in such a matter, become men in their position.

The next resolution, to the effect that Dr. Macdonald, "having been judged guilty of infamous conduct in a Professional respect," his name be erased from the *Register*, was carried by twelve to seven, three members here also declining to vote; but a third resolution, to transmit a copy of these resolutions to Dr. Macdonald, passed without a division. Verily, the ways of "our" Council are hard to understand.

The debate on Mr. Syme's motion was brought to a close on Friday, June 26, when Sir Dominic Corrigan's amendment was negatived and the original motion carried. The discussion was chiefly remarkable, perhaps, for the great variety of opinions elicited. We may almost say *quot homines, tot sententiæ*, and we cannot pretend to give even the most meagre *resume* of the speeches here; we must be content with referring our readers to the report of the debate, which will be found elsewhere in our pages. We are glad that the Council did finally accept the original motion, and not Sir Dominic Corrigan's truncated edition of it. We cannot but think that, whatever the difficulties of the subject may be, the Profession have a right to expect from the Council an expression of their opinion as to "how the various subjects of Medical education which have been deemed requisite by the Council may be taught with most advantage." All the members of the Council are, or have been, teachers or examiners, and they certainly ought, in their position, to instruct and advise on all educational questions, instead of waiting to be themselves advised and instructed by any outside self-constituted body, such as the Medical Teachers' Association.

We have ourselves so lately stated our opinion on the principal reforms required in Medical education in our article on Dr. Parkes's able pamphlet on the subject,(a) that we need not go into the matter again now; we shall wait with much interest and hope the report of the Committee of the Council, congratulating them meanwhile on their having summoned up the courage to grapple with such difficult, but so all-important, questions. We cannot help feeling some fear that a committee of twelve may prove rather unwieldy an instrument; but its large size has no doubt been caused by a desire to act with the utmost fairness by including in it members of all shades and diversities of opinion. We wish them heartily "a good deliverance."

The communications from the Colonial Office and the Chancellor of the University of Melbourne were next taken into consideration, and, after considerable discussion, it was resolved "that in any provision which may be introduced into an amended Medical Act by which power would be given to register graduates of the University of Melbourne in the British Register, previous residence be not required as a condition of admission to such registration." This concession has been made as only due to the high character of the degrees of that University, and a like concession will no doubt be made to every colonial university that may succeed in attaining as good a standing as that of Melbourne. In connexion with this subject the letter of the President to the Secretary of State for the Home Department on the Colonial Medical Practitioners' Act was read to the Council. The history of this letter, as related by the President, is curious and instructive. The Secretary of State for the Home Department wrote to the President of the Council to request his opinion on the Act, and in reply the President pointed out various imperfections and objectionable points. When, however, the Bill was introduced into the House of Lords, to the President's surprise he observed that all his suggestions "had been completely ignored." Obtaining an interview with the Secretary of State for the Colonies, who had charge of the Bill, he found that his letter, asked for by a Secretary of State, had remained pigeon-holed at the Home Office, and had never been communicated to the Colonial Secretary at all! Fortunately, the President was able to supply the Duke of Buckingham at once with a copy of his letter, and "the result was that the objectionable parts of the original Bill were amended"—a very happy result, and highly to the credit of the President of the Medical Council; but one feels curious to know whether the quiet entombment of the original letter in the Home Office is to be regarded as an example of how things are not done in Government offices, or as a proof of the estimation in which the General Medical Council is held in the same sublime regions.

On Saturday, the first business of great importance was Dr. Acland's motion for a committee "to report on the steps proper to be taken, if any, for granting diplomas or certificates of proficiency in State Medicine, and for recording the same in the *Medical Register*." It was introduced by Dr. Acland in a very able and telling speech, pointing out the rapid growth and great importance of State Medicine, or preventive Medicine, and the necessity that existed of a special and real education in it. He was well supported by Dr. Stokes, and, after an entreaty from Mr. Hargrave that the committee, if appointed, would take care of the interests of the existing licensing bodies, the motion was agreed to without a division, with the direction to the committee to send their report to the Executive Committee, which might "print and circulate it among the members of Council prior to their next session."

The remainder of the Saturday's sitting, which was prolonged beyond the usual half-holiday hour, was occupied by Dr. Storrar's motion — "That, having regard to the importance of improving the general education of persons entering on the study of Medicine, it is incumbent on the General Council to petition both Houses of Parliament, praying for early legislation on the subject of secondary education in schools," and referring to the Executive Committee the duty of preparing petitions. Of course no one denies the importance of good, thorough secondary education. The question was whether the Council should petition the Houses of Parliament to legislate in the matter. As a council of education, we think they will, at any rate, not be going out of their way in doing so; but we venture to express the hope that their petitions will not be in the tone of the man praying to Hercules to lift his cartwheel out of the rut for him—a tone which is becoming, we are inclined to think, rather too prevalent in England now-a-days. It used to be held that supply will equal demand, and we believe that if thoroughness of "secondary education" is imperatively called for, schools supplying it will be established; but if the "average" Englishman of the middle classes is too indifferent or too occupied by business or pleasure to require that his boys be well educated, we doubt whether Parliament can bring him to a better state of mind.

On Monday, June 29, some documents were read and ordered to be entered on the Minutes, and then the Council adjourned, in order to place more time at the disposal of the various committees.

On Tuesday the Council received an important deputation from the British Medical Association to present a memorial on the subject of the "direct representation of the Profession in the Council," and afterwards was occupied in debating Dr. Andrew Wood's motion, "that the Medical Council take into consideration its present constitution, with the view of determining whether it be advisable that it should be placed on a more popular basis by the addition of a certain proportion of members to be chosen directly by the suffrages of registered Practitioners." The debate on this resolution was adjourned to, and continued on, the Wednesday, and resulted in its rejec-

(a) Vide *Medical Times and Gazette*, June 6, page 606.

tion by the decisive majority of 16 to 4. Of the debate itself we will speak next week.

The Council then proceeded, at the eleventh hour, to appoint a Committee to take into consideration the provisions of the Pharmacy Bill, which has been passed by the House of Lords, and has reached its second reading in the House of Commons.

THE WEEK.

TOPICS OF THE DAY.

The rapid progress of the Scottish Reform Bill through the House of Lords leaves no doubt that it will in a few days become law. At the risk of being charged with iteration and reiteration, we venture once more to call the attention of our readers to the benefits and responsibilities it has conferred upon the Medical graduates, who constitute a large and probably the most influential part of the Medical Profession in the three kingdoms. We have no hesitation in asserting that if the Medical sections of the University constituencies show themselves of one mind and heart in determining to return a Medical representative, they will undoubtedly succeed, both in the cases of the Universities of Edinburgh and St. Andrews, and of Glasgow and Aberdeen. On the other hand, if the graduates in Medicine allow themselves to be influenced by mere political motives, and are attracted by the old party cries, they will undoubtedly and deservedly lose an opportunity which, once lost, will probably never again occur. If once there is a precedent set by returning lawyers for the Scottish Universities, the return of independent and representative Medical men to Parliament will become as hopeless a matter as it has hitherto seemed. We know that politicians of the highest eminence are willing, and even anxious, that Medical Practitioners should be represented in the reformed Parliament. The Medical Profession have now the matter in their own hands. If they fling away their chances, they will in the future be justly regarded as the unpractical men it has been the fashion in some quarters to represent them. Their grievances and themselves, their underpaid services, and their ignored status will be contemptuously consigned to the limbo of those whom it is impossible to help because they won't help themselves. In order to insure the return of Medical candidates for the Scottish Universities, registration of the voters is necessary. The registration fee, which is a compounding one for life, is thirty shillings, and the business of registration will, in addition, cost the trouble of writing one or two letters. We hope that these preliminaries will not hinder the registration of any Medical graduate. He may be sure that the fee will be well repaid by the representation of his class and their claims in the new House of Commons. With the questions of Poor-law remuneration for Medical men, the constitution and duties of the General Medical Council and its relations to the Government and the Profession, the condition of Medical men in the public services (especially in the navy), Medical education, and many other subjects of a like character directly pressing upon public attention, it is absolutely a necessity that the voice of the Profession should be heard. If they are now silent, they must expect ever hereafter to be compelled to hold their peace.

For the representation of the Universities of Edinburgh and St. Andrews, four candidates will probably offer themselves—Mr. Campbell Swinton, a lawyer and a Conservative; Dr. Lyon Playfair, a man of science, an advanced liberal, but not a Medical man; Dr. B. W. Richardson, who holds the highest reputation both as a cultivator of science and a Physician, who, if he come forward, will decline to pledge himself to either of the parties which are now fighting for power; and Dr. Prosser James, who seems to have offered himself simply on the ground that he is a member of the Medical commonwealth. Of these four gentlemen, it is clear that Dr. Richardson has especially strong claims on the Medical graduates. Putting aside for one moment his scientific and Medical status and successes, the mere fact of his having been the main mover and spring of the successful attempt to obtain the franchise for the graduates of St. Andrews has given him an influence and a claim on a large section of the electors which at least counterbalances those of either of his competitors. Dr. Richardson's candidature has not yet been definitely announced, but we believe that if a fair amount of support be tendered to him he will undoubtedly offer himself. If Dr. Richardson be returned, we believe that he will enter the House of Commons as an independent member, claiming to himself the same privilege as in science—to act according to his convictions, untrammelled by cliques and parties. With regard to social and educational questions, we understand that he will be prepared to support the Scottish University system of education, the consolidation of sanitary laws, and the formation of a State department of public health. He would advocate the extension of education, minus sectarianism, amongst all classes, and the revision of the laws relating to the poor, especially in the matter of Poor-law Medical relief. In general politics he would be opposed, on principle, to permissive measures, believing all laws, however good, to be useless when made permissive only. On the question of the day—the Irish Church—he does not believe that its disestablishment would pacify Ireland, and he is not prepared precipitately to vote for it without further deliberation and inquiry. He is, on the other hand, opposed to all processes of "levelling up" in dealing with the religious differences of that country. For the rest, he is an advocate of freedom in Medical education, the test of examinations, enlarged representation of the Profession on the Medical Council, and the improvement of the position of Medical men in the Poor-law service, the army, and the navy.

When we turn to the Universities of Glasgow and Aberdeen, we find there are three possible candidates—the present Lord Advocate, Mr. Gordon, who is a Conservative; the past Lord Advocate, Mr. Moncrieff, a Liberal; and Dr. Andrew Clark. These gentlemen, we believe, are just now engaged in calculating chances and watching the movements of their opponents. For ourselves we have no hesitation in saying that if Dr. Andrew Clark can be prevailed on to stand, he ought to receive the unanimous support of the Medical graduates. His political opinions are not of an ultra hue, and his Professional and social standing, his talents, industry, and thorough sympathy with the wants and claims of the Profession, make him a candidate in every respect worthy to be our representative.

An influential meeting, to advocate the extension of the Contagious Diseases Act, presided over by Sir Thomas Watson, was held in St. James's Hall on Friday last. Lord Lifford, who said that when he moved for a Select Committee in the House of Lords he was not aware of the existence of the Association for promoting the Extension of the Act, moved the first resolution. Lord Sidmouth, Lord Charles Bruce, Sir John Simeon, and many other persons of influence, were present. We cannot hope for any extensive legislation on the subject until the reformed Parliament has well got into harness. But there is no doubt that the battle the Association has fought is, partly at least, won, and that preventive measures are no longer regarded as questionable by the thinking part of the community.

Sir R. Napier's last despatch again renders a handsome and well-deserved tribute to the Medical officers engaged in the Abyssinian Expedition. The following extracts from the despatch will be read with interest by the old fellow-students and friends of the officers mentioned :—

"My acknowledgments are due to Dr. Currie, C.B., for his able direction of the Medical Department; to Dr. Pelly, Deputy Inspector-General, who superintended at Zoulla, and under

whose immediate charge were the native troops and followers of the Expedition; to Dr. Mahaffy, Deputy Inspector-General with the First Division, and also Deputy Surgeon-Major Guy, Surgeons Madden and Wyllie, and Assistant-Surgeon Martin, whose services have been most favourably brought to notice.

"Dr. Lumsdaine, when sanitary officer at Zoulla, by introducing a good system and rules for conservancy, and seeing them carried out, contributed in a very important degree to the healthiness of the garrison and civil inhabitants.

"I am greatly indebted to Dr. Lumsdaine for his constant attention while forming part of the Head-quarter Staff, and for very valuable voluntary service in many extra duties during the expedition."

The contest between Mr. Gladstone and the Lord Chief Justice Inglis for the Chancellorship of the University of Edinburgh is likely, we hear, to result in the defeat of the former. It is said that the Liberal party have alienated the Scottish Universities by their apathy in all that concerns University interests, and the leader of that party has made opponents by his ill-omened scheme of converting the four existing Universities into Colleges to be affiliated to one central University.

We are glad that the General Medical Council have obtained some slight respite from the wordy warfare to which they devote ten weary days. On Wednesday last week they were received by their President Dr. Burrows, who had invited a large company to meet them, and on Friday they honoured the Master and Wardens of the Society of Apothecaries at their Hall in Blackfriars. We need scarcely say that the entertainment did not belie the good repute for hospitality which the Hall has obtained. The speeches were delivered under the pleasing sensations which follow an undeniably good dinner, and were agreeably relieved by some very good part singing, which was arranged and led by a well-known member of the Court of Examiners on whom has largely descended the double gift of Apollo.

THE ELECTION INTO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

On no occasion since the Fellows of this institution have had the privilege conferred on them by Royal Charter of electing persons from their own body into the Council of the College, has there been so much interest shown by the members of the Profession in the election as has been exhibited during the past week or two. Whether this is owing to the great number of candidates brought forward to fill the four vacant chairs, or to the high social position of the competitors, does not appear. These vacancies were caused by the decease of Sir William Lawrence, Bart., the resignation of Mr. Joseph Hodgson, and the retirement in the prescribed order of Professor Partridge, F.R.S., late President of the College, and of Sir William Fergusson, Bart., F.R.S., Sergeant-Surgeon to her Majesty; these two gentlemen, however, offered themselves for re-election yesterday. The additional candidates were Mr. Erasmus Wilson, F.R.S.; Mr. John Gay, Surgeon to the Great Northern Hospital; Mr. G. L. Cooper; Mr. Charles Brooke, F.R.S., Surgeon to the Westminster Hospital; Mr. John Simon, F.R.S., of the Privy Council Office; Professor Humphry, F.R.S., of Cambridge; and Mr. Luther Holden, Surgeon to St. Bartholomew's Hospital. The proceedings commenced at 2 o'clock, when Mr. Hilton, the President of the College, accompanied by Messrs. Quain and Cock, the Vice-Presidents, entered the library. The former gentleman, having briefly explained the objects of the meeting, called on the Secretary to read those portions of the by-laws and charter relating to elections into the Council. This having been done, the voting at once commenced in the usual manner adopted on these occasions—viz., by *erasing* from the lists supplied the names of those candidates for whom the electors did *not* vote, taking care not to retain more than four names that being the number of vacancies. The voting was of course conducted with great good temper, and at a quarter to 5 o'clock the President declared the polling closed, when the Secretary commenced reading aloud the names, which were taken down by the Clerk. This having been accomplished and the numbers checked, the President declared the choice of the Fellows to have fallen on Sir W. Fergusson, Bart., and on Messrs. Simon, Humphry, and Holden. The numbers polled by each candidate were as follows:—For

	Votes.	Plumpers.
Richard Partridge . . .	103	7
Sir William Fergusson, Bart. .	206	—
William James Erasmus Wilson .	108	5
John Gay	120	13
George Lewis Cooper . . .	58	6
Charles Brooke	32	1
John Simon	157	9
George Murray Humphry . .	148	11
Luther Holden	136	8

The number of voters was 342.

In proof of the interest evinced in the election, it may be stated that the following Fellows attended from distant provincial towns:—From Manchester, Messrs. Turner, Lund, and Jordan; Birmingham, Furneaux Jordan and Baker; Northampton, Marsh; Coleshill (Warwick), Barker; Stroud, Carter; Sheffield, Chesman; Bath, Church; Aberdare, Davies; Bristol, Green; Cambridge, Hammond; Southampton, Wiblin; Oxford, Hussey. Amongst the metropolitan Fellows were—From St. Bartholomew's, Messrs. Holden, Callender, and Hulme; Guy's, Birkett and Hilton; Great Northern, Jackson, Gay, and Hulme; King's College, Fergusson, Partridge, and Smith; Westminster, Brooke; St. Thomas's, South. In the evening the Fellows dined together at the Albion Tavern. We must defer until next week an account of the proceedings; but it was stated at the dinner that Professor James Syme, F.R.S., of Edinburgh, will be the chairman on the next occasion, and that the present is the last time that Mr. E. C. Hulme, the indefatigable honorary secretary, will fill that office. This gentleman, who has contributed so much during the last five or six years to make these *réunions* agreeable to all the Fellows, will, we hear, be succeeded by Mr. Thomas Carr Jackson, the announcement of whose appointment was received with great applause.

THE NEW HOSPITALS FOR THE LONDON POOR.

There can be no doubt but that the managers of the new Metropolitan District Asylums are proceeding vigorously in their work. It is proposed to erect asylums at Leavesden Woodside, near Harrow, for the northern side of the Thames, and at Caterham, in Kent, for the southern. For each asylum, which is calculated to accommodate 1500 imbecile persons, a purchase has been made of about seventy acres of land at about £120 per acre, and arrangements have been made with the Bank of England for a loan of £257,000, at 4½ per cent., for defraying the cost. A Hospital for fever patients will shortly be commenced on a plot of land called "Bartrams," near Hampstead, which cost £15,500, and another near Homerton. Similar Hospitals for infectious fevers will be established on the south side of the Thames. A site at Stockwell has been secured for £15,000. The board of managers have also contracted for a local habitation for themselves, having taken the first floor of No. 37, Norfolk-street, Strand, for offices, at the yearly rental of £325. It is understood that Mr. Giles (of the firm of Giles and Biven) is the successful competitor for the erection of the asylums.

WATER ANALYSIS.

The examination of water has hitherto been a process occupying several days. This consumption of time has been to a great extent caused by the necessity of evaporating down either to dryness or to a small bulk before the real analytical processes could be commenced. In a work just issued(a) by

(a) Water Analysis: A Practical Treatise on the Examination of Potable Water. By J. Alfred Wanklyn, M.R.C.S., and Ernest Theophron Chapman. London: Trübner and Co. 1868.

Mr. Wanklyn and Mr. Chapman, an effort has been made to abridge water analysis to the utmost extent compatible with accuracy. This object is attained partly by avoiding tedious evaporations, and by curtailing the evaporation in the one instance in which it is absolutely indispensable. In fact, they say that a complete water analysis, including the determination of solid residue, hardness, chlorine, nitrogen as nitrates and nitrites, ammonia, and organic matter, can be effected by their process in the space of six hours. They also think that a *complete* analysis is not often required, and that for many purposes all that is necessary is to estimate the amount of ammonia and organic matter. Such an examination admits of being made within the space of one hour, and thus comes within the reach of many of our readers, especially of officers of health, and of the officials of the water companies. Messrs. Wanklyn and Chapman first teach us how to take the sample of water intended for analysis. Then they treat of total solid residue, and cite the quantities of residue which well-known waters contain, so as to furnish the analyst with standards. After treating of "hardness," they teach the determination of chlorides, which are regarded as of little consequence in themselves but as constituting a record of the history of the water. If animal refuse has been discharged into a water, there will be an unusually high charge of chlorides. The converse does not, however, hold in all instances. The process for the determination of nitrates and nitrites is the reduction of them to ammonia by means of a bit of metallic aluminium acting in a strongly alkaline solution—the ammonia being subsequently measured by means of the Nessler test, and the amount of nitrogen present as nitrates and nitrites inferred from the amount of ammonia. The opinion is expressed that far too much importance has been attached to the nitrates and nitrites. After describing the ordinary methods of estimating ammonia and organic matter, the authors give the new method—the ammonia method—which has been the subject of very animated discussion in chemical circles during the last half-year. The Nessler test, which is a saturated solution of biniodide of mercury in iodide of potassium of a certain strength, and rendered very alkaline, is described with great minuteness. One of the most interesting conclusions arrived at is this: that the water of the Thames after proper filtration is as good for drinking as the water supplied to Manchester, Edinburgh, or Glasgow. According to Messrs. Wanklyn and Chapman, the *sine qua non* for Thames water is efficient filtration. With this, they believe that we shall be quite as well off as if we tapped the lakes of the North-west, and they profess to be able, by their system, to detect the smallest neglect on the part of the water companies. Still, we may, on grounds of economy, demand a system of storage; and on sanitary grounds we may claim that all water-closet sewage should be shut off from a river used for drinking purposes.

MEDICAL MAGISTRATE.

The name of Richard Ley, Esq., was placed, last week, on the Commission of the Peace for the borough of South Molton, Devon, by the Lord Chancellor.

FROM ABROAD.—ADDRESS FROM MEDICAL PRACTITIONERS TO M. DURUY—NON-ADMINISTRATION OF ANÆSTHETICS IN THE FRENCH HOSPITALS — FORMATION OF A COMMITTEE ON PHTHISIS.

M. Duruy, the French Minister of Public Instruction, who has met with such bitter hostility on the part of the ultramontane and retrogressive party in consequence of the enlightened policy he pursues with respect to educational questions, has just received a gratifying address from the Medical Practitioners of the Department of Aveyron, and there is every reason to believe that, had the document been circulated throughout the Profession in France, it would have been received with general approbation. The general body of the Profession feels itself insulted by the violent, and, as it turns out, utterly mendacious, attack made in the Senate by the cardinals on the Faculty, and the resistance offered on this and many similar occasions, and especially to the efforts made by the same party to cripple the education of women, is highly appreciated. We extract a passage from the address:—

"The undersigned Medical Practitioners have followed, with an interest and emotion very easily to be conceived, the debates which have just taken place in the Senate. They thank you, from the bottom of their hearts, for those noble and eloquent words with which you defended the Paris Faculty of Medicine, and with it the entire Medical body, against unjust and calumnious attacks. If there are some few Medical students to be met with who, dazzled by the marvellous discoveries of modern science, have, in their enthusiasm, believed themselves able to explain by it alone the phenomena of the material and moral world, it is but a passing illusion which time and the experience of each day will dissipate. But however grievous such illusion may be, it has not destroyed in them, nor in the hearts of any of their fellow-students, the love of humanity and devotion to its sufferings; and, as you declared with so much eloquence, at the first sign of danger 'they rush forth to meet the enemy as their fathers do each day.'"

M. Giraldès informs us that we have not mistaken the purport of his observations, and that it is a fact that in many of the secondary provincial towns in France patients still undergo operations without being submitted to any anæsthetic agent. This is even the case in so important a town as Amiens, in which there is a School of Medicine, and where the Surgeons, or, at all events, the senior Surgeon, never employ anæsthetics.

Consequent upon two interesting communications by MM. Villemin and Besnier on the etiology and increasing frequency of phthisis, the Paris Hospital Medical Society early in the present year appointed a committee for the consideration of the subject. The first object this committee proposes is to accumulate as large a number of facts and documents as possible, feeling convinced also that the observations, by the help of which we may hope to resolve questions in dispute, are more easily and more surely made in small localities, where the patients, as also their habits, relations, and families, have been long known to the inquirers, than in large centres of population. A Practitioner, too, in the midst of his patients is in a much better position for examining into hereditary affiliations and the importation of morbid conditions into families than the Hospital Physician can possibly be. The committee, therefore, makes an appeal to all Practitioners interested in these great problems for contributions of observations on the etiology of the disease—facts that they may have observed, and the statistics they may have at their disposal. Such documents as it may receive the committee proposes to carefully digest and report upon periodically until the matter acquired justifies the publication of a general report.

Although desirous of welcoming any communications that may be addressed to it, the Committee deems it right to indicate the points which it thinks require elucidation—viz.:—What at this present time is the absolute frequency of phthisis in France and in the various parts of France? What differences are to be observed in relation to its frequency at different epochs and in different localities, concerning which positive information exists? If such differences are well established, to what causes are they to be attributed? What is the influence of hereditariness on the development and form of tuberculosis? What modifications are produced by the coexistence of other and different diathetic dispositions? What is the relative frequency of phthisis in families where such dispositions prevail, and in those where they do not? Is phthisis contagious, and under what conditions? Has phthisis so contracted any special characteristics?

Documents which may serve for the solution of these questions are of two kinds:—1. Those of a statistical character, indicating the number of deaths as compared with other causes, specifying the sexes and ages—the changes which the

number of deaths may have undergone at different epochs—and the comparative number of cases in localities at small distances from each other, or in portions of the same locality. It would be highly interesting to compare any such ascertained differences with the hygienic condition, the progress and the employments of the populations, and the meteorological condition of the localities. Moreover, the principal diseases which prevail in the localities concerned should also be returned, as well as the number of families in which phthisis prevails as compared with that in which it has not been met with for a more or less long period. 2. Cases circumstantially detailed are essential for all that relates to hereditariness, contagion, etc.; and, while these should leave no doubt as to the correct diagnosis of the disease, they should contain as much information as possible concerning its etiology. In reference to *hereditariness*, they should indicate the condition of health of the relatives, whether progenitors, descendants, or collaterals; the epoch to which the origin of the tubercular affection could be referred; the health of the parents at the time of conception; the relations which continued to exist between the patient and the members of his family themselves suffering, or his more or less prolonged and complete separation from them; the characters which the phthisis exhibited in the various members of the family; and the conditions under which the disease arose in the first of those attacked, and of the localities he inhabited. In respect to *contagion*, the cases should establish whether there had been habitual and prolonged residence among phthisical persons, and whether these were relatives or not; what were the frequency and intimacy of the relations of the patient with those from whom he had seemed to contract his disease; whether he had nursed them, and whether excessive fatigue had been incurred; in the cases in which the transport was supposed to be due to the use of clothing or beds in common, the stage at which the tuberculosis had arrived when the contagion was effected; whether in the case of a woman seeming to contract the disease from her husband, she had borne children to him, and at what epoch; and, in general, the time which elapsed between the presumed epoch of contagion and that at which the first symptoms appeared.

PARLIAMENTARY.—THE CHIEF SURGEONCY TO THE METROPOLITAN POLICE—POOR RELIEF BILL—CONTAGIOUS DISEASES ACT AMENDMENT BILL—SALE OF POISONS AND PHARMACY ACT AMENDMENT BILL.

In the House of Commons on Monday, June 29,

In reply to Viscount Enfield, who addressed a question to the Home Secretary,

Sir G. Grey said: As this question refers to an arrangement made by me three years ago, I had, perhaps, better answer it. On the resignation of Sir John Fisher, the chief Surgeon to the metropolitan police, a question was raised as to the necessity or expediency of continuing the prohibition of private practice. I consulted Sir J. Fisher upon it, and his opinion was that it would be advantageous to the police that the chief Surgeon should have Hospital practice, but he thought extensive private practice would interfere with the duties of the office. I acted on this opinion. The office was first offered to Mr. Pollock, an eminent Surgeon, of St. George's Hospital, who had, besides, extensive private practice. He was unwilling to relinquish this, and therefore declined the appointment. It was then offered to and accepted by Mr. Holmes, an Assistant-Surgeon at St. George's Hospital, a gentleman also of the highest reputation in his Profession, and of whose qualifications for the office no doubt could be entertained. After some months' experience he found that the duties of the office did not nearly occupy the whole of his time, and it was represented with great force that no man in the prime of life and devoted to his Profession would permanently retain an office which did not fully occupy him. On a reconsideration of all the facts of the case I decided that the restriction might be relaxed by allowing the chief Surgeon to practise, subject to the condition that there should be no such absence from London as to interfere with his primary duty in connexion with the police, and that the salary was to be reduced from £800 to £500, the amount at which it had been fixed before the restriction was originally imposed. I have no reason to suppose that any inconvenience has arisen from the relaxation of the rule, but if the experience of the last two years, with respect to which I have no information, has shown that private practice has in any degree interfered with the efficient discharge of Mr. Holmes's duties, I am sure that he would himself feel that he should either give up his practice or resign the office.

The Poor Relief Bill was read a second time.

The Contagious Diseases Act (1866) Amendment Bill was read a second time.

The Sale of Poisons and Pharmacy Act Amendment Bill was read a second time.

On Tuesday in the House of Lords, the Scottish Reform Bill was advanced a stage.

GENERAL MEDICAL COUNCIL.

ELEVENTH ANNUAL SESSION.

THIRD DAY.—FRIDAY, JUNE 26.

Present:—

Dr. BURROWS, President, in the chair.

Dr. Risdon Bennett.	Mr. Cæsar Hawkins.
Mr. Cooper.	Dr. Acland.
Dr. Paget.	Dr. Embleton.
Dr. Storrar.	Dr. Alexander Wood.
Dr. Andrew Wood.	Dr. Fleming.
Mr. Syme.	Dr. Thomson.
Dr. Aquilla Smith.	Mr. Hargrave.
Dr. Leet.	Dr. Apjohn.
Sir D. J. Corrigan, Bart.	Dr. Sharpey.
Dr. Parkes.	Dr. Quain.
Dr. Rumsey.	Dr. Stokes.

Dr. Francis Hawkins, Registrar.

THE adjourned debate upon Mr. Syme's motion for the appointment of a committee on Medical education was proceeded with by

Dr. BENNETT, who expressed his surprise at the great diversity of opinion with regard to the terms of Mr. Syme's motion. He regarded this question as the most important of any that the Council could have before it. The Council was, in fact, a Council framed for educational purposes. He called attention to a clause in their Act authorising, and in fact calling upon, them to see that all candidates entering the Profession were possessed of the requisite amount of skill. Some of those who had opposed the motion seemed to fear that the Council would be unable to enforce its recommendations upon the licensing bodies; such, however, had not been the experience of the past, for those bodies had hitherto most cheerfully acceded to any suggestion that the Council had made. In fact, the greatest complaint that had been hitherto raised against the Council was that it had manifested too great a reluctance to interfere with the licensing bodies. (Applause.) And the time had now come when it became the imperative duty of the Council not to shrink from the important responsibility which was thrown upon it in that respect. He had heard an observation to the effect that it was not fitting the Council should take up this matter, because it had already been taken up by the Teachers' Association. He was greatly astonished at such a doctrine. Was it to be said that the Council should be prevented from performing its duties by reason of the action taken on the part of a self-constituted body? On the contrary, he thought it was a fact which showed how dilatory the Council had been in dealing with the subject. He felt quite sure that if the Council did not take up this subject, it would be taken up out of doors, and that indeed would justify many of the reproaches which were cast at the Council for want of efficiency in the discharge of the most important function assigned to it by the Act of Parliament. (Hear, hear.)

Mr. COOPER thought that the time allowed for study—forty-eight months—was insufficient, considering all the branches of Medical education. A most important method of study which had not been hitherto alluded to in this debate, was

that of apprenticeship. (Question.) The question before the Council was how the future Practitioner in Medicine and Surgery could best acquire that knowledge which would enable him to perform his Professional duties, and he believed the system of apprenticeship to be a most wholesome one. Young men were taught during their period of pupilage a mass of information most useful to them, and had especial opportunities for acquiring a knowledge of the Pharmacopœia.

Dr. Paget thought it was most desirable that the Committee should extend its deliberations beyond the period of the sittings of the Council. (Hear, hear.) He also hoped that they would consider it their duty to receive information from other teachers besides those who were members of the Council. He confessed to a great dislike of anything like interference with the liberty of teaching. (Applause.) In the first place, any attempt so to interfere would fail; and even if it were to succeed it would be mischievous. It was not in the power of any body of men to determine a system of teaching which should be best under all circumstances. Even if they could discover the best mode of teaching in the majority of cases, there would still be left a considerable minority of students who from a variety of reasons—from a difference of mental constitution and habits, and the like—would find a mode of teaching better adapted to themselves than could be laid down in any general plan. Something had been said about coercing, if necessary, the licensing bodies; but it seemed to be overlooked that they were not the only teaching bodies in the country. The great Medical Schools had been overlooked. In London alone he might instance St. Thomas's and St. Bartholomew's Hospital over which this Council had no direct authority. [Dr. Bennett: But, through the licensing bodies, an indirect authority.] He was at a loss to understand what Dr. Bennett meant when he spoke of a disposition on the part of the Council to shrink from enforcing what it thought right upon the different licensing bodies. After an experience of ten years on the Council, he was not aware that it had ever happened as a matter of fact that there had been any shrinking from such a duty. If there were an instance, he should like it to be pointed out.

Mr. Cæsar Hawkins, while not wishing to oppose the appointment of the Committee, trusted they would seek for a great deal of information from persons outside the Council. There had been no difficulty hitherto in getting the licensing bodies to accede to recommendations of the Council, and he had no fears on that ground. He preferred Sir D. J. Corrigan's amendment to the original motion, because he thought great latitude ought to be allowed to teachers. A teacher who understood his duty would not follow the same mode of instruction with one student that he would with another: he would look at the different capacities of minds, and would act accordingly. (Applause.)

Dr. Embleton hoped the Committee would be appointed, because he believed it would open up what was the very essence of the business of the Council; and, moreover, he believed that such action on the part of the Council was expected by the Profession and the public at large. He trusted the report of the Committee would not contain anything which could be said to be tyrannical to the licensing bodies, but that it would be a broad scheme allowing considerable elasticity and latitude to the different modes of teaching. It was impossible to have complete uniformity everywhere.

Dr. Stokes thought that the speeches which had been delivered might be taken as a sort of instruction or suggestion to the Committee. (Applause.) He wished to express a general accordance with what had fallen from Dr. Storrar, and particularly with regard to that system of coercive education which was involved in the certificate system. He believed that, except in certain universities where a strict system of roll call was established, the thing was a perfect farce; and it had the shocking effect of demoralising the students who received a certificate for having attended diligently, whereas, in fact, they might not have attended at all. Some order in the course of minor studies might be indicated, but it should not be enforced, and there should be considerable elasticity as to time and order. It might be a question whether certain matters of minor education should not be to some extent coercive. He alluded principally to those taught by demonstration—for example, anatomy, chemistry, botany, clinical Medicine, and clinical Surgery—and that because those were matters in which the student could not educate himself in his own chambers, and which could not be learned from books. He thought Mr. Syme in his opening speech had spoken a little hardly of the tutorial system. It was very wrong to confound that system with the system of cramming. (Hear, hear.) They were essentially different in this respect—that, while grinding or cramming merely filled the mind of the student with a certain quantity of facts, such a quantity and no more as would enable him to answer successfully at this or that examination, the tutorial aimed at teaching the student how to teach himself—(applause)—pointing out the difficulties of the subject and the principles upon which a correct conclusion upon this or that question connected with it might be arrived at. The tutorial system aimed at showing the student how he might ultimately, by his own exertion, obtain the highest scientific power—(hear, hear)—putting him in the way and instructing him in the method of procedure, most likely to succeed in that purpose. For example, in the institution with which he was connected, students of three years' standing were allotted a certain number of beds for the patients of which they were responsible to the Physician. They had to make daily reports as well as general reports, they had the care of the patient, they were responsible for visiting him whenever it was necessary—even at midnight if called upon. Two or three times a week these students, who were called "practising assistants," appeared in the theatre of the Hospital. Each read his own case, and was then called upon to give his diagnosis and the grounds of his diagnosis. He was then asked how the diagnosis would differ if such and such phenomena were present or absent, if they were constant or intermittent; he was asked as to the value to be attached to this or that symptom, according to its intensity, according to its order of succession, etc. He was thus taught general principles, and from those principles he was able to treat other cases. The great difficulty connected with the certificate system was that the income of the teachers depended to a certain extent upon it. He trusted the Committee would be appointed; but he was disposed to vote for Sir D. Corrigan's amendment, because he thought great latitude ought to be allowed as to the mode of teaching. (Applause.)

The debate was continued by Dr. Quain, Dr. Acland, and Dr. Fleming, and

Mr. Syme, in reply, said he never intended that the opinions of the Council should be addressed to the licensing bodies in a tyrannical way, but rather in a fraternal way. The fact of the diversity of opinion in the Council upon some of these points was an argument for a committee, but he could not help thinking that there was something like unanimity with regard to a great portion of the matters which he proposed to be submitted to that committee. He quite agreed that the committee should not be required to report until next year's session. Sir D. Corrigan had said several things in moving his amendment to which he (Mr. Syme) felt a strong desire to reply, but, forty-eight hours having elapsed, and the time of the Council having been so long occupied, he would pass them over with the exception of one. Sir D. Corrigan had represented him as saying that he desired to establish a monopoly in Medical teaching. All he had said, however, was that at present the schools seemed to be too numerous both in town and country, and that they should be restricted to a number which would allow the students to confer such an adequate remuneration upon teachers as would enable them to get men distinguished in the different branches of Medical science; and also that the students should be sufficiently numerous to create that spirit of emulation which was found to be so wholesome in all educational bodies. In such towns as Leeds, Birmingham, Manchester, and Liverpool, where there were large and admirable Hospitals, no doubt there would always be found men able to undertake the post of teachers and students, and sufficient remuneration to make it worth their while. The ground upon which Sir D. Corrigan proposed to leave out the first proposition of the resolution—namely, that there was no chance of coming to any agreement upon it—was the strongest argument for the appointment of a committee to consider it, and he trusted, therefore, the Council would agree to take that step.

The amendment was lost by 13 to 7. The motion was then put to the vote and carried. The Committee appointed were: —Mr. Syme (Chairman), Mr. Cæsar Hawkins, Dr. Acland, Dr. Andrew Wood, Dr. Thomson, Dr. A. Smith, Mr. Hargrave, Dr. Apjohn, Dr. Sharpey, Dr. Parkes, Dr. Christison, and Dr. Stokes.

Colonial Degrees.

The next subject upon the programme was the "Consideration of the communications to the Council from the Colonial Office, the Home Office, and the Chancellor of the University of Melbourne."

The following was the principal of these communications:—

The University of Melbourne, March 12, 1868.

Sir,—I do myself the honour to address myself to you on behalf of the Council of the University of Melbourne, inasmuch as it has been intimated to the Council that measures are about to be taken to introduce into the Imperial Parliament, during the present session, a Bill to amend the Act which regulates the Registration of Medical Degrees in England, of which Bill the carriage would be entrusted to you.

How far it may be proposed by that Bill to restrict the admission of gentlemen who have taken degrees in universities of the British Colonies, and received their Medical and Surgical education either altogether or partially in them, I am not aware; but intelligence recently received from the President of the General Council of Medical Education and Registration, in the course of correspondence had with him on the subject, is to the effect that probably a residence by such persons in England for a year before they can apply to be registered, will be required.

There is doubtless much force in the suggestion that those charged with the grave responsibility of admitting to registration applicants who arrive in England from distant countries should be allowed full opportunity to satisfy themselves as to the respectability and social standing of such applicants. Nevertheless, I may be allowed to submit, with great deference, the compulsory residence in England, for the period of one year, previous to the application, is not required; for it is quite possible to make provision that such persons may apply to be registered in England on producing to the General Council a certificate or certificates of the nature deemed necessary, signed by the Governor,

The Chief Justice,

The head of the religious body to which the applicant belongs,

The principal Medical officer of the colony, or any of the chief officers of State, together with the like certificate or letters discussory or recommendatory signed by the Chancellor, Vice-Chancellor, Warden, or Principal, or the representatives of those officers, and six members, at the least, of the University in which he has taken a degree. If deemed expedient, these certificates might be under the seal of the colony and University and be transmitted by the Governor to your offices; satisfactory evidence of the identity of the applicant should be also forthcoming, and it is worthy of consideration whether such testimony, authenticated by persons of such eminence and distinction, might not well be deemed as trustworthy and conclusive as any which a Professional man comparatively a stranger in England, could procure even after a residence of twelve months there. Moreover, remote as Victoria is from England, the facilities of intercommunication are so different now from those which existed only a few years since, the circumstances which might have then legitimately enforced such a delay are materially altered.

Thirteen mails are despatched from London for Melbourne, by Suez, in the course of the year, the transit is accomplished in about six weeks, and twelve mails leave London for Melbourne during the like period, accomplishing the voyage in about fifty days. A return mail goes by each route.

Thus, should a Medical man possessing a degree confirmed by the University of Melbourne, present himself for registration in London without the prescribed certificates, or should it be necessary to refer to the proper authorities in this country to complete any portion of the evidence requisite, a period of six months would amply suffice to procure all required, while any further delay could form no grounds for just complaint, as it would be attributed in all likelihood to some inattention on the part of the applicant, whose duty it would be to furnish all the testimony required by the Act.

Similar provision would, I believe, meet all cases affecting all other British Colonies.

I trust you will permit me therefore to impress upon you, with all due respect, and in the interest of the young men educated in our University who may aspire to enjoy in England the privileges of a British citizen, that you be pleased not to insist on any compulsory residence in England before registration by any of our Medical graduates who may arrive in the United Kingdom furnished with the certificates or other testimony mentioned above.

The Queen has been graciously pleased to ordain that the decrees which the Council of this University is empowered to confer are equivalent to those conferred by any University of Great Britain.

The Calendar of this University, which I have the honour to transmit with this, and to which I beg leave to invite your attention, will explain the nature of the incorporation, show you the letters patent granted by her Majesty, and also the statutes and regulations affecting the Medical School.

I may be allowed to express a hope, therefore, that you will be satisfied on examination of this volume that care has been taken by the Council to insure a liberal and generous compliance with the design of the Legislature, and the gracious confirmation by the Queen; and that if our Professional men can, on their arrival in England, satisfy the constituted authorities on the points required, the comity which influences Great Britain in her treatment of those of her sons who have betaken themselves to dwell in distant dependencies of the Crown, will induce you not to require the insertion in the Bill of the restriction in question.

I have, &c.

(Signed) Redmond Barry,

Chancellor of the University of Melbourne, Victoria.

The Right Hon. the Secretary of State, Home Department.

The letter addressed by the President to the Under-Secretary of State for the Home Department was also read.

18, Cavendish-square, February 29, 1868.

Sir,—In reply to your letter of February 11, 1868, transmitting to me a letter from the Colonial Office (and its enclosures), respecting the operation of sec. 31 of the Act 21 and 22 Vict., cap. 90, in the Colonies, and requesting me to favour Mr. Secretary Hardy with my observations thereon, I respectfully submit—

1. That the effect of the Act 21 and 22 Vict., cap. 90, as stated in the letter from the Colonial Office, is not correctly described. In that letter it is stated that the effect of that Act is "to protect persons resident in the United Kingdom from ignorant Practitioners, *by confining the right of practice to persons duly qualified and registered.*"

The Act 21 and 22 Vict., cap. 90, is not prohibitive, but merely enables the public to distinguish qualified from unqualified Practitioners, and accords certain important privileges to those registered under the Act There is no legal impediment to any one practising Medicine or Surgery, or any peculiar system of treating disease, in Great Britain. No one, not the most ignorant person, is legally debarred from practising Medicine or Surgery in Great Britain. The only difference between the qualified and registered Practitioners and unregistered persons is that the former have certain privileges accorded to them by the Act 21 and 22 Vict., cap. 90, which unregistered persons do not possess.

2. It appears to me for the well ordering of the Medical Profession, as well as for the safety of the community in any part of her Majesty's dominions, it is most desirable that all qualified Practitioners in Medicine and Surgery should be registered, so that the public may discern through the *Register* whom they may rely upon as well-educated persons. It seems, therefore, not unreasonable to require of a qualified British Medical Practitioner, when he goes to reside and practise his Profession in a colony of the British empire where all qualified Medical Practitioners are required by the laws of the colony to be registered, that he also should conform to such a wholesome regulation; but, at the same time, it would be only just and equitable that his certificate of registration in Great Britain under the Act 21 and 22 Vict., cap. 90, *should be admitted as a title to registration in the colony without any fresh Professional examination, but simply upon payment of a moderate registration fee.*

Should it be thought proper to amend the Act 21 and 22 Vict. cap. 90 (Medical Act, 1858), so as to bring the Colonial Ordinances into accord with the Imperial Act, it would be most desirable at the same time to make suitable provision for the registration of Colonial graduates who come to reside and desire to practise the Medical Profession in Great Britain.

Urgent applications from several colonies have been made to the General Council of Medical Education and Registration to have their graduates admitted on to the British Register; but at present the General Medical Council possess no power to do so, and, consequently, great inconvenience and occasional hardship is imposed upon such persons. A similar difficulty exists to the admission of foreign graduates in Medicine on to the British Register.

I remain, Sir,

Your obedient Servant,

(Signed) George Burrows, M.D.,

President of the General Medical Council.

The Hon. A. O. Liddell, Home Office.

Dr. Alex. Wood advocated a liberal policy in dealing with this matter, especially having regard to the present position of the Council in relation to the Government. At the same time he thought that in any communication with the Government upon the subject the Council should draw a very clear distinction between the mode in which they proposed to deal with the graduates and licentiates of colonial Universities and those of foreign Universities which had not the same respectable character. In conclusion, he moved "That this Council do now resolve that it is expedient that every facility be given for the admission on the Register of the names of Practitioners who have been duly examined and registered at the various Universities of the colonies of this country."

Sir D. Corrigan then moved an amendment—"That the General Medical Council see no objection to the introduction of a clause in any amended Medical Act that may be introduced, providing that graduates in Medicine of the University of Melbourne shall be entitled to register as Medical Practitioners in the United Kingdom on the production of the necessary proof of their having graduated in Medicine in the University of Melbourne, and paying the fees payable on registration in the United Kingdom." The question before the Council was whether the University of Melbourne was a body which required as good qualifications from its graduates as the universities of the United Kingdom. He believed there was sufficient proof of that, and the Council had, in fact, admitted it, because in the amended Act the proposal was to admit them to the Register after a residence of twelve months. Then the Chancellor of the University of Melbourne simply asked that that residence should not be insisted upon. He thought that a sufficient case had been made out for relieving graduates of that University from such a requirement. But he would not extend this privilege to all colonial universities; he would deal with each application, as it was made, upon its own merits. (Applause.)

Dr. Andrew Wood seconded the amendment. He thought they had done wrong last year to class colonial with foreign degrees—(applause)—and he trusted this measure would be carried, because it would show the colonial universities that the Council was determined to deal with them not only justly, but liberally.

Dr. Paget thought the question was not so simple a one as had been represented. Before the Council acceded to this request, it ought to be shown that the Medical Council of Victoria (if such a body existed) took the same views upon Medical education as the English Medical Council; otherwise, they would be undoing all that they had been labouring for to raise the standard of Medical education in this country—they would be admitting to registration, without any question, graduates as to whose course of education they had no power even to inquire. (Applause.) How could they then persist in imposing their recommendations on the licensing bodies of the United Kingdom? He said this with the greatest possible respect for the University of Melbourne, for all that he had heard of it was most favourable, but under the circumstances he thought a resolution to the effect that in any provision

hereafter to be made for the registration of foreign and colonial graduates, the University of Melbourne would, in the opinion of the Council, be entitled to the most favourable consideration, would answer every useful purpose.

Mr. Cæsar Hawkins said that, with regard to Sir D. Corrigan's amendment, it would not be wise to take up the single case of the University of Melbourne, and leave out all the other colonial universities, some of which he believed to be equally entitled to recognition. There were three excellent universities in India, and he could say from long experience that graduates of Calcutta were superior to many of our own. The Canadian universities also professed to do quite as much as that of Melbourne. He thought that within the next year they would learn more about the claims of the colonial universities, and then they would be in a better condition to take them into consideration as a general question. It was only fair for their own justification to remind the Government that the twelve months' residence clause did not issue from the Council, but from the Home Office. But Dr. Alex. Wood's motion would go further even than the University of Melbourne asked them to go, because it would impose no security at all.

Dr. Acland could not agree with Mr. Hawkins that this should be considered as a general question. He thought they should proceed as Sir D. Corrigan proposed—namely, by admitting each university on its own merits. To decide without the fullest information to admit the students of any university would be a most disastrous thing, because, having done that, the Council would throw upon itself the *onus probandi* whenever the next application should be made. He had received a letter from a distinguished Physician in the United States with regard to certain institutions in that country. He had also had several conversations with people in the United States as to how far there should be an interchange of educational recognition in matters relating to the Medical Profession between the United States and this country. He had replied that the Medical Council would entertain any proper request of that kind which was placed before them. (Applause.) But the great difficulty was how to draw the line. [The President being obliged to quit the chair, it was taken, at his request, by Dr. Paget.] It was difficult to draw a line between one colony and another; and when you get to Canada the line between that country and the United States was, as they all knew, not a very broad one. Again, they all knew that the differences between the Medical institutions of the United States was very great indeed. The whole of this question required the most serious consideration of the Medical Council; for, as Dr. Paget had said most truly, by admitting one you invite a very large number of applications; and if a precedent were established he (Dr. Acland) would feel it his duty to lay before the Council an application of a more or less formal kind from the United States. He therefore thought it might be well to refer the matter to a committee; for if any precedent were once established, there would be a difficulty in discussing the question afterwards. If, on the other hand, there were such evidence as rendered the Melbourne case so strong that the application could not possibly be refused, he would be prepared to vote with Sir D. Corrigan.

Dr. Storrar said if the application from Melbourne were admitted, it would be regarded as an injustice by every colonial body not equally favoured. And if their claims were generally admitted, the effect would be to place all those educational bodies outside the surveillance of this Council—which would be dealing more favourably with them than with any of the educational bodies of the United Kingdom. Moreover, however good the colonial universities might be at the present time, there was no security that laxities might not spring up in the future which would inflict upon the British Register a class of persons not desirable to be seen upon its pages.

Dr. Sharpey then moved, and Mr. Syme seconded, the following amendment:—"That, in any provision which may be introduced into an amended Medical Act for admitting to registration persons holding degrees or licences from the University of Melbourne, previous residence in England be not required as a condition of admission to such registration."

The amendment was carried, and then put as a substantive motion, when

Mr. Cæsar Hawkins moved, and Mr. Hargrave seconded, the following amendment:—"That, in any provision which may be introduced into an amended Medical Act by which power would be given to register graduates of the University of Melbourne in the British Register, previous residence be not required as a condition of admission to such registration."

This amendment was ultimately adopted.

The following resolution, moved by Dr. Sharpey, and seconded by Mr. Hawkins, "That the above resolution be communicated to the Secretary of State for the Home Department in reply to the letter of the Chancellor of the University of Melbourne," was then agreed to.

On the motion of Dr. Alex. Wood, seconded by Dr. Embleton, a resolution—"That a committee be appointed to consider the list of bodies whose *testamurs* are considered sufficient evidence of the student having received a preliminary education; that the committee do also consider and report whether any plan could be devised by which the Council could better supervise the preliminary examinations, or dispense with the necessity for frequent supervision, or in any other way promote the improvement of the general (preliminary) education of the Medical student"—was, without any discussion, put from the chair and carried.

The following was the committee appointed:—Dr. Alex. Wood (Chairman), Dr. Fleming, Dr. Acland, Dr. Embleton, Dr. Rumsey, Dr. Leet, and Dr. Storrar.

Adjourned.

Fourth Day.—Saturday, June 27.

Dr. Andrew Wood, as Chairman of the Business Committee' suggested that the Council should not sit on Monday, in order to afford time to the various committees to draw up their reports. There were no less than seven committees sitting—the Visitation Committee, the Finance Committee, Professor Syme's Committee upon the Method of Study, the Vaccination Committee, the Lunacy Committee, the Committee of Preliminary Education, and the Pharmacopœia Committee. He thought this course would be really a saving of time in the end.

The Chairman said that it would be necessary, in order to comply with the standing orders, that the Council should assemble at 2 o'clock; they could then read the minutes, and adjourn until the next day for the purpose suggested by Dr. Andrew Wood.

This course was agreed to.

The following resolution was read from the Minutes of the Branch Council for England for June 5, 1868:—"1st. That this Branch Council is of opinion that in future the labour and expense of visiting the Examinations may safely be abridged by limiting the visitations of each year to the Examinations of certain bodies only. 2nd. That this Branch Council, considering that the Examinations of the several English licensing bodies have been visited and fully reported on during two successive years, and that important changes are still in progress in several of these bodies, has not thought it necessary to repeat the visitations since the last meeting of the General Council."

State Medicine.

At the request of Dr. Acland, the Registrar read the memorial of the Committee on State Medicine of the British Medical Association, which was ordered to be received and entered on the minutes.

"*To the President and Members of the General Council of Medical Education and Registration.*

"The memorial of the Committee on State Medicine of the British Medical Association humbly showeth, that, whereas there is at the present time no sufficient guarantee for the general competency or the special qualification of Medical men appointed as Medical Officers of Health, and employed as Medical jurists; no recognised plan for conducting their education; nor any examining body for regulating the standard and testing the sufficiency of their acquirements; the members of this Committee earnestly urge upon the General Medical Council to consider, at their next meeting, the special qualifications required for such Medical officers of Health, and the mode in which they should be trained and licensed for the discharge of their varied and important duties.

"Signed, in name and by appointment of the Committee,

"A. T. H. Waters, *Chairman.*

"A. P. Stewart, *Secretary.*

"April 23rd, 1868."

Dr. Acland, in bringing forward his motion "That a committee be appointed to report on the steps proper to be taken, if any, for granting diplomas or certificates of proficiency in State Medicine, and for recording the same in the Medical Register, due regard being had to the interests of existing health officers in the several parts of the kingdom," reminded the Council that by their promise he had withdrawn a similar

notice of motion last year, because it had been somewhat mixed up with another question, from which it was now separated. He had thought it his duty to promote a combination of the licensing bodies for the purpose of decreasing the examinations and qualifications upon this department of Medical education, and he had done that because he saw looming in the future the question which would sooner or later have to be dealt with—namely, the granting of some particular licence or qualification for the special department of what was known as State Medicine. He was sorry to give up that part of the question, but he was compelled to do so for the present; otherwise the same discussion would be raised as they had heard last year, and in all probability, although perhaps by one vote only, his motion would be lost. He now, therefore, proposed to enter upon the real essence of the matter. He apprehended unquestionably the proper course was to appoint a committee upon the subject, which was one of the most serious importance, and one which touched upon some of the most difficult questions they had to deal with as an educational body. Twenty-five years ago, State Medicine, or preventive Medicine, had scarcely any existence; now, as a matter of fact, it had come to be a very important branch of knowledge, embracing a great deal of the most curious and interesting information, quite of a special kind. And it was supposed that because a man's name was on the Register, he possessed all this special knowledge. That might be so, but he (Dr. Acland) doubted it in a great many cases. A gentleman might be a very excellent officer of a union or of a parochial district for curative purposes, and yet be by no means an authority concerning the construction of Hospitals. It had been objected in some of the journals that this view of the case was a reflection upon the knowledge of the Profession; but nothing could be more childish than such an objection, because State Medicine involved all sorts of things. (Hear, hear.) The questions that had been put to him concerning levels, concerning the dimensions of sewers, concerning drainage, concerning the geology of districts, concerning water pipes and waste pipes, and engineering questions of all kinds—because he was a Physician—would form quite a catalogue of scientific knowledge in itself. He might or might not be wise enough to answer the questions, but the fact was that they were all within the category of what might be called sanitary knowledge. They had to be answered by somebody—sometimes by engineers who knew nothing about the science of health, and sometimes by Medical men who knew nothing about the science of construction—(applause)—and if anybody ventured to suggest that those persons were not thoroughly acquainted with the whole department of that special knowledge, he placed himself in an invidious position which no one would desire to occupy. His opinion was not only that those who were engaged in the therapeutical treatment of Medicine were not necessarily competent to answer all these questions, but it was very cruel to require it of them. It was difficult, no doubt, to draw the line, but it must be borne in mind that any proposition to inquire into what is exactly the kind of knowledge which should be comprised under the head of public or State Medicine, could only properly be laid down by such a body as the Medical Council. In his opinion it should be left perfectly optional to registered Practitioners whether they would acquire this knowledge or not; and when he proposed a committee to inquire into the best means for granting diplomas or certificates for State Medicine, and for recording the same in the Medical Register, he intended it to be in the way of an additional qualification which a man might or might not possess. It must be in the knowledge of the members of the Medical Council that many persons had devoted a great deal of time and attention to this subject, and had materially diminished their Professional income by so doing. He (Dr. Acland) could quite remember the time when a person who devoted his powers to preventive Medicine was considered to be attending to something which did not concern him at all, and the public looked upon him as *pro tanto* an inferior member of his Profession. Of course, that was simply absurd; because, if a comparison were to be drawn, he was prepared to argue that the prevention of disease was a higher branch of the Profession than the treatment of it, and, that being so, it was rather hard that persons who possessed such knowledge should not have a certificate granted to them which would mark them out, in the judgment of the Council of Medical Education, as safe advisers upon such matters. With regard to the latter part of his resolution saving the rights and interests of existing health officers, he thought it was only right that such a clause should be inserted. It would be a very hard thing that a man thoroughly skilled in these matters should be required to pass an examination in order to enable him to retain his appointment in that department of knowledge. (Applause.) He would now say a word upon the memorial which had been presented, because it touched upon a subject which was important in a national point of view. At a meeting of the Medical Association which took place at Dublin last year under the presidency of Dr. Stokes (and which he might be allowed to say in every sense was, nationally speaking, a success), one of the most important things which happened was the reading of a paper by Dr. Rumsey on the present state of State Medicine and the subjects thereto belonging—a paper which embraced a much wider view of the subject than he (Dr. Acland) had touched upon, because he had confined his attention hitherto to the sanitary part only. The matter was then referred to a committee who put themselves into communication with the Social Science Association and also with the Government. A great deal of correspondence had taken place. The two associations had combined, and had been to the Government, by whom they were received in the most flattering manner. The Home Secretary, the President of the Council (the Duke of Marlborough), and the President of the Poor-law Board (Lord Devon), met together for the purpose of receiving their deputation and hearing the whole state of the case. The importance of the question was represented to the Government, and at the same time it was stated that the Medical Council would have, as their duty in relation to it, to say what would be the proper education of persons in order to be well qualified to serve the country in the department of State Medicine. All admitted the need of special education for officers of health, upon what might be termed the Medico-legal questions generally. They had become so important and so extensive, and not only the Medical Profession, but the public themselves, were so keenly alive to the importance of this branch of preventive knowledge, that there appeared to be no question that it should be elevated into a special branch of education. It was an open question, however, whether that branch should be enforced upon every one or whether it should be optional; also whether it should belong to the Medical Profession at all, or to a special class of persons. Upon all these matters he would offer no opinion, but would leave it to the Committee to inquire into, only remarking that those were some of the principal points which they would have to report upon.

Dr. Stokes seconded the motion. Especially with regard to the Medico-legal question, it behoved the Medical Council to look after the interests and honour of the Profession; because, in the ordinary course of things in legal matters, any man who happened to be on the Register was selected as a witness no matter what the the case might be. That was a system calculated not only to defeat justice, but to bring irreparable disgrace upon the Profession. Nothing was more common than sneers which were aimed at Doctors in consequence of the evidence which men were compelled to give, and which they were not qualified to give, because, no matter how eminent a man might be, it did not follow he would make a good or even a proper witness in this or that case of Medical inquiry; the consequence being that in nine cases out of ten he retired from the court baffled and bullied and snubbed by clever lawyers. In the common case of inquests his firm belief was that in his country the method of conducting all those inquiries was more calculated to conceal crime than to discover it. Upon these grounds he earnestly hoped the Council would take up this subject. If they did not, it would be done for them. Oxford and Cambridge were already moving in the matter, and it was of the utmost importance that, to use a phrase which found favour now-a-days, some "deliverance" should be made upon the subject. (Cries of "Agreed.")

Mr. Hargrave had read with great care Dr. Rumsey's pamphlet, and there was one matter in it which required some explanation. At page 17 he had read with great surprise the following sentence:—"The secondary object of the institution of such a board might be to test, as the Army and Navy Medical Boards have so well tested, the real value of the diplomas previously conferred by the different licensing bodies." He objected to such a principle being admitted, and he trusted that the committee would not act upon any such assumption.

The President reminded Mr. Hargrave that the question before the meeting was as to the appointment of a committee. He could, if he chose, move as an instruction to the committee

that that portion of Dr. Rumsey's pamphlet should not be embodied in their report.

The motion was then put to the vote, and carried unanimously.

Mr. Hargrave then moved an instruction to the committee in accordance with the remarks he had made. (Loud laughter.) It was nothing for gentlemen to laugh at. He meant it in no offensive spirit to Dr. Rumsey or any other member of the board; but if such an idea as Dr. Rumsey had suggested were carried out, it would be the means of forming one central licensing body in London. It was opening up a new system. There were revolutions everywhere now-a-days—(laughter)—and he certainly hoped that some instruction would be sent to the committee which would be a safeguard to the licensing bodies.

Dr. Alexander Wood seconded the motion. He had read the pamphlet, but was not aware of the existence of the passage to which Mr. Hargrave had referred, and of which he thought it was absolutely necessary the Council should take some sort of notice. It was written under an entire misapprehension, because the Army and Navy Boards never had tested anything of the kind. He was sorry Dr. Parkes was absent, because he had been present when he (Dr. Alexander Wood) had a conversation with the Director-General in reference to this matter, and the Director-General had said, "If our returns to the Council are to be used as a means of testing the value of the qualifications of examining boards, or as a means of enabling one board to say to another your examination is not so strict as ours, we will withdraw those returns altogether." He therefore trusted it would never go out to the world that those returns were used in the way indicated in Dr. Rumsey's pamphlet, and in conclusion he wished to express in one sentence his belief of the extreme importance of the appointment of the Committee which had just been named, and his sense of the admirable speech of Dr. Acland which had made the subject so clear to the Council. He also was happy to recognise, with the single exception which had been pointed out, the extremely able pamphlet which Dr. Rumsey had written upon the subject.

Dr. Bennett objected to any such instruction as that suggested by Mr. Hargrave being put upon the Council—going as it did upon the assumption that they would proceed to do something which they were not at all likely to do.

Dr. Rumsey was extremely obliged to Mr. Hargrave and Dr. Alexander Wood for their criticisms on a passage in his pamphlet. He had no idea that any particular sentence or suggestion in that pamphlet would become a matter of formal criticism at the table of the Medical Council, or he would have been probably a little more careful as to the precise wording of that pamphlet. He therefore at once expressed his readiness as a member of the Committee to receive the advice Mr. Hargrave and Dr. Alexander Wood had given. (Applause.) He agreed with them that the course before the Committee was a perfectly blank one. The subject was entirely novel, and in fact they would have to consider in what way the study of State Medicine could best be advanced. (Applause.)

Dr. Alexander Wood said, after the very handsome way in which the suggestion had been met by Dr. Rumsey, Mr. Hargrave might withdraw his amendment.

Mr. Hargrave expressed himself perfectly willing to do so.

Dr. Bennett then moved, and Mr. Hawkins seconded, "That the Committee have power to send in their report so soon as it be read to the executive, and that the Executive Committee have power to print and circulate it among the members of the Council prior to their next session." The motion was unanimously adopted.

Secondary Education.

Dr. Storrar, in bringing forward the subject, said: I may be asked in the first place what I mean by secondary education. I mean that later education which follows, in point of order, what is known as elementary or primary education. In other words, whereas primary education comprise reading, writing, and arithmetic—what were facetiously called the three R's—whenever the classics, modern languages, mathematics, natural science, or any other subject of education is introduced with a view to carry the training of boys further, that is called secondary education. It is a perfectly conventional term amongst those who have directed their attention in any way to educational subjects. It is used in Parliament, and therefore I have used the word. I felt it right to add the words "in schools" because I do not desire to refer to secondary education in colleges. The secondary education which we have chiefly to do with is that in schools; and, moreover, I do not know really that, in regard to secondary education in colleges, there is much that calls for investigation, at least so far as we are concerned. With regard to the main question, I think it is hardly necessary for me to enter into an elaborate statement of the vast importance of general education to Profesional men. It is a question which has been so often discussed, and the importance of which has been often recognised, that I need only glance back a little at what has been done. Not, it is true, at the first meeting of this Council after its formation, because that was called somewhat hurriedly for the purpose of making arrangements for completing the Register, but at the next meeting, one of the first steps taken was to appoint a Committee to consider what should be done with a view to promote the general education of students for the Medical Profession. A strong opinion was entertained by some of the wisest members of this Council, who are now no longer with us, that down at the bottom of all questions of Medical education lay the question of general education. (Applause.) I cannot forbear alluding to the strong views entertained upon this subject by Sir Benjamin Brodie. He was himself a good scholar, he had the advantage of being brought up in a Wiltshire parsonage, he was well acquainted with both Latin and Greek, and I have been informed—I believe correctly—that in after life, when he resigned the active duties of his Profession, he amused himself by reverting to his Greek studies. When I had some conversation with him upon this subject, he entered very earnestly into this view of the question. I remember we were discussing at the time when it was expedient that young men should enter our Profession, and the age of 17 was suggested. He said "17 is quite early enough—almost too early—better make it 18—better keep young men at school a little longer;" and I dare say there may be some gentlemen round this table who can recall what I can recall—namely, that when young men were taken by their parents to consult Sir Benjamin Brodie about entering the Medical Profession, he constantly asked them this question—"How old are you? Answer: 16 or 17. Oh! take another year at school." The same views were entertained by our next President, Mr. Green, a man of great observation, and I am quite sure, Sir, I should not err in saying that your own views correspond, seeing that you yourself have had had the advantage of a Cambridge career. Mr. Green said to me once upon the standard of education—"You really have no idea how ignorant the young men are who come to the Medical Profession. It is impossible to teach them Medical knowledge with profit, because positively they begin in the Medical school their general as well as their Professional education." I know there is a great deal of truth in this; and the argument that was founded upon it was that it behoved us to be very careful in this matter of general education. However, we have gone on step by step. Our standard began very low. We had some difficulty in getting examinations made preliminary to Medical study, but this regulation has been pretty generally enforced. Not, however, without exception, because I observe that, in some parts of the country—Edinburgh, for instance—there is a habit of allowing certain studies to hang over. A man, for instance, may be rejected in Latin, and he is allowed to bring this subject up again at a future period. I think this is a great misfortune. I hope it will not last long: I hope it merely represents a sort of transient stage—I hope it merely represents the difficulty of all at once getting into the right track; for I conceive that such a system literally saps the very foundation of the principle of general education altogether. (Applause.) It is not simply to cram up a Latin author so as to be able to render it into English which is required; it is that discipline of intellect, that power of using the mind which it is so important to secure in young men who enter upon the study of Medicine. I believe that if we were to persevere in this Council in raising the standard of education and taking the best means of seeing that that standard was honestly maintained—shutting out those men who had made a mistake in contemplating entering the Profession at all, and inviting them to devote their attention to pursuits—honourable callings—which would not require that amount of culture which our own Profession does—I believe we should do good to the Profession and good to the individuals. (Applause.) That is one of the things which it would be desirable to do; and another is to secure that young men coming in to study the Profession have really received a good general education, and have shown by preparatory training their capacity to enter upon Professional studies. I believe if we arrive at that

point we shall have gone a considerable way towards solving many of the difficulties of Professional study, because it would be possible to leave to the young man this greater liberty in the selection of every course of Professional study that has hitherto been accorded to them. I have said that by these means we shall be able gradually to bring in a better class of men amongst us; but I think it is possible to do something more than this. I think we may see whether it is practicable or not to take some step to improve the schools of the country. And there is a special reason for taking this course at the present time. About three years and a half ago a Royal Commission was appointed to inquire into the endowed grammar schools of this country. I had the honour of being one of that Commission; and without venturing for a moment to assume that I was the Medical graduate best qualified to be on that Commission, I think there was great advantage in having a member of the Medical Profession upon it. (Applause.) I paid great attention to this matter; it was an exceedingly interesting one, and although, of course, it is not my intention to go into the details of the inquiry, I just wish to present, in a very summary way, some of the points which came out upon that inquiry. It lasted for three years, and comprises nineteen volumes of evidence. Dr. Storrar then went into a number of details respecting the endowed schools of the country, which went to show the necessity for a strong measure of reform, and he stated that, in view of the various modifications which trustees of endowed schools had been driven to initiate by reason of the Government inquiry, a Bill had been passed staying all special legislation upon the subject until the year 1870, by which time it was hoped there would be an opportunity of bringing those endowed schools within the scope of a general measure. In order to obtain a sweeping measure of reform, it was necessary to create a strong public feeling upon the subject; for, a great many of these endowments being in the nature of what was known in Parliamentary language as "jobs"—and every one connected with these matters knew that nothing died so hard as a mismanaged endowment—it was essential that every one interested in educational subjects should bring every possible influence to bear upon the Government to strengthen their hands and to enable them to carry a satisfactory measure upon the subject. With that view, he trusted the Medical Council, which had so large an interest in the training of the Profession, would show the Legislature that this was a question in which it was deeply interested. He therefore proposed that a petition should be presented to both Houses of Parliament upon the question. He had hitherto confined his remarks to the interests of those young men who were hereafter to be members of the Medical Profession, but he might be allowed to say a word on behalf of the existing members of that Profession. There was always a great anxiety on the part of Medical men to give their children a good education. (Applause.) But sometimes they could not get good schools at any price; and if the schools were to be got, the chances were the expenses of education were so great as to place it almost beyond their reach. The Medical Profession was not one abounding in riches: the pecuniary prizes were few; and all that the great majority of Medical men could do was to bring up their children with some degree of refinement, and to give them a tolerably good education so as to enable them to make their way in the world. Looking at the question, therefore, merely from the narrow view of poor private individual interest, it was very advisable that the Council should take some action in the matter. Contemporaneously with the Education Commission in England, there had been one in Scotland, the results of which were somewhat similar. It would be sufficient to say that the report of the Scotch Commission amounted to this—that neither in extent nor quality is the education of Scotland what it ought to be in proportion to the population and wealth of the country. Passing from Scotland to Ireland, he confessed himself utterly ignorant upon the subject of secondary education in that country. Of course he had heard a great deal about Trinity College and the Queen's University; he had also heard a great deal of the primary education instituted in Ireland for the last ten years; but of that education which came between—secondary education—he was not in a position to speak. At the same time he was quite aware how many highly educated gentlemen they had from the sister isle; but he expected he would not be far wrong in assuming that what we wanted they wanted, and that what was obtained for Scotland in the way of secondary education, Ireland was undoubtedly entitled to also.

Dr. Alex. Wood seconded the resolution. Having perused with great interest the voluminous mass of evidence to which Dr. Storrar had referred, and having taken a great interest in the subject generally, he might be permitted to say he had come to the conclusion that no young man was in a fit position to study Medicine without that amount of secondary education which was calculated to prepare his mind to receive his Professional learning. In the present state of our schools, it was impossible to obtain that education unless a man was prepared to send his son away from home in a great majority of cases. He had found, moreover, from his researches that there was a great amount of educational power running utterly to waste which might be well and usefully employed; and having found all these things, he had come to the conclusion that it would be extremely desirable such reform should be introduced into the kingdom in educational matters as would enable our youths to receive a suitable training, not only for the Medical Profession, but for every calling in life. The only question before the Council at present, however, was whether, as a Council, they were called upon to interfere in this matter. (Hear, hear.) It had been laid down repeatedly by the highest authorities upon their Board, and in repeated reports of committees, that while there was a general excellence in regard to professional education, there was a great deficiency in general education. And all must admit that if a young man began his Medical studies not only with his mind uninformed, but unformed, it was just throwing seed upon ground unprepared for it, and wasting entirely educational machinery to attempt to instruct him in the science of Medicine. He held that the Council was in duty bound to take part in this great educational movement; and to go to the Government and tell them that they found all their efforts to raise the standard of Medical education hampered and dragged down by the deficient state of preliminary education—the latter of which was absolutely essential as preparatory to the former. (Applause.) In his experience as Examiner of the College of Physicians at Edinburgh, he could now pretty well tell when he got a student of Aberdeen by the greater precision with which he answered questions, and by the greater clearness with which he comprehended those questions. This puzzled him greatly at first, but he found that the preliminary education of the students of Aberdeen was attended to in the parish schools in the locality in a way that was unknown in any other part of Scotland; and he was in a position to declare upon his honour that he could almost tell an Aberdeen scholar from the superior way in which his mind was prepared. (Applause.)

Dr. Risdon Bennett apologised for the interruption which he had found it his duty to make when Dr. Storrar was proceeding to define what an endowment was, feeling that it would involve the Council in an endless discussion.

Mr. Hargrave supported Dr. Storrar's motion, and said that, with regard to Ireland, the middle-class education had declined since the introduction of the national system. He was strongly in favour of a thorough preliminary education, and narrated an anecdote of the Duke of Wellington which showed the great value which that veteran attached to education in early life.

Sir D. J. Corrigan: This is a very important subject, and I must trespass upon the Council by some observations upon it. I should have proposed an amendment if Dr. Risdon Bennett had not brought forward his; and I now find I cannot accede to the original motion or to the amendment as it stands: because the amendment carries out a principle which I object to—namely, that it would be a proper course for us to petition the houses of Parliament on that very great subject of the education of the United Kingdom. I hold that it is, as regards us, altogether out of our province to do so, and the amendment I intend to propose is—"That, having regard to the importance of improving the general education of persons entering upon the study of Medicine, it is incumbent upon the General Council to take such steps as will insure that all students in Medicine shall have passed through a sufficient examination in general education either previously or within the first year of their Professional examination." The reason I have put in the condition as to the first year is this: that I think if a young man who is either bound to an apothecary or a Surgeon, or comes up to commence his Medical studies, or is bound to a provincial Surgeon—if, in either of those cases, a young man came up and missed his preliminary examination in October, it would be a great hardship that he should be thrown back the whole year. I think he should be allowed to go on with his apprenticeship or with the study of anatomy for instance, and thus he would have an opportunity

of compensating himself for the loss of a year. However, I am not bound to that part of the resolution. The learned Baronet added that he could not agree with Mr. Hargrave's strictures upon the decadence of education in Ireland. The only way in which it was possible to estimate that was by a comparison with some other standard of education. He found in the examination in Arts required for entering into the Medical Profession by one of the licensing bodies, of which they had a representative sitting in the Council, the following questions; and he did not think they were quite so bad as that in Ireland. On the very first page of that examination paper were the following questions:—"Give the female of bachelor." (Laughter.) "Give the female of bullock." (Laughter.) He (Sir D. Corrigan) remembered hearing of an Irish ploughboy, who, upon being asked by a lady what a bullock was, with that delicacy that belonged to his class, replied it was a calf's uncle. (Loud laughter.) But, proceeding with the examination paper, he came to a question which was worse still—"Give the female of friar." (Loud laughter.) He handed the document in for the examination of the President, in order to show that he was not misrepresenting it. Returning to the general question, he was happy to say they were all agreed that the preliminary education of Medical students was very deficient, and that every effort ought to be made to raise it. The question was how that was to be done. He cordially agreed with Dr. Storrar in the principles he advocated and in what he endeavoured to achieve; but he did not agree with him as to the means. His first objection was that it was little use their petitioning Parliament upon this tremendous subject. The whole question of education in Ireland was in a very great turmoil at the present time. A commission sat some years ago upon Erasmus Smith's endowed schools. Years had passed over, and no legislation had taken place. ("Hear, hear," from Dr. Storrar.) He was glad to find Dr. Storrar agreed with him, because it strengthened his opinion that if there was no prospect of obtaining legislation, it was of little use for the Council to expend its energy upon an endeavour to obtain it. If they did, the result would be that, whenever they called upon the licensing bodies to institute an efficient standard in preliminary education, their reply would be, "The Medical Council have petitioned Parliament for legislation: let us wait for that;" and thus the education of young men entering the Profession, in place of being improved, would be rendered worse. Among the wisest professions was the profession of lawyers; and the members of that profession would seldom be found wrong in matters affecting their own interest. What had they done upon this matter? Why, every student entering the profession of attorney who was not a graduate in Arts of one of the universities had to be examined in history, arithmetic, book-keeping, geography, English composition, and dictation, and, after the month of November, 1867, logic was to be added. It might be said the Medical Council recommended nearly the same thing; but the lawyers did not commit the task of examining their students to irresponsible bodies who might sell their certificates for a few shillings, but required that the student should pass a preliminary examination conducted by a special examining body appointed by themselves. He desired to see the same plan adopted with regard to the Medical Profession.

Dr. Andrew Wood said his first impression was to vote against Dr. Storrar's motion, but he must confess that by the skill, the genius, and the frank way with which the mover had introduced the subject, he had been induced to change his opinion, and he was now convinced that whatever other means they might use (and Sir D. Corrigan was quite wrong in supposing that because they petitioned Parliament they would therefore neglect other and more direct means), a case had been made out against the schools of the country as they at present existed. That was quite clear from the figure which young men cut when they came up for examination. In Edinburgh the other day thirty-six young men were cast out of seventy, and one of them, upon being asked who Copernicus and Galileo were, replied that they were two celebrated portrait painters. Another gentleman was asked who Copernicus was, and—perhaps he might have mistaken the question—he answered that it was a metal compound of copper and nickel. (Laughter.) Upon being asked what was the origin of the word idea, another gentleman replied that it was a combination of two Latin words—*id* and *ea*—and that it meant "this and those." (Laughter.) Another young man being asked what was an epidemic, replied that it was a medicine given for the purpose of inciting vomiting. (Loud laughter.) There must be something radically wrong in a system which produced such results, and therefore the Council was bound in every way to attempt to better it; first, by petitioning Parliament to give a general reform of education; and secondly, and very strictly, by exercising, as they had been doing hitherto, that power of visitation which secured that the licensing bodies were performing their duties. As he believed the one course of action need not interfere in any way with the other, he would give his vote for the motion of Dr. Storrar.

Dr. Apjohn was of opinion that the petitioning of Parliament belonged rather to the general public than to such a body as the Medical Council.

Mr. Cæsar Hawkins was of opinion that, however important the subject might be, the course suggested was *ultra vires* as far as the Council was concerned.

Mr. Cooper having spoken against the motion,

Dr. Storrar replied, and the motion, being put to the meeting, was carried by a majority of 9 to 8.

Adjourned.

Fifth Day.—Monday, June 29.

In accordance with the resolution passed on Saturday, the Council only held a formal sitting on Monday. Present:—Dr. Burrows, *President;* Dr. Bennett, Dr. Thomson, Mr. Hawkins, Mr. Cooper, Dr. Acland, Dr. Paget, Dr. Embleton, Dr. Storrar, Dr. Alexander Wood, Dr. Andrew Wood, Dr. Fleming, Mr. Syme, Dr. A. Smith, Mr. Hargrave, Dr. Leet, Dr. Apjohn, Sir D. Corrigan, Bart., Dr. Sharpey, Dr. Parkes, Dr. Quain, Mr. Rumsey, Dr. Stokes, Dr. R. Francis Hawkins, *Registrar.*

Communications were read from the Royal College of Surgeons of England relative to the requirements of that body for their diploma of Membership; and from the King and Queen's College of Physicians, Ireland, as to the age they admitted candidates to examination. These were ordered to be entered in the Minutes, and the meeting adjourned.

Sixth Day.—Tuesday, June 30.

Registration of Students.

Dr. Embleton moved—"That a committee be appointed to consider the Returns of Examinations from the Licensing Bodies and the Registration of Students."

Sir D. J. Corrigan objected to the motion, because the registration was found in practice to be a dead letter.

Dr. Andrew Wood trusted that the Medical Council would give an expression of opinion upon the subject; he did not think it would do to be told by a member of the Council that there was no use entering into the question because in Ireland they would only laugh at you.

Sir D. J. Corrigan: No, not at the Council; at the recommendations.

Dr. Andrew Wood said to laugh at one would be to laugh at the other. He would, therefore, support the motion, and would move as an instruction to the committee that they report upon how the recommendations are attended to in Ireland. (Laughter.)

Dr. Paget remarked that a strong reason in favour of the appointment of a committee was the fact that whereas all the others had completed their returns there was one body which had not made one since 1864—namely, the body which was represented by Sir D. J. Corrigan. (Hear, hear.)

After some remarks from Dr. Apjohn, Dr. Alexander Wood, Sir Dominic Corrigan, and Professor Syme, the motion was put from the chair, and carried *nem. con.*

Dr. Paget then moved that in future every person whose name shall be entered for the first time on the Medical Register shall be entitled to receive on application a copy of the Register for the year in which his name has been entered.

The motion was seconded by Dr. Storrar, and carried *nem. con.*

Dr. Quain handed in the Report of the Pharmacopœia Committee, with a recommendation that an additional gratuity of £50 should be presented to Dr. Redmond.

The Executive Committee was then ballotted for, and the following members were elected:—Mr. Hawkins, 23 votes; Dr. Acland, 17; Dr. Paget, 22; Dr. Andrew Wood, 21; Dr. A. Smith, 20; Dr. Sharpey, 22.

Deputation from the British Medical Association upon the Representation of the Profession in the Council.

The deputation, which consisted of the following gentlemen

—Dr. Sibson (President of the Council); Dr. Waters (Chairman of the Committee); Mr. Nunneley, of Leeds; Dr. Southam, of Manchester; Dr. Henry Simpson, of Manchester; and Mr. Watkin Williams (General Secretary of the Association)—was then introduced to the Council by Dr. Stokes, and presented the following memorial:—

The deputation from the British Medical Association beg to submit to the consideration of the General Medical Council the following propositions, founded on resolutions passed at the annual meeting held in Dublin in August, 1867, with the view of obtaining direct representation of the Profession in the Council.

1. That eight members to be elected by the registered members of the Profession should be added to the General Medical Council, the Association being of opinion that the Profession will not be adequately represented in the Council, as at present constituted, by a less number. That four should be elected for England, two for Ireland, and two for Scotland.

2. That the election should be by voting papers, to be distributed and collected by the Registrars of the Medical Council in the respective countries.

3. That the tenure of office should be the same as that of the members of the Council appointed by the Crown.

4. That every candidate should be nominated by at least twelve registered members of the Profession resident in the division of the kingdom for which he is to be elected; and he shall also signify to the Registrar in writing, fourteen days before the day of distributing the voting papers, his willingness to serve if elected.

5. The Association is of opinion that the addition of eight members to the General Medical Council, far from embarrassing its proceedings, will add to the confidence already reposed in the Council, and materially increase its influence.

6. The Association is of opinion that if the Council, in consequence of the addition of the members to be elected by the Profession, should deem it advisable to recommend a diminution in the number of its present members, that then a corresponding reduction may be made in the proposed number of the representatives of the Profession.

Francis Sibson, M.D., President of the Council of the British Medical Association.
Edward Waters, M.D., Chairman of the Committee.
T. Watkin Williams, General Secretary.

The President inquired whether it was the memorial of the whole body of the Medical Association, or simply emanated from the Council.

Dr. Sibson replied that in spirit it emanated from the whole body of the Association; and, in answer to some other questions of the President, gave a brief account of the manner in which the British Medical Association had come to the resolution to present this memorial to the Medical Council. He then spoke as follows:—Mr. President and Gentlemen, these resolutions were carried almost unanimously at a very large meeting in Dublin presided over by Dr. Stokes. With regard to the Association which I have the honour to represent, it has traditional claims to be heard upon this important question. It was the body who first brought forward the question of the new Medical Act, and it was through its influence, in fact, that the present Medical Council was constituted. In this very room in which you sit and I stand was brought together, on the invitation of our Council, through the courtesy of the Royal College of Physicians, a meeting of gentlemen from all parts of the kingdom, at which, Sir, I think, you were present, and at which three members of this deputation were present—Mr. Southam, of Manchester, Mr. Nunneley, of Leeds, myself, and another member of the Committee—the originator of it—Mr. Husband, who, I am sorry to say, is quite unable to attend here to-day. Therefore, the subject which we are bringing before you is literally a continuation of the work done then, and will be found, if you examine it, to correspond with the advice of the Association which I have the honour to represent. Let me now, Sir, call your attention to the spirit which animates the Association towards this Council. It was, so to speak, in taking steps to give aid to this Council in its work, and in token of our great approval of the work done here by the Medical Council, that this proposal originated. Acting upon the recommendations of the Association, I wrote to yourself, Sir, representing the Council, and also to the Home Secretary, from whom I had a most courteous letter in reply. Let us look for one moment at the constitution of the Council as it now stands. I may say there is no single member of it that represents what may be termed the body of the Profession. There are most important members sent up from the various universities who represent truly the education of the Profession; there are most important members sent up from the various bodies who confer power to practise Medicine, and, although some have said that it is possible those gentlemen may be influenced by the bodies they represent to the disadvantage of the true interests of Medical education, the Association that I have the honour to represent do not entertain such views, but are satisfied that every gentleman composing this Council always has done his utmost to promote the welfare of the Profession, quite irrespective of the individual body that he represents. We therefore take no exception whatever to the elements that compose the existing Council; on the contrary, they are the very elements we were the first to recommend, and if we had the work to do over again, where could we go to find a body of men so capable of supporting that which is best worthy of support in the Profession as those who form this Council? I do not allude to individual members, but I allude to those bodies who are certain almost to send here their very best men. But may I suggest to you that, if taxation and representation ought to go together, the body of the Profession has an eminent right to be largely represented on this Board? Observe, sir, that every pound that comes into the coffers of this Council comes not from the corporations, or from the universities, or from the Government, but from the General Practitioners and the Physicians and Surgeons of the Kingdom. And as I have named the Government, it is only due to the Government to say that it has always sent to this Council an admirable body of men; but it cannot be said that, admirable as they are—high in education, well-known as promoters of the public health—they represent the Profession. But although we have a large claim to be represented, the Association has no desire whatever to obtain a preponderating weight of votes in this Council; it aims only at one object.

The President: You do not mean that the Association is to be represented?

Dr. Sibson: No; I meant the Association was desirous that the Profession should be represented not in a proportion so as to get a preponderance of votes, but in a minority of one fourth; and, although we have asked for eight in the existing state of things, if the Board should be, in consequence of the addition (supposing it to be made) considered too numerous, we should consider, if the numbers were reduced, that the reduction should apply equally to those representatives of the Profession as to the representatives of the public bodies. The last part of my duty will be to point out to you, sir, and the Council the various advantages which, in our opinion, the addition to the Council of representatives of the Medical Profession will offer. It would bring undoubtedly from the Profession some among the very best men to be found in it. It would bring men from the provinces in England, Ireland, and Scotland who take an active part in the every-day life of Medicine and Surgery, who would therefore be most familiar with the daily wants of the Profession and the daily wants of the public in relation to Medicine, and who would be in instant communication with the whole body of the Profession upon any question that might be submitted to them. It would also obtain for this Council the active and unflinching support of the whole Profession in their work. It may be said that our members would not represent the public any more than the members who are now sitting in this room; but when it is considered that the Profession is brought into immediate contact with the public in every direction, and has ever identified itself with the public, there can be no doubt that, by the reinforcement of its body by eight members from the general Profession, this Council would obtain a number of men who would be able to wield great resources, and to place those resources at the control of this Council, helping it in the great work which it has in hand. Generally, let me say that our Association has shown its warm approval of the general line of action of this Council, and has heartily supported its labours. It desires not for itself (for the Association from the first has never asked anything for itself—it has no right to do so), but for the members of the Profession throughout the Kingdom, that you should add to your body their knowledge, their aims, their powers, which, united to your present influence, will give additional vigour to your action, moderation to your views, influence to your labours, and unity to your exertions.

Dr. Waters, as Chairman of the Committee, begged to endorse the sentiments of Dr. Sibson. When first put upon the Committee, with a view of bringing the matter into a shape that could be laid before the Council, he rather hesitated in accepting the post, inasmuch as the Council as at present constituted had then, as it had still, his entire confidence. His hesitation, however, was overruled, and ultimately he became Chairman of the Committee. The question was very carefully discussed, and the result was, after the matter had been brought thoroughly before the entire body, the present deputation was resolved upon. The more inquiries he had made amongst Medical men in the provinces, the more convinced had he become that it was essential to the well-being of the Council that it should be reinforced by the addition of representatives from the Profession generally. His con-

viction was that unless this prayer was listened to, there would be disunion where union would otherwise exist, and that if any measures were taken with regard to the Medical Acts Amendment Bill, there would be two parties in the Profession instead of one. His conviction was so strong upon this point, that he believed no Medical Acts Amendment Bill would be carried unless the wishes of the Profession in this respect were acceded to. In conclusion, he reminded the Council that universities, however celebrated, and corporations, however advantageous to the Profession, were subject to rise and fall with the times; but there was one body which could never fluctuate, and that was the body politic of the Medical Profession.

Mr. NUNNELEY, of Leeds, expressed his coincidence with the views of Dr. Sibson. He had been one of the earliest movers in the agitation for the amendment of the laws regulating the Medical Profession, and the views embodied in the memorial were precisely the views which had regulated the action and guided the opinions of those to whom the Medical Council owed its existence. At the outset it was the intention that a certain proportion of the Medical Council should be elected by the voice of the Profession at large; but the difficulty of recording their votes formed an insuperable objection at that time. The British Medical Association had been increasing in its labours for many years, and those labours had at last culminated in the passing of the Bill to which the Council owed its existence. It was in conformity with the same spirit that the deputation had waited upon the Council to-day to state that, until the Profession as a general body was represented, the views of the Medical Association would not be carried out. The difficulty of registering the votes no longer existed, because there was now a machinery by which that might be done. It was only in accordance with the spirit of the times that representation should go with taxation, and that the body who were rated for the funds distributed by the Council ought to have some voice in their distribution. He believed the general character of the Council would be very little altered by the proposed measure. Probably gentlemen of the same standing and of the same eminence in their Profession as those now returned to the Council would be elected, and would hold similar views; still it must strike the public at large that there are certain interests of the general body of the Profession which were not represented on the Council. There was that natural leaning which was inherent in human nature which would lead gentlemen who were nominated by the Government to look upon Government measures with a favourable eye, and it was therefore material that the general Practitioners, who were materially affected, and would be far more so in future, by Government measures, should have representation, in order to enable them to state their views. Laws relating to State Medicine would have to be carried out which might be injurious or obnoxious to the general Practitioner, who would have no voice in the matter unless he were admitted to representation on the Medical Council. Even if it were regarded as a mere prejudice and a mere question of feeling, it was one of those prejudices and feelings which it would be wise to give due weight to, and to the requirements of which it would be well to accede. (Applause.)

The PRESIDENT ventured to promise, on the part of the Medical Council, that the memorial would be most carefully discussed, and an answer returned after due consideration. Before the deputation retired he wished to state—what he was sure they must all be aware of—that the Council was not a self-constituted body, but one appointed by the Legislature, in numbers and proportions decided by Parliament. Both as to its constitution, as to who should or should not sit at that Board, and as to the functions and duties which it had to perform, the Council had no voice; all was defined by Act of Parliament, and without another Act of the Legislature the Council could not make any change. It was also right the deputation should be made aware that the Council saw no prospect of being able this year to ask for or to require an amendment of the Medical Act, and consequently of being able to include the question brought forward by the deputation; and, if he might venture to forecast the political horoscope, he should say there was little chance of being able to obtain a Medical Amendment Act even in the next. Looking at the great measures which were likely to be brought before the new Parliament, he thought there would be little chance of getting the Government to take up anything of the kind, and especially judging from the difficulty which had been experienced hitherto in that respect by the Council. He mentioned that because he wished to ask the Chairman of the deputation whether the Medical Association had any charge to bring against the Council of having neglected their duties. It was quite clear, from the memorial and the statements that had been made, that they did not bring any particular charge, but still they seemed to think there were certain interests in the Profession which were not duly represented on the Council. As no doubt considerable time—perhaps two or three years—would elapse before any legislation could take place, it was desirable to ask them whether they could point out to the Council any one particular instance in which the Council had been wanting in their duties to the general body of the Profession, for it would give great satisfaction to the Council if they could be made aware of it by the deputation, in order that they might turn their attention more closely to it until the time arrived when the interests of the Profession generally would be more directly represented in the Council. As a body, they were not aware of ever having intentionally or unintentionally neglected the interests of the Profession at large; but if the deputation could point out any particulars in which the Council could mend their ways for the future, until fresh legislation took place, he was quite sure the Council would most anxiously and willingly endeavour to do so.

Dr. SIBSON disclaimed any such view, and stated that, as far as the powers of the Council went, the British Medical Association was satisfied that the utmost had been done for the Profession. The great difficulty was that the powers of the Council were not equal to their deserts, and that if they had greater influence they would be able to do infinitely more for the Profession as well as for the public. They were not in hot haste upon this question; they had been agitating it for thirty years, and were quite ready to wait—content even if their descendants could reap the advantages of it. He would suggest that, as the Council had not the power to originate any change in their own constitution, a clause might be inserted in the next Medical Bill embodying the suggestions of the memorialists; and he need not assure the Council that, in putting forward such a proposal, they would have the whole Profession with them, and with the Profession the whole country; they would then not be obliged to wait in the anterooms of Home Ministers, but they would be able to carry out their views in a manner which was perfectly impossible under the present partial representation of the Profession.

The deputation then withdrew.

Dr. ANDREW WOOD rose to move the following resolution:—"That the Medical Council take into consideration its present constitution with a view of determining whether it be not advisable that it should be placed on a more popular basis, by the addition of a certain proportion of members to be chosen directly by the suffrages of registered Practitioners." He said:—Mr. President, I am afraid it will be necessary to occupy the time of the Council a little longer than I have been in the habit of doing during the present session; but it is quite evident this is a fundamental question, and one upon which the Council should not come to any decision, whether *pro* or *con*, without giving it their most careful and calm deliberation. I regret that the duty has devolved upon me of bringing forward this question. It was not my wish to have done it; but when I found that the Registrar had received no notice of motion upon the subject from any other member of the Council, I felt the time had come when we must grapple with the question, and give our deliverance upon it. (Hear.) It is not necessary in commencing the argument to go back to the time preceding the Medical Act, when one of the great bones of contention that delayed the passing of that Act for many years was the inability to come to any agreement with regard to the constitution of this Council. It was proposed by certain parties that the whole of the interests of the Profession, of the corporations that were represented and the universities which contributed so largely to the education of the Profession, should be handed over to a Crown Council—a comparatively small number of men, I think twelve was the number—who were to be paid the handsome salary of £1000 a year, and who were to sit together to decide upon the regulation of the Medical Profession. That was contained in Lord Elcho's Bill, and I need hardly say that the Profession rose in arms against such an idea. And I think, from the experience we have had during the ten years that have followed the passing of the Act, we may be very thankful that we succeeded in defeating that attempt. Then came a large number of conferences between various bodies representing the Profession in both Medical corporations and universities; and, after long agitation, they agreed upon the constitution of the Council, which was afterwards improved in the Bill brought in by Mr. Cowper and Mr. Walpole; and the consti-

tution of the Council to this day remains as it was laid down then. We heard to-day from the deputation which we have had the honour of receiving, that the British Medical Association were the first parties to engage in Medical reform, and that we owe this Medical Council mainly to their operations. Now, I do not mind admitting that they may have in part contributed to the passing of the Medical Act; but that they were mainly the cause of passing the Act I absolutely deny. Let us look now at what is the present constitution of the Council. We have England represented by eleven members, of whom four sit for universities, three for Medical corporations, and four for the Crown; Scotland is represented by six members—two for universities, three for Medical corporations, and one for the Crown; Ireland is represented by the same number and in the same proportion. So that we have of university members 8, of Medical corporations 9, and of Crown members 6, which makes up our number, with the President, who is elected by the whole Council. This Council, when it was originated, gained almost, if not quite, the universal approbation of the Profession. The British Medical Association did not object to it. The only suggestion they made, so far as I can see, looking over the records of those times, was that the Crown nominees should constitute one-third part of the Council. One reason why the British Medical Association were so anxious that the Crown nominees should be numerous was this, that it was understood at the time—I understood it, and I believe my friend Dr. Alex. Wood understood it, and many others—that one great object of having Crown nominees was that they might be representatives of the General Practitioners. I believe I am right in that, and we know that in the very first appointment made by the Crown there were two representatives of the general practice of the country, in the persons of Sir Charles Hastings, who I believe at that time was President of the British Medical Association, and our esteemed and lamented friend Mr. Teale. Since that the only representative of the general practice, who has been sent by the Crown, is my friend Dr. Rumsey, so that if there were expectations excited at that time that the Crown nominees were to be the means of representing general practice, those expectations have not been fulfilled. But it must not be supposed that we have any reason to find fault with the nominees sent by the Crown. On the contrary, when I consider that the Crown has sent into this Council such men as Sir William Lawrence, Sir James Clarke, our friends Professor Sharpey and Professor Parkes (and I might go on—I do not want to be invidious—I might name the whole of them), I do not think we have any reason to find fault with the nominations of the Crown. We have no reason to wish that we should get rid of the nominees of the Crown. (Hear, hear.) I say that for this reason, that I have seen in some of the Medical journals this proposition made—that as the Crown paid nothing for the expense of the Medical Act, we should get quit of the Crown nominees and convert them into popular representatives of the general body of the Profession. But it will be no part of the scheme which I am about to propound to-day that Crown nominees should be diminished. It is right, especially after what we have heard, that we should look at the *personnel* of the Medical Council as it at present exists. There are many misrepresentations abroad in regard to this—you find the cuckoo cry continually being raised that general practice finds no representation in the Council. It is quite true that general practice does not find direct representation such as has been suggested to us, and such as I am about to suggest, but there are General Practitioners upon this Council, and how the interests of General Practitioners are looked after will appear from the enumeration I am about to give you. I find, taking the twenty-four gentlemen who sit round this table, eight of them are pure Physicians, three are pure Surgeons, eight are General Practitioners—men engaged in the ordinary practice of their Profession, who are neither consulting Physicians nor consulting Surgeons; we have three scientific teachers who are not in practice (and I need hardly say their presence amongst us is a most valuable element)—(hear, hear)—and we have one gentleman who is experienced in everything—in teaching, in examining, and in practice—I need hardly say I allude to Dr. Parkes. It is right that that should go forth, in order that it may be proved that general practice is represented to a certain extent indirectly upon this Council. As a member of the deputation rightly stated, there was a reason why that representation should not be direct when the Medical Act was brought in—namely, that, there being no Medical Register in existence at that time, it was impossible to arrive at the opinion of the Profession. Therefore, we must not suppose that if there had been in existence the means of making the votes of the General Practitioners available, direct representation would not have been introduced into the Bill constituting this Council. If I were asked whether I would choose to have a Council composed entirely of popular representatives sent by the General Practitioners of the country and by the universities, by means of the General Councils of those universities which have been lately enfranchised in Scotland, I would say no, because, however anxious I may be for popular representation, I am desirous that it should be limited in quantity, and that we should not be reduced, as was said in regard to the Reform Bill, to the dead level of Salisbury Plain. Neither would I choose to have a Council wholly nominated by the Crown, nor to have an irresponsible Council. I would choose something between. The Council I would choose if I had the means of carrying it out would be the present Council, which contains the university element, and the choice of members by the primates of the universities; secondly, the Medical corporations and their election either by Fellows, as is the case with my own corporation and that of my friend Dr. Fleming and others, or by the Council, as in the case of my friend Mr. Hawkins; and thirdly, the Crown element; but in addition to that I would have members elected directly by the registered Practitioners, in order to add to those other three elements the popular element, which I think would tend—heterogeneous as those others are—if joined together in a close chemical union, to make a homogeneous and salutary compound. (Applause.) I advocate such a Council on account of its variety. (Hear, hear.) I think it is of very great consequence indeed that we should have a variety of constituents, because I feel satisfied that by this principle of selection the various interests will balance one another, the conservative tendency of the one acting as a drag perhaps upon the radical tendencies of the other, and *vice versâ*. I may be twitted by some of my friends with the inconsistency of holding very radical doctrines upon this matter, and yet be at the same time a Tory in general politics.

The PRESIDENT: I hope my friend Dr. Andrew Wood will not introduce general politics here. (Laughter.)

Dr. ANDREW WOOD: I use it as an illustration of my subject; and I will show you the analogy. It is that I consider that, in propounding this so-called radical doctrine, I am advocating the most conservative course you can take.

The PRESIDENT: Forgive me for reminding you that we do not argue questions here as to whether they are conservative or radical, but as to whether they will be for the good of the Profession or not.

Dr. ANDREW WOOD: I will show you how it is I apply this illustration. I say it will be conservative of the Council to adopt this reform, and for this reason—If the Council will not heed the agitation which is going on outside, and will stand by its present constitution, notwithstanding what we have heard to-day in regard to agitation, which is sure to occur if we go to Parliament for a Bill, in all probability in the Reformed Parliament we may have the old constitution of the Council *bouelversé*, and you may have perhaps those conservative elements which exist in it now destroyed. (Order.) I think I am quite justified in using that argument to induce you to take such steps as will show that we are determined, having considered the subject most carefully, not to be hindered by obstacles in the way of introducing that popular element into our constitution, which may perhaps be the preservation of the Council. I think it will tend to strengthen the hands of the Council—a thing we greatly need. I am one of those who have desired more than once to go to Parliament for the purpose of having additional powers enabling us to enforce our regulations; but I have no hope of success in that unless we put the Council on a more popular basis. Another thing is that it will make the Council more popular out of doors. For whatever the deputation may have said to you to-day, that all we have done has been so excellent, yet true it is, and a verity, that for the ten years this Council has been sitting we have some way or other, explain it how you may, not been a popular body hitherto. I also think that the infusion of the popular element and the admission of members from different parts of the country will awaken interest in our deliberations, which is not at present felt. (Applause.) I have often been surprised, on making allusions to the Medical Council and to what it was doing, to see how little gentlemen in the provinces cared about it, and how little they knew about it.

(Applause.) But if they are invested with the franchise, depend upon it they will watch carefully to see how their representatives act in this Council, and they will take an interest in our deliberations which will give a force and influence to them which they never hitherto had. I think also it will have the effect of giving more certainty to the decisions of this Council, and driving away that debility—I do not speak it offensively, but I may almost say a vacillation which has from time to time characterised the decisions of this Council. It will also have the effect of exciting among the Professional gentlemen an *esprit de corps*, which they have not at present. That has been my experience in the case of the Scottish universities. Before the passing of the recent Act, the graduates attended their lectures, took their degrees, and there was an end of their connexion with the universities. But I find at this moment we are in the midst of elections which are exciting the greatest interest, both in the election of our Chancellor and in the election of Members of Parliament; and the result is that there is amongst all the members of the universities an *esprit de corps* raised, which is attaching them to the universities, and which, I believe, will greatly benefit those bodies.

At this point, the President having to withdraw, Dr. Sharpey took the chair.

Dr. Andrew Wood continued: Another reason why this reform should be carried out was that the provincial element was not sufficiently represented at present. His scheme would be this—that the country should be divided into electoral districts. Taking the Medical Directory, he found there were 16,380 members of the Profession: in England 12,500 (comprising 2833 in London and 9691 in the provinces), in Scotland 1717, and in Ireland 2139. He proposed to increase the numbers of the Council by six. (Applause.) He would give one member for London, and dividing the provinces into three districts, Northern, Midland, and Southern, he would obtain manageable electoral bodies of 3000 voters, and then England would be well represented. In regard to Scotland, with all his national love and desire to do what he could for her, he thought in justice she could not claim more than one member, and the same with regard to Ireland. There were reasons for dividing England into districts; otherwise all the members might be chosen from London, and the provinces would still go unrepresented, and he had no hesitation in saying that the gentlemen who would be returned from the provinces—able men, high in their Profession, who were now practising there—would be cordially welcomed by the Council. Another advantage of dividing the districts was that you obtained manageable members for scrutineers, etc., and the plan he proposed to adopt was that the Registrar of the Branch Council of England should issue and receive the voting papers for London, and appoint a special Registrar for each of the three English districts, one for Scotland, and one for Ireland, to whom the voting papers would be returnable. Then the numbers would be summed up by those Registrars respectively in the presence of the movers and seconders of the candidates, and the result being ascertained would be sent up to the President, whose duty it would be to notify the election in the *Gazette* to the country. He had given these particulars to show that the scheme he proposed was a workable one; but of course he was anxious that the matter should be referred to a committee to consider the details. He was opposed to any curtailment of the numbers of the Council in order to admit the popular representatives; because who was to be disfranchised? He doubted whether there was any Marcus Curtius ready to leap into the gulf for the sake of pure patriotism—(laughter)—and he believed any attempt to modify the existing constituencies in that way would bring the whole house about their ears. It had been often said, and especially by the Medical press, that there was a great deal too much talk in the Council and very little work. In fact, some of the journals had gone the length of selecting the inveterate talkers, at the head of whom he believed Sir Dominic Corrigan enjoyed a proud pre-eminence, he (Dr. Andrew Wood) came second, and his friend, Dr. Alexander Wood, third. (Laughter) He did not care about being held up for that, for, if they expected members to come up here as simply delegates to carry measures without discussion, they had very much mistaken their men. There was no deliberative assembly in the world where there was not a large amount of superfluous talk. Go to Parliament, and ask the reporters if it was all wheat and no chaff there, and they would soon tell you their experience upon the subject. The truth was, that just in proportion as views obtained ventilation in free discussion, the results were good. He therefore maintained that a great many accusations had been brought against the Council with regard to talk which were undeserved, and if it were suggested that the admission of popular representatives would increase the talk, he answered that provincial members were, as a rule, common-sense men, whose views it would be most advantageous to the Council to hear, because they were constantly in direct contact with large numbers of their brethren in the Profession and with the public, and therefore knew by experience what were the wants of the Profession on the one hand, and the wants of the public on the other. Again, it was said that the Council was already too numerous. He did not think so, and if any one had come into the Council Hall yesterday and seen five or six Committees all sitting busily employed for six hours, and found that there was difficulty in manning those Committees, they would come to a different conclusion. He was glad to see a tendency day by day to increase the working Committees—(applause)—and he believed that six more members upon the Council would be a great assistance in this respect, and that the deliberation of the Council would be shortened by having the work done, to a great extent, by committees. But the great master grievance was the expense, and he found that so distinguished a man as the Right Honourable Robert Lowe had taken occasion the other day to allude to this. He (Dr. Andrew Wood) had for some time past deplored this expense. Being subject to the reproach, whether justly or unjustly—he did not think justly—worked in a very baneful way against the influence of the Council, and therefore he would be the last in proposing this addition to the numbers of the Council. He was prepared to advocate a measure which would not increase, but decrease the expense. By reducing the fees from five guineas a day to £4, and, still better, to £3 10s., there would be a diminution. But, better than that, he was thoroughly convinced that it was the duty of the Council, by a self-denying ordinance, to reduce their fees from five guineas down to two guineas. Was it an object of money to any of them? He did not believe that the men who composed the Council should be men who could be swayed in any degree by pecuniary motives; and if the remuneration was reduced to two guineas, they would not only not add to the expense of the Council by the addition of the six members, but would really save £600 a year. He was satisfied that, just in proportion as they decreased the expenses and took away that opprobrium, the cause of the Council would increase out of doors. It must be but an *honorarium* at the best, for he was satisfied that the majority of the gentlemen sitting round were attending even now at a large pecuniary sacrifice—(applause)—and he felt therefore that they ought not to be twitted in the manner that they had been in the Medical journals in reference to this matter. However, he would take away even the chances of such a reproach by adopting such a scheme as no one could cavil at. As a member of the Executive Committee, he had to come to London from time to time, and two guineas a day were considered a sufficient remuneration for his services. Why should they make fish of the Executive Committee, and flesh of the General Council? (Laughter.) Let them adopt the low tariff and save £600 a year, and he would be bound to say they would not feel the same difficulty that was felt with regard to the disestablishment of the Irish Church—(order)—for they would know perfectly well what to do with the money. It had been said by this measure you would introduce the element of agitation and possibly of discord. He did not fear that. He did not find that men, when they were enfranchised, were a bit deteriorated; he had been "educated" up to that point. (Loud laughter.) He was quite sure that a little wholesome agitation in the Profession would, upon the principle of *agitatione purgatur*, be a great service. He thanked the Council for the patient way in which they had listened to his scheme. By voting for the present resolution, they would not pledge themselves to any course except as a resolution containing the words "with a view to determine whether it be advisable that it should be placed on a more popular basis," could be said to pledge them. He was happy to say that Sir Dominic Corrigan agreed largely in the great features of the scheme, and had done him the honour of seconding the motion.

Sir D. J. Corrigan, in seconding the resolution, said he would reserve his remarks until a later period in the debate.

Dr. Rumsey stated that Dr. Andrew Wood had made a mistake in his classification of the Council into Physicians, Surgeons, and General Practitioners, for that the late Sir Charles Hastings was strictly a Physician, while the late Mr. Teale, who, since our last session, has been called to his rest

from the toils and cares of a distinguished career, was as strictly a Surgeon, while for himself he might say that for many years he had ceased to practise among that honourable and useful body, the General Practitioners. On the general question, while admitting the force of many of the remarks both of the deputation and of Dr. Andrew Wood, he wished to remind the Council that the more purely representative the constitution of this body might be made, the less would it be adapted for executive functions—the less readily would it be intrusted by Parliament with administrative functions—the more difficult would it be to obtain from the Legislature those more summary executive powers with which many, both in and out of the Council, wished it to be endowed. He must also protest, as one of the Crown nominees, against the assumption that he and his colleagues sat at this Board as representatives of the Practitioners of this kingdom. For himself, he must strongly assert that he represented no Professional interests—nothing but the interests of the public, the safety of the community, the preservation of health, and the prolongation of the lives of the people.

Sir Dominic Corrigan drew attention to a phrase which had been used in the discussion—namely, General Practitioner. The memorial referred to the "Registered Practitioners" of the United Kingdom, and it was quite necessary the distinction should be kept up, because the representation of General Practitioners as a class would be attended with insuperable objections. He regretted the President was absent, because he felt bound to criticise the course which he had taken in the conference with the deputation. He had challenged them to show that the Council had ever failed to protect the interests of the Profession, the conclusion being that if they had never so failed there was no ground for the application. He remembered an occasion when the pecuniary affairs of a large body were at issue, and a motion was brought forward to have the financial arrangements put in better order than before, an officer of the company, instead of listening to a discussion on the merits of the plan proposed, jumped up and challenged any man round the table to say in what respect he had been guilty of defalcation. He did not think it was a fair way for the President to deal with the deputation, and but for Dr. Sibson's tact there might have been an angry discussion upon it. Coming to the general question, he thought the discussion might be considerably narrowed, for he thought the Council should not enter on the consideration of any details by which the measure should be carried out. The only subject to which he directed his observations would be whether the principle was right or wrong; because if the principle was right, then the details might be left to a committee, and if wrong there would be no necessity to discuss details which would never be required to be put into operation. Was the present constitution of the Council, then, satisfactory to the Profession in the United Kingdom, amounting to about 15,000 persons? He thought after the evidence they had had, and after the discussions they had seen in the Medical periodicals for a considerable time, it was nearly impossible for any one to say that the present constitution was satisfactory to a very large portion of the Profession throughout the United Kingdom. It was not necessary to enter upon the point raised by the President—namely, that there was no prospect of carrying a Bill this session or next—because that was not the question. He had heard it said that it was not necessary to enlarge the Council; that its duties being confined simply to registration and education, the representatives of corporations and universities, and of the Crown, were quite competent to deal with those subjects. But was it possible for them to confine their attention to those two matters? or had they done so hitherto? Looking back through the journals in a cursory manner, he found that, as long ago as 1860, they had considered the regulations of the Poor-law Board and others with regard to apothecaries' licences in England. Would anybody say that was a question either of registration or education. Again, the question of inquests had been brought before them in the same year; and was it not obvious that they would have their knowledge and experience vastly increased upon such a question of State Medicine by having among them men from different parts of England, Ireland, and Scotland? He (Sir D. Corrigan) confessed that he had no practical knowledge whatever of inquests, and if he had to consider the subject on a committee or elsewhere he would be obliged to turn to these gentlemen whose absence from the Council he now regretted. Again, on the subject of vaccination, was there any member of the Council practically acquainted with it, or who had spent days and days vaccinating children and keeping a register? Not one. There, again, the importance of having popular representatives would be seen. Again, upon the question of Medical witnesses, what experience had they upon the subject? He found, in 1863, they had a very lengthened and able report on the Pharmacy Bill then introduced into the House of Commons. Was there any one in that Council, with the exception of Dr. Leet, who possessed any practical knowledge upon that subject? The Weights and Measures Bill was another instance in which they could arrive at no satisfactory conclusion without the experience of these men. And even upon the question Mr. Syme so ably brought before them, as to the best mode of education—whether young men should go for the first two years to a General Practitioner, or to the Surgeon of a county infirmary, and serve an apprenticeship—upon all these matters the information which men who had acquired a knowledge of their Profession by going into the world and mixing in it, and practising in the provinces—men who knew what information was required and who knew what their own defects were when they went out into the world, could give, would be most valuable to the Council, and was not possessed by those members who at present constituted it. Within the last two or three days they had had a most important subject before them—namely, the lunacy laws. Could there be a subject upon which they must more regret the absence of those men than that? For one case of lunacy which came before men in their position, five, ten, fifty, and a hundred would probably come before the general Practitioner. Dr. Sibson had also put forward as a reason for advocating the step which he proposed one of the most important principles, recognised everywhere in the English constitution—namely, that there should be no taxation without representation; and there was no such anomaly, as far as he knew, in England of a representative body paid for by funds derived from the taxpayers in which the taxpayers themselves had no single vote in the appointment of the representatives. He believed that any Medical Act Amendment Bill in which there was not a clause for the representation of the men who were taxed to pay the Medical Council would never be listened to by the House of Commons. He also agreed that such a measure would popularise the Council, for, disguise it as they might, they were looked upon at the present moment by the bulk of the Profession as a corporation that had done very little hitherto to protect the interests of the Profession, and one with which the Profession had no sympathy. Upon the subject of education, in which they all expressed so deep an interest, he did not think there was any body of men in the United Kingdom who had so strong an interest in maintaining a high standard as the registered Practitioners; while, on the other hand, the interests of the corporations was to get in as great a number as they could, so as to obtain as much money as they possibly could. (Loud cries of "Oh, oh!" and interruption.) I do not say their motive is that, but I say it is their interest. (Interruption.) Had not they had a licensing body within their regulation which made a thousand pounds in one year by giving its qualifications without any examination? (Applause.) And was he to be oh-oh'd at because he told the truth? He did not except the corporation which he himself represented. The College which had done him the honour of electing him president was afraid to advance much upon the subject of education because licensing bodies with equal privileges had not gone as far. (Oh, oh!) The men who represented the Profession at large would have a strong interest in supporting nearly the whole of this Council (because the representatives had very different feelings upon the subject from those whom they represented) in raising the standard of education, because they would have very possibly a direct interest to increase their own respectability by taking care that no man entered the Profession with a low status, either as to education or character. Lastly, the Council would be able to command more respect from the Government of the country. It was no use disguising the fact that when once men obtained their degrees, every connexion with the university was severed. But once let them have a representative upon this Council, and a great accession of strength would be the result.

Dr. Alexander Wood moved the following amendment:—"That the Council, as a Committee of the whole Council, take into consideration its present constitution with the view of determining whether any alteration should be made in its constitution in any future Medical Act to be proposed." He did

not think that the Council could go on after what they had heard of the Profession at large from the influential and respectable deputation which they had received without entering upon the consideration of the question; but he put it to the Council whether it was a wise thing that the Council should enter upon this inquiry with its hands fettered in the way which Dr. Andrew Wood's motion would bind them. He was not aware that the Council had failed in its duties of late, and he was at a loss for a reason to account for the rapid conversion of his friend Dr. Andrew Wood upon this subject. He believed that within the last few years the Council had made great progress in the right direction, and vindicated its position in a way that it had not done in former years. He recollected Sir Benjamin Brodie saying that of all evils that he could conceive falling upon the Profession, a popular representation of the Council was the greatest, and he had heard diametrically opposed opinions from very great authorities. Others thought that the Council should consist entirely of crown nominees. It was not a time now to discuss the advisability of those suggestions; it was enough to pass a resolution declaring that the Council was prepared to enter upon the subject, and then, either by the appointment of a committee or by a committee of the whole house, they might enter calmly upon the discussion of the question without being pledged in any way to any particular view.

Mr. Hargrave agreed with Dr. Alexander Wood that the motion would have the effect of prejudging the question. He vindicated the conduct of the President in the reception of the deputation, and contended that the questions put by him were most pertinent and necessary in order to arrive at the real value of the memorial. He also thought he was quite justified in asking whether the British Medical Association had any charge to bring against the Council. The President of that Association had replied as every one must who had studied the proceedings of the Council, that he had not. But the truth was that the ignorance on the part of the Medical Profession at large with regard to the proceedings of the Council was most extraordinary—(applause)—it put him in mind of nothing so much as the ignorance of English statesmen with regard to the Irish Church affair. (Laughter.) Again, Dr. Corrigan came forward——

Sir D. J. Corrigan: I beg your pardon, I am Dr. Corrigan's father.

Mr. Hargrave: I meant to say Sir Dominic Corrigan. I will be more careful in future; I will have your name stereotyped before me, so that I shall not be guilty of such an insult again. The reason why the Council was not popular was that the licensing bodies were not in heart with the Council. (Applause.) It had been asked what good had the Council done. He would give them one great fact amongst others—it had brought the Profession of the three kingdoms into union—(applause)—and if it had done nothing else but that, and prepared the Pharmacopœia, it need not be ashamed of its labours. (Applause.)

Mr. Cooper defended the licensing bodies against the charge of Sir D. Corrigan, that they were influenced by the desire of making money by their examinations and licences. With regard to the Society that he represented, so far from wishing to make money by their diplomas, they had, greatly to their honour, voted the sum of £1000 to the examiners as a recognition of the efficient and honest way in which they had conducted their examinations, and their standing endeavour was to make the General Practitioner in England competent to discharge the duties which devolved upon him. He would vote for Dr. Alex. Wood's amendment.

Dr. A. Smith said the deputation had admitted that no charge of incapacity or anything was to be brought against the Council, and his impression was that at the present session they had made more progress than they had for many years, for, by adopting the plan of devoting one day for committees, he believed the most beneficial results had followed, and would follow, far greater than would ever be obtained by discussion round the table of the Council. And he was disposed rather to wait for the result of their present labours than to vote for such a motion as Dr. Andrew Wood's; for he could not help thinking that it pledged the Council to effect a complete change in its constitution without a due consideration of the question. He therefore very much preferred Dr. Alex. Wood's amendment, because it merely pledged the Council to take the matter into consideration without binding it to any particular course.

(To be continued.)

GENERAL CORRESPONDENCE.

THE PHARMACY BILL.

Letter from Dr. T. Redwood.

[To the Editor of the Medical Times and Gazette.]

Sir,—In reply to my communication which appeared in your journal of June 20, and in which I challenged you to adduce any evidence that the system of education and examination provided by the Pharmaceutical Society and recognised in the Pharmacy Act of 1852, contributes in any way to foster counter practice among chemists and druggists, Dr. R. H. S. Carpenter says he has "known several instances where the certificate given by the Pharmaceutical Society has been used expressly for the purpose of deluding the public into a belief that its possessor was thus guaranteed to have a real Medical knowledge;" and he proceeds to say also that he has known of several cases of poisoning from the shop of one of these "practising druggists." I infer, from the manner in which he has stated the case, that he equally ascribes the attempt, in the first place, to delude the public by a false representation, and the accomplishment afterwards of some successful and some almost successful cases of poisoning, to the influence of the education and examination provided by the Pharmaceutical Society. Is this what Dr. Carpenter means? If not, I am at a loss to understand the full purport of his communication. I do understand, however, that he has advanced a very serious charge against men living, I presume, in his neighbourhood; and while I deny that his statement, in the form in which he has made it, is a valid answer to my challenge, I cannot think that it should be allowed to pass without some more specific explanation being given, which may exonerate the guiltless and fix the blame on those, if there be such, who deserve it.

I presume Dr. Carpenter would not admit that the Medical education and examination provided for members of his Profession tends to foster and encourage quackery, nor would he be any the more disposed to make the admission if it should be shown that some notorious quacks have certificates of examination and use them for the purpose of deluding the public. I am, &c. T. Redwood.

39, Russell-square, June 22.

NEW INVENTIONS.

NEW PREPARATIONS OF CARBOLIC ACID.

(*Mayne and Co.*, 2, *Wardrobe-place*, *Doctors'-commons*.)

Whoever promotes the use of carbolic acid, deals the heaviest blow possible against all fermentation, all parasitic organisms, and all the annoyances and illnesses that arise therefrom. From the fly that teases to the pestilence that destroys, all are abated, there is good ground for believing, by the timely use of carbolic acid. Messrs. Mayne's preparations consist of some fine for Medical use, and some coarse for disinfection. Amongst the former we notice a very convenient carbolate of glycerine; and a *Gray's glycerole of carbolic acid*, for use as gargle, lotion, or caustic, in various degrees of dilution; also a *carbolic ointment* and *mouth-wash*. For disinfecting purposes there are powders and liquids, the latter of various degrees of fineness, according as they are wanted for the sick room, or for the stable or kennel. The powder is brought within the reach of all classes, inasmuch as it is sold even in penny packages.

NEW BOOKS, WITH SHORT CRITIQUES.

Diseases of Children. A Clinical Treatise based on Lectures delivered at the Hospital for Sick Children, London. By T. Hillier, M.D. Lond., F.R.C.P., etc. London: J. Walton. Pp. 402.

*** This excellent little work on the diseases of children was begun by the author in the lecture style, which, however, was subsequently given up for the more ordinary form of composition. The materials are chiefly derived from the author's experience at the Hospital for Sick Children, and do not, therefore, include the affections of newly-born infants nor strictly Surgical diseases. The topics treated of are pneumonia, lobar pneumonia, pleurisy, rickets, tuberculosis, diphtheria, hydrocephalus, pyæmia and otorrhœa, chorea, paralysis, ascites, scarlatina, typhoid, skin diseases, epilepsy, and convulsions.

Journal of Cutaneous Medicine. Edited by Erasmus Wilson, F.R.S. For July, 1868.

*** Besides papers by Mr. Wilson on the therapeutics of skin diseases and on morphæa, this number contains others by Handfield Jones, Purdon, Drysdale, Hoblyn, and Hunt.

A Collection of the Published Writings of the late Thomas Addison, M.D., Physician to Guy's Hospital. Edited by Drs. Wilks and Daldy. New Sydenham Society. Pp. 242.

*** No one who has studied the valuable papers published by Dr. Addison in the Guy's Hospital Reports can fail to be pleased that they are now rendered more widely available by this separate publication. Although not an extensive writer, what Dr. Addison did he did well, and these papers may stand even now as models for imitation. His great and extensive knowledge of skin diseases renders the articles on that subject of much interest. If, however, we were asked to select the one most likely to be useful to the Practitioner, we should unhesitatingly point to that on the physical examination of the chest.

Principles of Forensic Medicine. By W. A. Guy, M.B. Cantab., F.R.S., F.R.C.P., Professor of Forensic Medicine King's College, and Physician to King's College Hospital. Third Edition. London: Renshaw. Pp. 655.

*** We gladly welcome a new and improved edition of this, which we hold to be decidedly the best student's text-book on the subject of Forensic Medicine. In almost every page are to be found the marks of painstaking and efficient revision, especially in the domain of toxicology. Dr. Guy first introduced engravings into a book of this kind, and has, in the present edition, greatly increased the nember of his illustrations in every department. The book will doubtless meet with the encouragement it so richly merits.

The Causes and Treatment of Lateral Curvature of the Spine. By Richard Barwell, F.R.C.S., Surgeon to and Lecturer on Anatomy at the Charing-cross Hospital. London: Hardwicke. Pp. 179.

*** Mr. Barwell remarks in his preface that no one ought, in the present plethora of Medical literature, to write except he has got something new to tell us. With this we most heartily agree, and we also think that Mr. Barwell has decidedly proved his right to address the Medical public. His methods of dealing with curvatures have much to recommend them—scientific accuracy, easy application, and satisfactory results. The dreadful cages, so-called orthopædic apparatus, were becoming an opprobrium to Surgery. Mr. Barwell may safely say he has changed all that.

The American Journal of Obstetrics and Diseases of Women and Children. Edited by E. Norggerath, M.D., Late Professor of Obstetrics and Diseases of Women and Children in the New York Medical College, and B. F. Danson, M.D., Lecturer on Uterine Pathology in the Medical Department of the University of New York. No. I. May, 1868. New York: Moorhead, Bond, and Co. Pp. 95.

*** This journal makes its appearance under most favourable auspices, containing four papers of very great value. The first is by Professor Gaillard Thomas, on placenta prævia; the second, one of the best treatises on croup in the English language, is by Professor Jacobi; the third is a highly suggestive article by Professor Storer on the relations of rectal to uterine disorders; the last is a case of diabetes in an infant by Dr. J. L. Brown. A few book notices, on the model of our own, complete a very good number.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 25, 1868:—

Leland, John Smallman, Boyle, county Roscommon, Ireland.
Orton, Frederic, Beeston, Notts.
Royds, William Alexander Slater, Bedford.

The following gentlemen also, on the same day, passed their First Examination:—

Aldrich, Edward Fredk., St. Bartholomew's Hospital.
Hardyman, Edward Chas., St. Thomas's Hospital.
Hitchcock, Henry Knight, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Arnott, Henry, M.R.C.S.E., Surgical Registrar and Pathologist to the Middlesex Hospital—Surgeon to the Western General Dispensary.

Day, Dr.—Physician for Out-Patients at the Samaritan Free Hospital for Women and Children.

Evans, Mr. E. T. B., of the St. Giles's and Bloomsbury Infirmary—Medical Officer of Males at the St. Pancras Workhouse, *vice* Mr. Platt, resigned.

Hayward, Dr. Sidney—Physician for Out-patients at the Samaritan Free Hospital for Women and Children.

Weller, G., M.R.C.S.E.—Medical Officer to the Merchant Seamen's Orphan Asylum, Snaresbrook, *vice* F. Collins, M.D., resigned.

NAVAL AND MILITARY APPOINTMENTS.

Nihill, Dr. John—To the rank of Staff Surgeon in her Majesty's Fleet, with seniority of January 1, 1868.

Royal Artillery.—Staff Assistant-Surgeon Thomas Maunsell to be Assistant-Surgeon, *vice* Eugene Francis O'Leary, who exchanges.

75th Foot.—Staff Surgeon Joseph Coleman Hornsby Wright to be Surgeon, *vice* Surgeon-Major Richard Domenichetti, M.D., appointed to the staff—Staff Assistant-Surgeon Henry Morris has been permitted to resign his commission.

MARRIAGES.

Grierson—Caldow.—On June 17, at Falmerston-house, Dumfries, by the Rev. Walter Macfarlane, D.D., Troqueer Samuel Grierson, Esq., Medical Superintendent of the Roxburgh District Asylum, Millholme-house, Musselburgh, to Janet, only daughter of the late James Caldow, Esq., ironfounder, Dumfries.

Pattison—Edger.—On June 25, at Kirby Stephen, Westmoreland, Tom W. Pattison, eldest son of W. W. Pattison, Esq., of Felling-house, Gateshead, to Rose Emily, eldest daughter of John Warren Edger, M.D. No cards.

Purvis—Vaughan.—On June 30, at Christchurch, Lee, John Prior Purvis, M.R.C.S.E., eldest son of Prior Purvis, M.D. Lond., of Blackheath, to Frances Mary, elder daughter of Wm. Vaughan, of Clarendon-villas, Blackheath. No cards.

Ross—Hamilton.—On June 23, at St. Bartholomew's, Dublin, John Haly burton Ross, Esq., M.B., Surgeon 39th Regiment, to Mary Read, only daughter of James Hamilton, Esq., 6, Elgin-road, Dublin.

Sale—Sharp.—On June 25, at the Parish Church, Rugby, the Rev. Edward Townsend Sale, to Emma Frances, eldest surviving daughter of William Sharp, Esq., M.D. No cards.

Thomas—Carlile.—On June 27, at Stockwell Congregational Chapel, Sidney Stamper Thomas, Esq., of the Avenue, Penge, youngest son of Dr. David Thomas, of Stockwell, to Margaret, eldest daughter of Edward Carlile, Esq., of Clapham-park.

DEATHS.

Allen, Harriet, widow of the late E. D. Allen, M.D., late of York, at 231, New Kent-road, S.E., on June 30, aged 58.

Denecke, Elizabeth, widow of George Denecke, Esq., M.D., Deputy Inspector-General of Army Hospitals, late of Calbourne-lodge, Isle of Wight, at Utterby Rectory, Lincolnshire, on June 25, aged 76.

Garrett, Catherine Louisa, the fondly loved daughter of Dr. and Mrs. Garrett, at Hastings, on June 26.

Kennion, George, M.D., Fellow of the Royal College of Physicians, at Oak Lea, Harrogate, on June 30, aged 54.

Lloyd, Lucy, widow of the late Robert Jones Lloyd, Esq., M.D., of Roscommon, on June 25, at Luddington-house, Egham, aged 53.

McDiarmid, Albert, M.R.C.S., M.D., Assistant-Surgeon, on board the P. and O. Steamer *Solette*, between Bombay and Suez, on May 24.

Nicholson, Adam, Esq., M.D., at Antigua, West Indies, on June 6, aged 49.

Painter, Richard, Surgeon, at 4, Beaufort-gardens, Brompton-road, on June 27, in his 71st year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Daventry Union.—Mr. George N. Swinson has resigned the First District; area 14,739; population 6329; salary £60 per annum. Also the Workhouse; salary £20 per annum.

St. Thomas Union.—Mr. Lucius Nicholls has resigned the Topsham District; area 4239; population 4361; salary £54 19s. per annum; no fees.

Wellington (Som.) Union.—The Fourth District is vacant; area 8802; population 2170; salary £42 16s. 9d. per annum. Also part of the Second District; area 5089; population 705; salary £20 per annum.

West Derby Union.—Mr. William G. Laidlaw, Assistant Resident Medical Officer at the Workhouse, has resigned; salary £80 per annum.

APPOINTMENTS.

Dolgelley Union.—Edward Jones, M.D. St. And., M.R.C.S.E., to the Workhouse.

Fylde Union.—Andrew A. Boyle, L.R.C.P. Edin., L.R.C.S. Edin., to the First Kirkham District. Thomas Shaw, M.R.C.S.E., L.S.A., to the Second Kirkham District and the Workhouse.

Presteign Union.—Wm. N. Thursfield, M.D. Edin., M.R.C.S.E., for the Union.

Wandsworth and Clapham Union.—John Annesley Brownrigg, L.R.C.S. Ire., L.K. and Q. Coll. Phys. Ire., to the Streatham District.

The Levee.—At the Levée held on Friday, June 26, at St. James's Palace, by His Royal Highness the Prince of Wales on behalf of Her Majesty, the following presentations were made:—Dr. H. Blanc, Bombay Army, on return from captivity in Abyssinia, by the Secretary of State for India; Assistant-Surgeon John Astley Bloxam, Royal Horse Guards, by Lieutenant-Colonel Duncan Baillie; Dr. FitzGerald, Madras Army, by the Secretary of State for India; Assistant-Surgeon J. R. Gaussen, M.B., R.A., by Colonel G. Gambier; Staff-Surgeon Frederic Harvey, R.N., by the First Lord of the Admiralty; Dr. Hooker, on appointment as Director of Royal Gardens, Kew, by Lord J. Manners; Assistant-Surgeon Kerr, by the Adjutant-General; Dr. Arthur Leared, by Sir Henry Storks; Assistant-Surgeon A. S. K. Prescott, Royal Artillery, by Colonel G. Gambier; Dr. Robert Pringle, Surgeon Her Majesty's Bengal Army, by Sir J. Hope Grant; Mr. Edward Harrison Solly, by Mr. Samuel Solly; Assistant-Surgeon H. B. Spurgin, Northamptonshire and Rutlandshire Militia, by the Marquis of Exeter; Assistant-Surgeon J. Wilson, M.B., Royal Horse Artillery, by Colonel G. Gambier. The following gentlemen attended the Levée:—Drs. Graham Balfour, Day-Goss, Scott Alison, Edward Smith, Forbes Winslow, and Yearsley; Messrs. Mitchell Henry and Samuel Solly.

The Astley Cooper Prize for the best essay on pyæmia has been awarded to Dr. Braidwood, of Birkenhead.

Prize for Theses at Montpellier.—Dr. Fontaines has left to the Faculty of Medicine of Montpellier a capital of 10,000 fr., in order to found an annual prize for the best thesis produced during the preceding year.

THE POET LONGFELLOW.—It will be gratifying to the members of our Profession to know that the first place of any interest in this metropolis which this distinguished citizen of the United States visited was the Museum of the Royal College of Surgeons on Saturday last, over which he was conducted by the Conservator, Mr. Flower, and with whom he remained some time, leaving highly pleased with all he had seen.

THE QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the University, held on the 27th ult., the following degrees were conferred:—M.D.—Messrs. Frederick C. Barker, of Q.C., Belfast; James Maybury Beamish, of Q.C., Cork; John Fritz Beck, M.A., of Q.C., Belfast; John Chambers, of Q.C., Belfast; James Chatterton, B.A., Q.C., Cork; William Boyle Coghlan, M.A., Q.C., Cork; Timothy Crowley, Q.C., Cork; J. Donovan, Q.C., Cork; Humphrey J. Donovan, Q.C., Cork; James Dunlop, Q.C., Belfast; Robert A. Jamieson, M.A., Q.C., Cork; G. Percival Hadley, Q.C., Belfast; Andrew Hegarty, Q.C., Belfast; Peter Longworth, Q.C, Galway; T. Browne MacAuliffe, Q.C., Galway; Richard Alfred Mowll, Q.C., Cork; St. Laurence Mullen, Q.C., Galway; Patrick Murphy, Q.C., Cork; William Forbes Newsam, Q.C., Cork; Richard Rice O'Brien, Q.C., Cork; William Henry Saunderson, M.A., Q.C., Galway; Robert Stewart, Q.C., Belfast; Robert Henry Stevenson, Q.C., Belfast; John Colvan Lugars, Q.C., Galway; Patrick Lynch Walsh, Q.C., Cork. The degree of Master in Surgery was conferred upon Drs. John Fritz Beck, M.A., Q.C., Belfast; James Maybury Beamish, M.A., Q.C., Cork; John Chambers, Q.C., Belfast; James Chatterton, B.A., Q.C., Cork; James Reid Dickson, Q.C., Belfast; John Donovan, Q.C., Cork; T. Browne M'Auliffe, Q.C., Galway; Richard Alfred Mowll, Q.C., Cork; St. Laurence Mullen, Q.C., Galway; Charles Gore Purcell, Q.C., Cork; William Henry Saunderson, M.A., Q.C., Galway; William Sharpe, Q.C., Belfast and Galway; John Colvin Lugars, Q.C., Galway; Patrick Lynch Walsh, Q.C., Cork. Mr. John W. Martin, Q.C., Galway, has qualified for the degree of M.D. and M.Ch., and Mr. Edward M'Carthy, Q.C., Cork, for the degree of M.D., but have postponed taking their degrees till another public meeting of the University. The following gentlemen have passed the first University Examination in Medicine:—Messrs. T. Middleton Armstrong, Robert Barry, Q.C., Cork; James Maybury Beamish, M.A., Q.C., Cork; John Martin Browne, Q.C., Galway; John M'Mahon Browne, Q.C., Cork; Samuel Haslett Browne, Q.C., Belfast; William Coulter, Q.C., Belfast; George William Daly, Q.C., Belfast; Andrew Dick, Q.C., Belfast; William Douglas, Q.C., Belfast; John Francis Enright, Q.C., Cork; R. Exham, Q.C., Cork; George Kilpatrick Given, Q.C., Belfast and Galway; Wm. Jos. Hastings, Q.C., Cork; Denis Harrington, Q.C., Cork; Samuel Hawkes, Q.C., Cork; John Roche Hayes, Q.C., Cork; Samuel Heron, Q.C., Belfast; Robert S. Hudson, Q.C., Belfast; Robert Alex. Jamieson (M.A.), Q.C., Cork; Samuel Johnson, ——; Michael Kearney, Q.C., Cork; James Love (B.A.), Q.C., Belfast; John Lloyd, Q.C., Cork; Edward M'Carthy, Q.C., Cork; Andrew M'Connell, Q.C., Belfast; Wm. M'Donnell, Q.C., Galway; Matthew B. MacKenzie (B.A.), Q.C., Belfast; William Kirkpatrick M'Mordie, Q.C., Belfast; Henry Murray Madden, Q.C., Galway; Daniel N. Martin, Q.C., Cork; Wm. Robert Moorhead (M.A.), Q.C., Belfast; Charles F. Murray, ——; W. Williams Murray, Q.C., Belfast; John Marshall Miles, Q.C., Cork; Edward Henry Morris, Q.C., Galway; Augustine Dominick O'Connor, Q.C., Cork; Thomas O'Sullivan, Q.C., Galway; Richard A. Peterson, Q.C., Belfast; Frederick M. Pierce, Q.C., Belfast; John Henry Rea, Q.C., Belfast; James R. Ross, Q.C., Galway; James Shaw, Q.C., Belfast; James Simms, Q.C., Belfast; William John Smyth, Q.C., Belfast and Galway; James B. Spence, ——; William F. Sweetman, Q.C., Cork; Henry Weldon, Q.C., Cork; William Williams, ——.

UNIVERSITY OF DUBLIN.—At the Summer Commencements, held in the Examination Hall of Trinity College on June 24, 1868, the following degrees and licences in Medicine and Surgery were conferred by the Right Honourable Sir Joseph Napier, Bart., Vice-Chancellor of the University:—*Baccalaurei in Medicina*:—Johannes Barton, *discipulus in Medicina;* Jacobus Gulielmus Brady; Ricardus Bookey; Edvardus Jones Butler; David Cahill; Franciscus Edvardus Clarke; Edvardus Wolfenden Collins, *olim discipulus in Medicina;* Herbertus Johannes Fausset; Carolus Edvardus Fitzgerald; Henricus Fitzsimons; Franciscus Jones; Georgius Ivie Mackesy; Johannes Gulielmus Moore, *discipulus;* Josua Robertus Minnitt; Gulielmus Flood Murray; Franciscus Peirce; Fredericus Taylor; Carolus Ricardus Whitty; Jacobus Henricus Wharton. *Magistri in Chirurgia*:—Johannes Barton, *discipulus in Medicina;* David Cahill; Herbertus Johannes Fausset; Carolus Edvardus Fitzgerald; Henricus Fitzsimon (*stip. con.*)(a); Gulielmus Henricus Goode; Franciscus Jones; Horatius Edmundus Maunsell; Johannes Gulielmus Moore, *discipulus;* Gulielmus Flood Murray; Carolus Ricardus Whitty. *Doctores in Medicina*:—Alexander Dickson (*honoris causa*); Edvardus Jones Butler; Adam Perry Newman. *Licentiati in Medicina*:—Henricus Commins; Edmundus W. F. Frost; Fred. Aug. Smyth. *Licentiatus in Chirurgia*:—Fred. Aug. Smyth.

SCHOOL OF PHYSIC IN IRELAND.—The following gentlemen, whose names are arranged in the order of merit, passed the first examination in Medicine held on June 26, 27, 29, and 30:—Reuben J. Harvey, Science Scholar of Trinity College, and gold medallist in mathematics, obtained the first Medical scholarship; Rickard Lloyd was awarded the second Medical scholarship; James Armstrong obtained the Exhibition. Jacob O'Connor, Wm. R. Evans, Richard Rainsford, James A. Clery; Edward E. Barrington, gold medallist in mathematics; J. Lucius Davoren, Richard D. Purefoy, Hatton Smyth, Eyre Jevers, Richard Gibbings.

THE annual meeting of the Metropolitan Association of Medical Officers of Health was held on Wednesday, July 1, at the Scottish Corporation-hall, Fleet-street, when Dr. Druitt was re-elected president for the ensuing year; Mr. Liddle, Drs. Aldis, and Iliff, vice-presidents; Dr. Aldis, treasurer; and Drs. Buchanan and Vinen, hon. secretaries. The secretaries presented a report recapitulating the work of the Association, and especially the subjects discussed at the evening meetings, which seem to have attracted considerable attention. Amongst these, the earth system of conservancy, as the Indians call it, seems to have been fully discussed. Animal vaccination was described by Dr. Ballard; Dr. Letheby on the degree to which the atmosphere is vitiated by respiration; Mr. Haviland on the connexion between geology and disease; Mr. Torrens on his Artisans' Dwellings Bill; and Mr. Chadwick on the construction of dwellings. Dr. Letheby had continued his able series of water analyses, which have been published in our columns and elsewhere. The Association seems to groan over the sham called "permissive legislation," and we suspect will have to groan till another epidemic of cholera or of some other pestilence creates a public panic and fit of repentance.

A PRIZE of £50 is offered to members of the University of Oxford for an essay on "The Comparative Longevity of different species of lower Animals and the Longevity of Man in different states of Civilisation." The prize is open to members of the University who, within the five years preceding June 15, 1869, shall have attended two courses at least in the physiological department. The essays are to be sent in before the day of the Commemoration in next year to the Professor of Physiology, who will adjudicate the prize with the aid of any person or persons who will be kind enough to assist him at his request. If any question should arise as to the interpretation of any part of this notice, the Professor of Physiology is to be referred to. The essays are to be distinguished by mottoes (the candidate's name being sent at the same time under a sealed cover) in the manner prescribed for the Chancellor's prizes.

CLUB REMUNERATION.—Some time ago we noticed the report of the annual meeting of the Worcestershire Medical Society, a very flourishing Society, embracing most of the Medical Practitioners in that city and the surrounding towns. That report stated that the Committee appointed to obtain information respecting the remuneration made to their Medical officers by clubs had recommended the adoption of the first two clauses of what is called the "Birmingham declaration." With a view to obtain the adhesion of the whole Profession within working distance, the Committee issued a circular to every Medical Practitioner residing within a radius of sixteen miles from the city of Worcester, asking him to join the movement. We hear that the appeal has been most successful, and that, with one or two exceptions, every Medical man practising in the city and the surrounding towns of Malvern, Evesham, Pershore, Droitwich, Stourport, Bewdley, and Ledbury, have signed a declaration not to accept less than five shillings per head for any future club engagement, and

(a) Mr. Fitzsimons having obtained, at the recent examinations, double first place (in Medicine and Surgery), the fees for the Mastership in Surgery, amounting to £11, were remitted in his case.

a vigorous effort is about to be made to raise the pay of present engagements to that figure. The Committee of the Medical Society of Worcestershire deserve credit for their energy, which, we trust, will soon meet with the success it deserves.

ANTIQUITY OF CESSPOOLS.—A discovery has been made at Maiden Castle, near Dorchester, of several ancient cesspits sunk in the chalk within the ancient British fortifications. They are well-cut circular pits, from four to ten feet deep, and it seems that, when one was full, it was covered with turf, and another sunk close by.

WATER! WATER!—There are notes of scarcity all over England. At Preston, in Lancashire, the corporation have caused notices to be affixed to the walls, cautioning the people against waste of water. At Wareham, in Dorsetshire, an inhabitant writes to the local paper to complain that his well is dry. Mr. Baily Denton writes to the *Times* to complain of the neglect in storing the water of the Thames valley. In London the gulleys stink everywhere, and, as London is committed to a water-sewage system, that system, minus water, means miles of cesspool in the three hottest months.

MUSEUM OF THE COLLEGE OF SURGEONS.—One of the most interesting features in connexion with the annual election of Fellows into the Council of the College is the display in the theatre of the additions about to be made to the Museum; these, Mr. Flower states in his annual report, are considerably above the average number in the pathological collection, a portion so interesting to the Profession; this increase is due to Mr. Mackmurdo, who has presented the whole of his collection of anatomical specimens, including many of diseased bones, and to the addition of twenty-six preparations illustrating injuries and diseases of the jaws, received with Mr. Heath's Jacksonian Essay on that subject. Besides these are many contributions of great value and interest, presented chiefly by members of the Council. The transference into the Museum and cataloguing of the osteological specimens which had been so long accumulating in the store-rooms of the College have made considerable progress. Among others 165 more or less perfect skeletons of birds, some Hunterian, and many others purchased with Mr. Gould's Australian collection in 1840, have been cleaned and made available for examination. Numerous additions have been made to the series of separately mounted homologous bones, which now forms a very important feature of the Museum. The collection of human osteology has received a considerable addition in a series of skulls, chiefly showing individual peculiarities of conformation, or illustrating developmental changes, also presented by Mr. Mackmurdo. The series of comparative anthropology has received important additions in two skeletons of negroes from West Africa, presented by Professor Huxley; a young female of the same race from North America, presented by Professor L. J. Sandford, of Yale College; and various crania, including three from Vancouver's Island, one of which shows a remarkable form of artificial distortion. Mr. W. L. Crowther, Surgeon to the General Hospital, Hobart Town, is again a valuable contributor to the Museum, having sent all the bones, prepared by him with great care and at a considerable expense, of a full-grown male sperm whale, or cachalot (*Physeter macrocephalus*), taken off the coast of Tasmania in November, 1864. The skeleton is upwards of fifty feet long, the cranium alone being sixteen feet nine inches, and weighs nearly two and a half tons. Mr. Crowther's energy and liberality in obtaining and presenting this specimen to the Museum has also been the means of furnishing materials for a detailed and fully illustrated description of the osteology of this strangely modified mammal.(a) The opportunity of comparing and contrasting in the same museum the skeleton of the sperm whale with that of the Greenland whalebone whale (*Balænamysticetus*) materially adds to the value of each. The skeleton of the large male giraffe which died by fire last year in the Zoological Gardens, has been added to the collection. This specimen is perfect in every detail, and mounted in the new method, by which the head, neck, limbs, tail, and portions of the trunk can be removed from each other and separately examined. There are also skeletons of the great armadillo (*Priodontis gigas*), one of the most remarkable of a very singular group of animals, being the largest of the existing armadillos, though still far inferior in size to its extinct ally the Glyptodon. There is also a very fine German wild boar, presented by H.R.H. the Prince Royal of Prussia. In the physiological series additions are continually being made. Some very instructive specimens, showing early stages of the development of the human brain, prepared by the President of the College, Mr. Hilton, have been added to this series, and Mr. Sclater, the Secretary, and Dr. Murie, the Prosector, of the Zoological Society, have prepared and presented such portions of animals which have died in the gardens as appeared desirable additions to the collection. Those gentlemen who have not visited the Museum for some time will be much struck with its crowded condition, although, from the admirable arrangement adopted by the highly accomplished Conservator, Mr. W. H. Flower, F.R.S., everything is displayed to manifest advantage; and, notwithstanding the greatest economy of space, the conviction is forced upon us that, sooner or later, more room for the fitting display of this vast collection will become necessary. How this is to be provided for, in the face of a diminishing collegiate income, will puzzle the authorities, unless indeed the State will afford the necessary pecuniary assistance.

(a) "On the Osteology of the Cachalot or Sperm Whale (*Physeter macrocephalus*)," by William Henry Flower, F.R.S., F.R.C.S., F.L.S., F.G.S., F.Z.S., Conservator of the Museum of the Royal College of Surgeons. 4to. Taylor and Francis. Plates.

SANITARY OFFICERS IN THE EAST.—The French Government, at the request of the International Sanitary Conference, has established at Djeddah, which is the centre of intercourse with Mecca, a Doctor of Medicine having the duty assigned him of keeping an incessant look-out on sanitary matters, and of furnishing reports to the Sanitary Councils at Constantinople and Alexandria. It is to be regarded as a very perilous post with respect to unhealthiness of climate. A French Hospital has also been established at Suez, being a very important point for the observations which are to be transmitted. Another new Medical post has been established at Teheran, in order to study the progress of epidemics in Persia and the neighbouring provinces.—*Gaz. Hebd.*, June 20.

SULPHATE OF ZINC IN DYSPEPSIA OR CHRONIC GASTRITIS.—Dr. Gillespie states that for several years past he has employed this remedy with as much success as attends the use of quinine in agues. He gives it in doses of half, gradually increased to two grains three times a day, either in pill or solution, combined with opium or hyoscyamus.—*Boston Journal*, May 14.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Subscriber for Ten Years.—For a student, Huxley or Rymer Jones; for one more advanced, Siebold and Stannius. On Zoology, Dallas or Milne Edwards.

Port Elizabeth, Cape of Good Hope.—"A. G. B." is thanked. Ammonia is generally esteemed a valuable remedy in snake-bite.

"*Beautiful for Ever!*"—Try the hyposulphite of soda in solution. If not successful, first wash the hair with a solution (ten grains to the ounce) of nitrate of silver; then use a weak solution of pyrogallic acid, and wash. If the solutions are very weak to start with, the required tint is better gained; if used strong, black results.

"*Neligan's Medicines,*" *by Macnamara.*—We are under obligations to a correspondent for calling our attention to some observations in our review of this work in the *Medical Times and Gazette*, May 30, 1868, which he thinks require correction. He points out, and we admit the fact most gladly in justice to Dr. Macnamara, that seven passages to which our reviewer took exception as "old-fashioned and vague," are parts of the original Neligan, which is praised, and not of Dr. Macnamara's additions, which are blamed, in these instances without putting the saddle on the right horse. Our correspondent further specifies instances in which he considers our criticism unfair. Thus, treating of sulphate of potass, we complain that "not a word is said about the doses in which it has really proved an irritant poison," whereas Neligan says "in doses of from two to four drachms this salt is stated to have occasionally produced symptoms of irritant poisoning." What we should have said is: Here is a purgative recommended in doses of half a drachm to a drachm, said to produce symptoms of irritant poisoning in double the dose; why are we not told the dose which has actually destroyed life? We have carefully read, and read again, the passages relating to this drug, and cannot anyhow reconcile them with each other and with the common use of the drug in English nurseries. To say the least, the passages are ambiguous. We rejoice, nevertheless, at the accounts we receive of the popularity of the book, and shall be glad to hear that the editor is deeply at work on the revision of a new edition which may defy the critic's malice.

We have been requested to draw attention to Dr. Muspratt's chalybeate now that the Harrogate season is at hand. Last year it is said to have done much good.

A Lecturer.—Mr. Quain will deliver the Hunterian Oration. It will be the first occasion on which the orator will fill also the office of President.

M. D.—The names of several gentlemen have been mentioned as having been nominated for the examinership in Medicine. Next week. Write to the Secretary.

H. J. M.—Unless your son obtains his diploma at the ensuing examination (about the middle of the present month), he will have to undergo the additional examination in Medicine. This new regulation will come into operation after October next; if, however, he passes before then the College of Physicians or the Society of Apothecaries, he will be exempt from the operation of the regulation.

THE INHALATION OF CARBOLIC ACID.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly allow us sufficient space to say that the jury's verdict on the cause of Mr. Berger's death is evidently in error where it states that the inhalation of carbolic acid produced the lamentable result. Our workmen frequently inhale carbolic acid in very large quantities during the process of its manufacture, and we have not known a single instance of ill-effect therefrom, and we can also state that it has been most extensively used in proper inhalers for several years in the cure of consumption, throat and chest diseases. To us it is very evident that Mr. Berger died from the effects of accidentally drinking carbolic acid; and, had any one been at hand to administer promptly a mixture of sweet oil and castor oil, his life might possibly have been saved.

We are, &c. F. C. CALVERT AND CO.

Tower Chemical Works, Bradford, Manchester.

CANCER AND TUBERCLE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In connexion with those experiments which within the last few years may be said to have settled the question of the inoculability of tubercle, I shall feel obliged if you allow me through your columns to offer the following suggestion.

The relation in which cancerous and tubercular disease, or the constitutional states on which they depend, stand to each other, is apparently one of antagonism. While cases do occur in which the former disease attacks persons previously affected with the latter, there is no well authenticated case on record in which recent tubercle and cancer have co-existed. On this ground, which is now well established, it has appeared to me, since Villemin first demonstrated the practicability of the proceeding, that by the artificial production of a tubercular state of the system we might reasonably hope to cure cancer.

The difficulty of obtaining cancerous animals has hitherto prevented me from determining this by experiment, and consequently, although I still intend to do so, I have deemed it advisable to offer the suggestion to the consideration of those gentlemen who are investigating the subject of the artificial production of tubercle, and whose opportunities of testing its value may be greater than mine. I am, &c.

63, Castle-street, Edinburgh, June 29. DAVID J. BRAKENRIDGE.

COMMUNICATIONS have been received from—

A. G. B.; Mr. ROBERT RAYNER; Mr. ROBERT HOWARD; Dr. OXLEY; Mr. ALBERT HIND; Dr. W. STRANGE; Dr. R. H. S. CARPENTER; T. I.; Dr. SIDNEY HAYWARD; Dr. MUSPRATT; Messrs. A. and C. BLACK; A SUBSCRIBER FOR TEN YEARS; Messrs. ELLIS and SON; Dr. BRAKENRIDGE; Mr. RICHARD LEY; Mr. GUILDFORD WAIT; Mr. J. SWINTON; Prof. ROLLESTON; Mr. W. J. SMITH; Dr. WILKS; Mr. B. CLARKE; Mr. BERKELEY HILL; Dr. BARNES; Dr. SUCKLING; Dr. REDWOOD; Mr. J. CHATTO; Mr. T. M. STONE; Dr. GERVIS.

BOOKS RECEIVED—

Sieveking on the Out-patient Department of our Hospitals—Braithwaite's Retrospect, vol. lvii.—Bible Animals, part 7—Aldis on the Sanitary Condition of the Parish of St. George, Hanover-square—Journal of Cutaneous Medicine, No. 6—Half-yearly Abstract of the Medical Sciences, vol. xlvii.—Mental Journal, No. 66—Medico-Chirurgical Review, No. 83—Report of the Manchester Royal Eye Hospital—Brown-Séquard's Lectures on Functional Nervous Affections—Ashe's Medical Education and Medical Interests—Edinburgh Medical Journal, No. 157—Medical Mirror, No. 55—The Practitioner, No. 1—Pharmaceutical Journal, No. 109.

NEWSPAPERS RECEIVED—

Colonial Standard—Dorset County Express—Medical Press and Circular—The Public Health.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 27, 1868.

BIRTHS.

Births of Boys, 1122; Girls, 1047; Total, 2169.
Average of 10 corresponding weeks, 1858-67, 1884·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	767	687	1454
Average of the ten years 1858-67	619·1	566·1	1185·2
Average corrected to increased population..	..	..	1394
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	3	9	2	10	2	23	3
North ..	618,210	5	7	4	2	10	10	51	3
Central	378,058	..	3	3	..	4	8	19	2
East ..	571,158	2	24	4	2	17	8	49	7
South ..	773,175	2	18	8	2	24	14	29	3
Total ..	2,803,989	9	55	28	8	65	42	171	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·869 in.
Mean temperature	63·6
Highest point of thermometer	88·0
Lowest point of thermometer	48·4
Mean dew-point temperature	52·6
General direction of wind	S.W.
Whole amount of rain in the week	0·29

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 27, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending June 27.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending June 27.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2169	1441	1454	88·0	48·4	63·6	0·29	29
Bristol (City) . .	167487	35·7	126	75	*68	..	..	..	..	..
Birmingham (Boro')	352296	45·0	235	171	121	81·6	45·2	60·7	0·19	19
Liverpool (Borough)	500676	98·0	395	290	259	80·0	46·5	59·3	0·09	9
Manchester (City) .	366835	81·8	291	208	*188	..	..	..	..	..
Salford (Borough) .	117162	22·7	125	59	45	81·5	44·2	57·8	0·57	58
Sheffield (Borough).	232362	10·2	177	122	139	82·8	41·0	58·7	0·32	32
Bradford (Borough)	108019	16·4	110	55	80	..	..	..	..	..
Leeds (Borough) .	236746	11·0	240	120	90	85·5	43·5	60·3	0·26	26
Hull (Borough) .	108269	30·4	79	50	58	79·0	44·0	58·5	0·67	68
Newcstl-on-Tyne, do.	127701	23·9	103	68	55	67·0	50·0	56·7	0·17	17
Edinburgh (City) .	177039	40·0	126	85	82	73·7	48·0	58·2	0·20	20
Glasgow (City) .	449868	88·9	400	262	248	74·8	47·0	57·7	0·52	53
Dublin (City and some suburbs) .	319985	32·8	200	157	110	..	..	..	..	..
Total of 14 large Towns . . .	6391080	34·7	4776	3163	2997	88·0	41·0	59·2	0·33	33
					Week ending June 20.	Week ending June 20.				
Vienna (City) . .	(1863) 560000	..	..	..	305	..	..	†68·7	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·869 in. The barometrical reading increased from 29·54 in. on Monday, June 22, to 30·18 in. on Friday, June 26.

The general direction of the wind was S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 65·4°.

APPOINTMENTS FOR THE WEEK.

July 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

6. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Meeting.

7. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal Free Hospital, 9 a.m.

8. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

9. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

10. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.

THE PERFECTION OF PREPARED COCOA.

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The COCOA (or Cacao) of MARAVILLA is the true Theobroma of Linnæus. The Maravilla estate is the most favoured portion of South America.

TAYLOR BROTHERS, having secured the EXCLUSIVE SUPPLY of its UNRIVALLED PRODUCE, have, by the skilful application of their soluble principle and elaborate machinery, produced what is so undeniably the PERFECTION of PREPARED COCOA, that it has not only secured the preference of Homœopaths and Cocoa drinkers generally, but many who had hitherto not found any preparation to suit them have, after one trial, adopted the Maravilla Cocoa as their constant beverage for Breakfast, Luncheon, &c.

THIS COCOA, while possessing all the essential properties, far surpasses all other HOMŒOPATHIC COCOAS in fine grateful aroma, exquisitely delicious flavour, smoothness upon the palate, and perfect solubility. It is easily served up for table, for which see directions on each ¼ lb. and ½ lb. packet.

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Inflammation of the Brain, including Softening and Meningitis.

(*Continued from page* 628, *Vol. I.* 1868)

The idiopathic meningitis is usually divided into the simple and tubercular. The latter has very uniform characters, of which the amount of lymph exuded on the surface is the least remarkable condition. On the other hand, when the whole surface of the hemisphere is covered with a coating of lymph, the inflammation is for the most part non-tubercular. There may, however, be a simple meningitis, in which the inflammatory exudation is of as slight a nature as in the tubercular.

Sometimes, after the exanthematous fevers, as scarlatina, an acute meningitis occurs, in which, in the course of two or three days, the whole surface of the brain becomes coated with a layer of lymph. These cases are not common, but are occasionally met with.

A much more common form is the tubercular variety. In this, after removing the dura mater, you may for the moment doubt the existence of inflammation, as the hemispheres may exhibit no evidence of exudation; but on placing the finger on the surface a slight greasiness may be felt, and on looking at the sides towards the temples some streaks of lymph may be observed in the sulci. It should also be noticed that the convolutions are flattened, showing a pressure against the cranium from effusion of fluid within the ventricles.

On removing the brain from the skull a large patch of lymph is seen at the base, covering the optic commissure and neighbouring parts, occupying, indeed, the large subarachnoid space situated there. Along the margin of the Sylvian fissure also lymph may be seen, and on lifting up the middle lobe the lymph is found to proceed quite into the fissure. The ventricles contain a large quantity of opaque serum, and the adjacent parts are very soft. The septum lucidum may be broken down, while the fornix is semi-fluid and walls of ventricle all around are softened. On stripping off the pia mater from the convolutions, and more especially in the fissure of Sylvius, tubercles may be found. These are not seen on the surface of the brain, but in the meshes of the pia mater which dip down between the convolutions.

Besides the simple idiopathic meningitis and the tubercular, each of which has special characteristics, we may meet with varieties and different degrees of these inflammations; for example, after injury or from disease creeping up from the spine or from various causes, an inflammation of the base of the brain and of the ventricles may be constantly met with. It is important to observe that in the simple and tubercular, as well as in the lesser forms, the ventricles are most usually involved in the inflammation, from which it would appear that the affection known as meningitis, so far from being an inflammation of the membranes, unquestionably involves the surface of the brain to a certain depth, and at the same time the walls of the ventricles to a certain depth. It may therefore happen, and in all probability this is often true, that the brain throughout its whole substance is affected. We witness the effects on the surface without and the surface within, but there can be little doubt that very often these are the mere outward manifestations of a universal affection. Thus I am convinced that the term meningo-cerebritis would be the more correct appellation. The time will, I hope, soon come when we shall possess a more accurate knowledge of these different pathological conditions of the brain, so that we shall be able to give them their appropriate names and their corresponding symptoms.

Symptoms.—For the sake of saving the memory, it is as well always to have a rational knowledge of symptoms, and not merely hold in possession a meaningless category; therefore, from what I have already told you of the functions of the brain, you might infer the existence of many phenomena in what is usually styled meningitis. For instance, from the surface being involved, you would suspect delirium, passing on to a torpid state of mind, and finally unconsciousness; also, from what I have said, you might expect convulsion, passing from the extreme form to rigidity of particular muscles. From the centre or ventricles being involved with a large secretion of fluid, you might expect coma, or, owing to the softening of the ganglia on either side, right or left hemiplegia. This, of course, is towards the termination of the case. Then, from the inflammation at the base, with exudation and implication of cerebral nerves, you might not be surprised to find strabismus, inequality of pupils, and their inaction to the stimulus of light, or, from implication of pneumogastric nerves, an irregular respiration, a slow action of the heart, and much disorder of the stomach. Now it so happens, as you might suspect, that many of these symptoms need not necessarily be present, and thus, if you abstract those which are not universal, you arrive at symptoms which have no characteristic features about them. The brain, indeed, may become inflamed throughout (usually styled meningitis); the patient falls into a drowsy condition, which ends, in a day or two, in fatal coma. These are the totality of the symptoms in inflammation of the brain, as I have witnessed over and over again, both in the traumatic and idiopathic variety. For instance, the Surgeon will have a case in his ward of fracture of skull, and the patient is apparently doing well, when he becomes listless, then drowsy, insensible, and dies. The dresser will inform me that he can give no explanation of the cause of death, for there were no symptoms of inflammation of the brain; but on making the *post-mortem* examination, its whole surface is found covered with lymph. Then, again, cases are brought to the Hospital under various names of delirium tremens, drunkenness, etc., which turn out to be examples of meningitis. For example, a sailor goes to a lodging-house, and on the following day is found in bed, talking strangely, or in a stupor, and is brought to the Hospital with a suspicion of foul play, and then an arachnitis is discovered. Only this day you have seen an example of this kind. A man was brought in from a neighbouring linendraper's, because for two days he had been acting strangely in consequence, it was thought, of intoxication. He was placed in the spare ward, as on admission the case looked like one of delirium tremens. He would not speak, but was constantly moving in bed. There was not one single other nervous symptom. I suggested that he had had a blow on the head, and probably some effusion of blood on the brain, as I have seen exactly such symptoms from this cause. In a few hours he fell into a state of coma and died, and we have found an acute arachnitis, probably of a tubercular character. If you meet with an obscure case of recent disease to which you can only apply the term cerebral, without being able to declare the existence of any special lesion, it will generally turn out to be a case of meningitis, or rather cerebro-meningitis. You must remember, then, the approach to the final coma may be the only symptom in some cases; in others, the symptoms may be many and marked, and in others such a combination of characteristic phenomena that the nature of the disease cannot be mistaken. These are mostly observed in cases of tuberculous meningitis, which running a course often of a fortnight, the symptoms may be made the subject of careful observation. This disease, or acute hydrocephalus, as it is called, occurs in by far the majority of cases in young people of the tuberculous diathesis, is not common in infancy, seen more in growing children, and not unfrequently in young adults, and not so seldom, as is thought, in middle or advanced age. I have several cases in individuals above 50 years of age.

Now, in a large majority of these cases the earliest symptoms of illness are associated with the inflammation, but previous to this it is believed that tubercles are present, and certainly in the lungs and other parts of the body they already exist. It may be, therefore, that in some cases the premonitory pyretic condition is due to the formation of these bodies. In the first place, the child may be fretful, listless, have stomach disturbance, and suchlike symptoms which bear no especial characters; then feverish or pyretic symptoms, marked by hot skin, quick pulse, furred tongue, and headache. At this period, the case is generally, I might say always, styled one of typhoid or gastric fever. It is not the exception, but the rule, to make a mistake; the stomach disturbances are so common, and these cerebral affections commence so insidiously, that the severe nature of the case is not suspected. I believe, in the majority of cases to which I am called, the case is regarded as one of fever in which cerebral symptoms have become developed. I believe, with the utmost acumen which you can use, you cannot positively determine the disease at this early period. Some time ago I was asked by a more than ordinarily

acute Practitioner to see a young man who, having been ailing a few days, was causing some anxiety to his friends. He had febrile symptoms, and the question, as in all such cases, was whether these arose from a local inflammation or not. We could discover no cause, and were therefore obliged to style the case one of fever. We were both alive, however, to the possibility of tubercle formation, and of early meningitis, but failed to discover any proof of either. On the next day there was some suspicion of head affection, and on the following day there could be no doubt of its existence. You will see that the diagnosis of continued fever is as often made for negative reasons as for positive ones. A person is in a highly febrile condition, and if a characteristic rash is at the same time present, the nature of the case is apparent; if there is no rash, we look for some local inflammation to account for the symptoms; if none be discovered, we have again recourse to the term fever

Since, then, at the commencement of tubercular meningitis the head symptoms are not more marked than in ordinary fever, the diagnosis cannot be made. I am justified in this opinion by having to-day looked over my note book used when I was a student and reading the particulars of the case of a child who was in the Hospital under Dr. Addison, and to which are appended some notes of his clinical lecture. He alluded to the difficulties attendant on the diagnosis of tubercular meningitis and gastric fever, and after commenting on the case stated his belief that the symptoms present denoted a cerebral affection which was necessarily fatal. It so happened that on the very next day these head symptoms passed off, and the child got rapidly well. I know very well that Cullen and some of the old writers speak of meningitis being ushered in by a violent convulsion or a fit, to which they could give no other name than "apoplexia hydrocephalica." Now I believe these were not head cases at all, for you will find that such sudden cerebral symptoms as delirium and convulsions do not attend the onset of inflammation of the brain. They denote merely a poisoned blood acting on the brain, and generally imply that an exanthem is about to appear, that the kidneys are at fault, or that there is some exciting cause in the coming teeth or the intestine.

Subsequently to the fever the more characteristic symptoms appear; the child is obliged to lie down, complains of severe pain in the head, rolls it about, and often moans and screams out suddenly, and in the night grinding its teeth. The headache is often now too severe to be the accompaniment of a mere febrile disorder, and the distressing rolling of the head is never seen in simple fever. At this time lymph is forming at the base of the brain, and effusion is occurring into the ventricles. A strabismus may occur as a very early symptom, and various organic functions are now interfered with probably through the pneumogastric nerve and its associations. The heart is lowered in number, and from being 90 or 100 during the onset of the fever, is perhaps only 60, although sometimes, if disease approaches insidiously, it is slow from the beginning. This is one of the most important symptoms to note, and on this alone I ventured a diagnosis the other day, which turned out to be correct. I was asked to see a young man with fever. I found him in bed, almost unconscious, and therefore not able to make any complaints, and the febrile symptoms ran very high. I confessed my difficulty in being able to state positively whether the patient had continued fever or meningitis, but, on feeling the pulse and finding it 58, I decided at once on the latter. This turned out to be correct. Two days afterwards it was 120. It is usual for the pulse afterwards to rise. Then the character of the respiration is to be noted. This may be variously altered in number and rhythm by diseases involving the mechanism of breathing; but an irregularity in the process, or a sighing, may be usually referred to a nervous cause, and this in a child is strongly indicative of a cerebral affection. Then again, and produced in all probability through the pneumogastric, there is the vomiting; this, if marked, is one of the most important symptoms in head affection. It does occur occasionally in gastric fever, and sometimes very severely in typhoid; but these are exceptional instances. At the same time, as the stomach nerve-supply is affected, so is that of the whole intestinal canal. This undergoes violent spasmodic contractions, so that after death intussusception may frequently be found. With this narrowing of the intestines, the abdomen is much flattened or hollowed, and the bowels are confined. Here again is a point for diagnosis. If the question be between fever and meningitis, the state of the abdomen will enable you to distinguish: in the one it is full or tumid, with gurgling on pressure; in the other disease it is tight or scooped out. In some exceptional cases, however, for reasons I cannot explain other than that the nerves are paralysed, the abdomen is tympanitic. You may remark, also, as a help to the diagnosis between these diseases, an extreme irritability of the patient and sensitiveness of the skin. This is made an especial circumstance in the aid to diagnosis by Mr. Stocker, who says that if you wish to examine the patient's body for the presence of a rash, you will find the fever patient assist in raising his nightdress, whilst the cerebral patient will whine and resist: for you know that the patient suffering from fever is in a semi-conscious state, his blood is diseased, he lies in bed in a torpid state, and with confused state of mind, but has sufficient sense to discern your wishes, and assists you in your effort to examine him, whilst the patient with head disease is suffering pain, and is unwilling to be disturbed. In a few days the child or young person is still worse. No food taken, wasting of body, repeated sickness, constant delirium; pupils disposed to dilate, or, if coma have come on, widely dilated, scarcely at all acted on by the stimulus of light. On raising the eyelid you may often notice a mucoid film on the eye, which, I apprehend, implies that the fifth nerve is losing its function or becoming dead. Before the coma comes on, or accompanying it, there are often convulsions, sometimes of a general kind, with great distortion of the face, and, if the chest be involved in the spasm, much congestion of the skin and violent perspiration. A modification of the convulsion is seen in the rigidity of a limb or the turning in of the thumb on the palm of the hand. At this time, if you make a mark down the skin with your nail, a red stain remains. This was first mentioned by Trousseau as a diagnostic mark of cerebral disease, and is styled "tache méningitique." I never saw this well shown except in later stages, when no doubt existed as to the nature of the disease, and you may sometimes observe it in other febrile disorders. I therefore do not attach much value to it as a diagnostic sign. Towards the close of the case it is not unusual to find the patient hemiplegic; at this time the ventricles have become distended with fluid, and the surrounding parts softened. I apprehend the symptom may be accounted for by the central ganglia on one side being involved in the process.

I will take this opportunity of referring to another explanation, and that is, that the hemiplegia may be due to the arachnitis. Now, in the particular cases of tubercular meningitis to which we are referring, this will not hold good, seeing that the amount of inflammation of the surface of the brain is but slight, and it occupies both sides alike. Indeed, in all idiopathic inflammations the exudation is uniform on both sides, and therefore it is only in the case of simple arachnitis arising from external causes that there is a possibility of the symptom arising; but just as a unilateral arachnitis arises in nearly every case from injury, so there is more scope for a reasonable doubt as to the origin of the hemiplegia which sometimes accompanies it. The question is—Will an arachnitis produce paralysis, or a state which is equivalent to it, and, consequently, will a unilateral arachnitis cause a hemiplegia? We have already construed a true paralysis to mean a lesion of the motor tracts, applying the term to the case where the will is good to move the limb, but the mechanism is defective; we then also considered the case where the patient, from being in a state of coma, was unable to make the effort to move, and the extreme difficulty which arose therefore in being able to distinguish such a case from one of paralysis, unless, indeed, we chose to adopt the same expression for both, and styled the one a motor paralysis, and the other a paralysis of the will. As we know that this may arise from a deadening of the activity of the cineritious structure by the circulation of alcohol or urea through the brain, we can imagine that an inflammation of the surface of one hemisphere might, by arresting the volitionary action on that side, produce an effect equivalent to a one-sided paralysis. To put it in other words, if a patient has inflammation of the brain he falls into a state of stupor or coma, and is utterly powerless; he can no longer use his will to perform motor acts. Now, suppose that the patient has inflammation of one side only, may a true semi-consciousness remain so that he can move one side of his body, but, from the impairment of the cineritious structure of the other hemisphere, be hemiplegic on the other side? Some facts would seem to show that this does occur; but it must be remembered that unilateral arachnitis occurs only after severe injuries to the head, and it has appeared that in some of these cases a lesion of more central parts might have occurred, or a transmission of the inflammatory process from without to within. Such cases are interesting mostly from a scientific point of view; but, as a matter of fact, I could not

overlook paralysis as a possible symptom in speaking of inflammation of the membranes of the brain.

(To be continued.)

ORIGINAL COMMUNICATIONS.

SCLEROMA IN A PREMATURE FŒTUS.

By C. B. SUCKLING, M.D.,
Senior Obstetric Surgeon, Queen's Hospital, Birmingham.

The following case of scleroma occurred in my practice last week, and from its great infrequency in this country, and the interest with which all rare diseases are viewed, I am induced to ask you kindly to publish the particulars of it.

In France this disease is said to be of common occurrence, its victims being found amongst impoverished, ill-clad, and neglected children. The nature of the complaint has been ably investigated by MM. Bailly and Cazenave, and a valuable treatise on the same subject has emanated from the pen of M. Troccan, entitled "Sur la Maladie connue sous le nom d'Endurcissement du Tissu Cellulaire." I notice these authorities so that those of your readers who may wish to do so may rub up their knowledge of the subject. My patient was taken in labour at about the sixth month, as nearly as she could guess. She was delivered of a live female fœtus, whose size and development corresponded very closely with that period of gestation. It lived only a few minutes, and presented these peculiarities:—Its head was very large—nearly the size of the head of a small fœtus at term—being out of all proportion to the diminutive size of the rest of its body; the skin of the face and upper parts of the neck and arms partook of the same enlargement, and exhibited that singular waxy colour so diagnostic of the disease. The parts which were swollen were also indurated and resistent to the touch, which failed to make the slightest indentation of the skin, it being so tightly bound down to the subjacent tissues. The face of the fœtus was also distinguished by the immense swelling, which disfigured it to such a degree that its features were scarcely to be discerned. One might, from the preternatural appearance of the fœtus, have been led to doubt whether this was really a case of scleroma—at first sight it appeared more like an example of monstrosity, and this opinion would have been strengthened had the notions of the mother possessed any value, who stated that a few days previously to her labour she had been very much frightened by seeing a child run over in the street. However, the tension of the integuments, from the infiltration of serum beneath them, their wax-like hue, and the absence of either excess or arrest of development in other parts of the body of the embryo, led to the conclusion that this, indeed, was a case of true scleroma. It is stated that this complaint occurs mostly in premature children; hence the record of my case, if it serve no other purpose, will at least bear testimony to the truth of this assertion, and in this respect alone be of some slight value.

Birmingham, June 25.

A NEW UTERINE DOUCHE.

By HERMANN BEIGEL, M.D., M.R.C.P. Lond.,
Physician to the Metropolitan Free Hospital.

The application of the syringe is so extensive in all branches of Medicine, Surgery, and natural philosophy, and the apparatus hitherto in use for that purpose so deficient, that, in Hospital work, as well as in private practice and in scientific researches, I have very often felt the want of a good instrument. The hand-ball first constructed by Dr. Bergson, and afterwards improved by Dr. Andrew Clark, which I have found of great service in my researches on the inhalation of atomised fluid, and which has rendered available Dr. Richardson's excellent and very important invention of local anæsthesia, seemed to me the best instrument for the motor power required for a syringe.

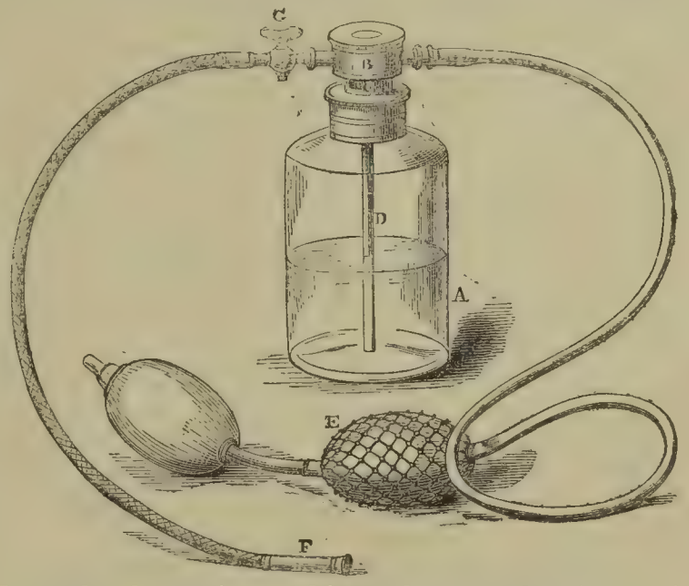
In some departments in Medicine, the success of the case depends very often on the instrument applied. In chronic metritis, for instance, and in other diseases of the female genito-urinary organs, all our efforts may be frustrated if we cannot place in the hands of our patient an instrument which may be easily handled and readily applied, refilled, cleaned, etc.

The uterine douches hitherto in use may thus be classified:—1. Instruments acting by direct pressure on the liquid to be injected, as the common syringe. Ancient as this instrument is, and simple in its construction, yet, in spite of its simplicity, it possesses great disadvantages. Change of temperature and frequent use have great influence over the proper adjustment of the piston to the tube, which adjustment is indispensable for good action. The slightest looseness makes the fluid escape above the piston, and little or nothing is injected. Another inconvenience is the small size of these instruments, and the necessity of requiring a second person for some injections—enema, for instance. The simple syringe has been modified by C. Mayer and others, in order to remove some of the defects just mentioned; but these modifications are expensive, complicated, and are still more liable to get out of order than the common syringe.

2. Apparatus working by means of exhaustion. Some of these work well, but labour under the great inconvenience of not being able to produce a continuous jet, which is often very essential; besides, the means of increasing and diminishing the force of the jet is very limited.

3. Apparatus acting as siphons, as does Scanzoni's well-known uterine douche, consisting of an india-rubber tube and a metal weight, in order to keep the tube in the vessel containing the fluid to be injected. Here the jet is thrown out in a continuous stream, and its force may be varied by raising or lowering the vessel. This arrangement, simple as it is, labours under the disadvantage of requiring different heights for regulating its force; and even when properly adjusted, a slight traction upon the tube may easily upset the vessel and throw the fluid over the patient's head.

All defects of these apparatus have been, I think, avoided in the instrument represented in the following woodcut.



Its mode of operation needs scarcely any explanation. A is the vessel containing the fluid to be injected; it is capable of holding about two pints, but may be made of any capacity required. B is the top, which can easily be adjusted to the bottle by a very simple arrangement at C. This top is on one side connected to the handball E, the action of which compresses the air above the fluid in the vessel; on the other side of the top projects the tube F, having a stopcock at G. A few movements of the handball suffice to compress the air sufficiently to cause the fluid to escape by the tube D as soon as the stopcock becomes opened. The regulation of the force of the jet, which is continuous, is easily effected by the handball. The apparatus, as manufactured by Messrs. Mayer and Meltzer, of Great Portland-street, is very portable, can be cleaned with the greatest ease, and works with the utmost perfection. It may as well be applied for uterine purposes as for the rectum, eyes, pharynx, nose, etc., as for cleaning wounds and other Surgical requirements. A smaller form of the apparatus answers well for microscopic injections, and, in fact, will be of great service wherever injection or syringing is required.

ECOLE DE MÉDECINE DE PARIS.—M. Marc Sée has just been appointed to the post of "Chef des Travaux Anatomiques," in place of M. Sappey, made professor of anatomy. He is well known as the translator of Kölliker's "Histology," and the editor of Cruveilhier's "Anatomie Descriptive."

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

ABDOMINAL ANEURISM—SUDDEN DEATH—AUTOPSY.

(Under the care of Dr. RAMSKILL.)

[Communicated by Mr. G. W. MACKENZIE, Resident Medical Officer.]

PETER C., aged 42, sailor, admitted March 3, 1868. His history was briefly as follows:—He had had no serious illness, with the exception of some "flying pains" in 1855, and the "fever and ague" in 1856. Two years ago he first noticed a severe pain in the middle of his back, which used to come on in the early morning after he had had a good sleep. It was so severe as to lay him up five weeks. He got rid of it, however, till the spring of the next year, when it again troubled him for some time. It disappeared till a month ago, and has lasted ever since, not seeming this time to get any better.

He is thin, of a dark sallow complexion, with an anxious expression. Complains of a constant pain in the lower part of his back, which shoots through to his left groin. Has no appetite; is not sick; bowels obstinately constipated.

On examination, nothing abnormal can be detected either in the back, abdomen, or groin. There was no abdominal tumour to be felt anywhere, nor was there any pulsation noticed. The superficial veins all over the body were very distinct. Urine: Sp. gr. 1022; acid no albumen.

Heart: First sound feeble, second sound prolonged; otherwise healthy. Lungs: With the exception of a little prolonged expiration under clavicles, healthy.

April 4.—The patient has continued to complain of the pain ever since last report, and says that it comes on oftener, and that it shoots down the left leg. It also seems to vary as to the time of its attack, sometimes being worse in the day, and sometimes in the night. His bowels remain as before. He has wasted a good deal, and looks more sallow. Repeated examinations have been made about the seat of pain, but nothing further has been elucidated as to the cause. This morning he complained of intense pain (which went "down his leg and back again") in the front and inside of his left thigh. He described it as very severe, and says that it now extends also into the right groin. On making an examination, a large pulsatile tumour is seen and felt in the left side, reaching to within two inches of the spinal column behind, and to within half an inch of the crest of the ilium in front. It seems to come from under the ribs. The tumour bulges the integument before it visibly, and is best felt in the left flank rather than in front. He looks more blanched than ever, and his pulse is feeble and somewhat fast; he does not complain of quite so much pain.

7th.—He died suddenly in his bed during the night.

Autopsy (copied from Dr. Sutton's report).—Body wasted. On opening the abdomen a large mass of blood was seen to occupy the left renal and iliac regions. It consisted of coagulated blood which had undergone some change. Near the seat of rupture, the blood had apparently undergone a process of decolorisation, and was beautifully fibrillated, but further from the sac, and reaching down to the external abdominal ring on the left side, the blood seemed quite fresh, though coagulated, and was black in colour The whole mass had made its way behind the peritoneum until it reached the external ring, and there it had found its way out, blood being extravasated all round the ring. There was also a little coagulated blood in the small intestine. The aneurism itself was seated just behind the cœliac axis in the posterior wall of the abdominal aorta. There seem to have been two sacs, one bulging to the right, and one to the left, and also backwards, pressing upon the spine. The latter had ruptured, and gave rise to the extravasation of blood. The spinal column underneath the tumour was much eroded and very irregular. A little above this situation was another aneurism of the aorta, smaller than the preceding, and the aorta was very much diseased throughout. All the other organs were healthy.

Remarks.—Dr. Ramskill repeatedly dwelt on the difficulty of making a diagnosis in this case. There was nothing to be found in the abdomen to cause the pain, and, but for the man's wasted and careworn appearance, he would have been considered a malingerer. Dr. Ramskill remarked that it was peculiar also that the man never complained of a throbbing in his abdomen, as that is a symptom which the patients nearly always find out first themselves.

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(*Continued from page* 636, *Vol. I.* 1868.)

IN our numbers of May 30 and June 13 (pages 577 and 635 in our last volume) the series of Mr. Spencer Wells's cases of ovariotomy in the Samaritan Hospital, from the 101st to the 110th inclusive, may be found. Nine of those patients recovered, and one died. The next case in order was of unusual interest, as Mr. Wells successfully removed the left ovary in February, 1868, having removed the right ovary in 1861, the patient having been tapped twelve times before the first operation. This is the third case in which Mr. Wells has performed a second ovariotomy. Two patients recovered, and one died. He wishes these cases to form a separate series, as the operations are performed under different conditions upon a patient who has not previously undergone ovariotomy. We, therefore, exclude this case from our present series.

Case 111.—*Multilocular Non-adherent Cyst—Once Tapped—Ovariotomy—Death on the Fourth Day.*

An unmarried housekeeper, 33 years of age, was admitted under Dr. Rogers February 10, 1868, suffering from an ovarian tumour which extended upwards midway between the umbilicus and sternum. Increase in size had only been noticed for about eight months, and latterly it had been rapid. Five weeks before admission, the patient had been tapped in the London Hospital under Dr. Head; but only three pints of fluid escaped, little effect being produced upon the bulk of the tumour. Violent sickness followed this tapping, but it subsided after one day, and the general condition being fairly satisfactory on her admission to the Samaritan, it was arranged, in consultation with Dr. Rogers, that Mr. Wells should perform ovariotomy on February 12, 1868. Chloromethyl was given by Dr. Junker. On making an incision five inches long between umbilicus and pubes, about a pint of fluid escaped from the peritoneal cavity, and a non-adherent cyst was exposed and tapped. But very little fluid escaped, and Mr. Wells opened the tumour, broke it up inside, pressed out the jelly-like contents, and then withdrew the tumour, separating a coil of intestine which adhered by its mesentery close to the root of the tumour, which was intimately connected with the left side of the uterus. Considering it unsafe to use the cautery so close to the uterus, and the base of the tumour as too broad to be included in ligatures, Mr. Wells decided to tie the bleeding vessels only; and to do this he tried for the first time an instrument contrived by Dr. Wright, by which the part to be secured is grasped and held firmly, and then released gradually in successive portions. Several vessels were thus tied. Probably six or eight ounces of blood were lost. The ligatures were all cut off short. Five pints of fluid and six pounds of more or less solid matter were removed.

The patient was sick during the operation, and vomiting continued to be the most prominent and distressing symptom. Pain and flatulence were also troublesome. The pulse and temperature gradually rose, the urine became scanty and loaded with urates, and the patient died ninety hours after operation.

On post-mortem examination, the wound was found well united. The small intestines were distended with gas, and one coil adhered to the left of the lower angle of the wound, so as to conceal the pedicle. Here some lymph was effused, and the divided edge of the tumour and the ligatures were completely surrounded by adhering intestine. Elsewhere there were only slight traces of early peritonitis. The anterior surface of the uterus adhered to the bladder by recent lymph. The sigmoid flexure of the colon and the upper part of the rectum adhered to the divided edge of the tumour at a very acute angle, the intestine being constricted at the point of flexion. A few small lumps of fæces were in the canal at this part, and could only be pushed along after separating the adhesions. There was no blood in the peritoneal cavity, and not more than two or three ounces of red serum.

Mr. Wells said this case confirmed him in the belief which he has repeatedly expressed that any of the intra-peritoneal methods of treating the pedicle must expose the patient to the danger of intestine adhering to the stump of the pedicle; and

that if adhesion takes place in such a manner as to fix a coil of intestine with a sharp bend, then the danger of obstruction must be considerable.

Case 112.—*Adherent Multilocular Cyst—Ovariotomy—Recovery.*

An unmarried needlewoman, 30 years old, was admitted February 17, 1868, suffering from a large multilocular ovarian cyst which appeared to have commenced about two years before, but had only increased rapidly after a fall four months before admission. The catamenia had been regular, but profuse, recurring every three weeks, and lasting eight or ten days. For six weeks past there had been almost constant discharge. This was thought to be due to the pressure of the tumour, and not an obstacle to ovariotomy, which was performed February 26, 1868. Chloromethyl was administered by Dr. Junker. A closely adherent cyst was exposed by an incision five inches long, and a large cyst was opened and emptied before any adhesions were separated. They were very firm, and were not separated without difficulty, although they extended but a short distance beyond the line of incision. A small piece of adherent omentum was also separated. The pedicle on the left side was secured in a middle-sized clamp, and kept outside with some tension of the left broad ligament. The right ovary was healthy. The fluid removed measured twelve pints, and the portion of cyst removed entire weighed 3 lbs. 11 oz. There was no sickness until the third day after operation, but more pain than usual, five opiates being required in the first twelve hours. There was no uterine discharge after the operation. The bowels acted and the clamp came off on the seventh day. She went to Brentwood on the twenty-seventh day, and returned from the Convalescent Cottage there in excellent health.

Case 113.—*Non-adherent Multilocular Cyst—Once Tapped—Ovariotomy—Recovery.*

An unmarried servant, 33 years of age, was admitted January 17, 1868, in a state of great distress from constant vomiting and some abdominal pain. She was so ill during the night that Mr. Wells tapped her early on the morning of the 18th, and removed ten pints of fluid containing a large proportion of blood. On allowing it to stand, one-eighth of the bulk was blood-clot. The abdominal wall and legs were œdematous, and the aspect leukæmic. The tumour had been of very rapid growth, increase in size only having been observed during about ten weeks. Great relief followed the tapping. Iron was given, and the patient went to the Convalescent Hospital at Eastbourne. She returned in February in much better health, but still looking very white. Iron was given more freely; the colour improved, and ovariotomy was performed March 4, 1868. A non-adherent cyst was exposed by a small incision, was tapped and emptied, and some ascitic fluid escaped. But as, on enlarging the incision to six inches, the tumour could not be withdrawn, Mr. Wells opened the cyst, broke up inner secondary cysts, pressed out their contents, and then the tumour was removed easily. A very broad pedicle on the right side was secured in a large clamp and kept out with moderate traction. Scarcely any blood was lost. The left ovary was normal in size, but was not free as usual, appearing to be enclosed between the two layers of the broad ligament. The fluid removed was not nearly so bloody as that removed by the tapping. It measured fifteen pints and a half, and the tumour weighed a little more than four pounds. Chloroform was given in this case to make a comparison with chloromethyl. The patient was not sick, and went on perfectly well, some pain in the right thigh being the chief source of discomfort. Slight metrostaxis began on the fourth day, and continued during the fifth and sixth days. The clamp came off on the eighth day, and the bowels were cleared by enema on the ninth day. The patient went into the country on the twenty-third day, and has been seen since her return in excellent health.

Case 114.—*Non-adherent Cyst—Iodine Injection—Ovariotomy eight years after—Recovery.*

A widow, 38 years of age, was admitted March 3, 1868. In the number of this journal for June 2, 1860, some cases are recorded in which Mr. Wells injected ovarian cysts with iodine. The following extract relates to this patient:—"A married woman, aged 29, admitted March 5, 1860. Has a large unilocular ovarian cyst. Circumference at umbilicus, 39 inches. She has had two children—no miscarriages—the youngest child is four years old. Catamenia generally regular, but has had menorrhagia. First noticed abdominal swelling about six weeks after birth of last child. Expecting the catamenia, tapping was delayed for a few days, but Mr. Wells removed 22 lbs. of fluid on March 19, and injected two ounces of the caustic solution of iodine. Care had been taken not to inject until the cyst seemed to be quite empty; but on removing the elastic catheter nearly the whole of the iodine escaped through the canula, diluted with about two pounds of ovarian fluid. Accordingly very little effect was anticipated from this injection, and it was curious to find that the patient suffered during the next three days from the taste of iodine, dryness of throat, and general depression characteristic of iodinism. There was less pain in the abdomen, but quite as much tenderness on pressure as in the other cases, and the after-progress was much the same. She was discharged on April 12 in good health, and she has been seen since without any sign of refilling of the cyst."

In 1866 she saw Mr. Wells again. Her husband died in 1865. She had not been pregnant since the injection. The catamenia had been regular, but scanty latterly. The cyst appeared to be refilling, but very slowly. Increase was gradual, but on admission in 1868 the girth at the umbilicus was 45 inches, the distance from sternum to pubes 22 inches, and from one ilium to the other across the front of the abdomen 26 inches The cyst appeared to be unilocular above, but there was a firm portion of tumour felt in the pelvis between the uterus and rectum, pressing the fundus uteri closely against the pubes. As the uterine cavity only measured 3 inches, and the organ could be moved both by the finger and sound, it was thought to be separable from the tumour, and ovariotomy was performed March 11, 1868. There were no adhesions to the abdominal wall, but the left Fallopian tube and broad ligament extended over the front of the cyst. These were pushed aside, the cyst tapped and emptied, a piece of adhering omentum separated, and the emptied cyst drawn out with another which was moulded into the pelvis. A short broad pedicle was enclosed in a middle-sized clamp, and kept outside with slight traction. A large Graafian vesicle protruded from the right ovary, which was healthy. The vesicle was punctured and emptied. Five or six ligatures were placed on omental vessels and cut off short. Twenty-six pints of fluid were removed, and the cyst weighed a pound and a half.

This patient also took chloroform. Reaction was slow, but there was no sickness until after she had had four opiates. The pulse never rose higher than 96, and the highest temperature noted was 101·8°. Metrostaxis commenced on the third day and continued till the sixth. The clamp was taken off on the fifth day, and on the same day the bowels acted naturally. Recovery was uninterrupted, and the patient went home in good health five weeks after operation.

(To be continued.)

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Medical Times and Gazette.

SATURDAY, JULY 11, 1868.

GENERAL MEDICAL COUNCIL.

Our report of the proceedings of the Council last week will have informed the Profession that their little Parliament has not been infected with any reform mania, or, to use the political slang of the day, is not yet "educated" up to reform point. So far, indeed, is it from this that it would not even

give leave for a reform bill to be introduced—that is, it rejected, by a very large majority, Dr. Andrew Wood's motion, inviting it to take into consideration its present constitution, with a view of determining whether it should not be reconstructed on a more popular basis, etc. The motion called forth for us, however, the most interesting and brilliant debate of the session. Perhaps some poor-spirited economist may complain that, as the Medical Council cannot in the least alter their constitution, the whole debate was a waste of time, and therefore of money. But what is the poor price of thirty pounds an hour compared to the pleasure and value of a good reform debate? Utility and economy may be very good things in their proper time and place, but shall they prevent "our" reformers from once at least airing their theories in "our" Parliament? We, at any rate, scorn to take any such narrow-minded views of the matter.

The debate was worthy of the occasion, and among the able speeches made not the least able and interesting were those of the deputation from the British Medical Association, who presented a memorial from that body recommending that "eight members, to be elected by the registered members of the Profession, should be added to the General Medical Council." The members of the deputation, and especially their suave and courtly leader, Dr. Sibson, were perhaps a trifle too laudatory of the Council as it at present exists. In their anxiety to make things pleasant and to induce the Council to swallow the pill they presented, they seemed to think it impossible to say too much in their praise. They had done their utmost, and had done everything well, and the Profession—or, at least, the Association—had shown its warm approval of their general line of action, and had heartily supported their labours; in fact, loved them very much, and gave them their confidence; only one thing they still lacked—reform.

The Medical Council appeared hardly able to swallow so much praise or to believe in their popularity, and seemed to think that the love and confidence of the Profession had shown itself in a rather curious fashion. Probably, though they did not say so, they were reminded of the old distich,

> "It might be well to dissemble your love,
> But why should you kick us downstairs?"

The protestations of confidence and approval sounded to them not exactly consistent with the pressing desire to revolutionise their constitution.

The Association, indeed, did protest somewhat too much; it claimed to have created the Medical Council; "it had been increasing in its labours for many years, and those labours had at last culminated in the passing of the Bill to which the Council owed its existence." Dr. Andrew Wood "absolutely denied" this, and it will seem like a revelation, we suspect, to most members of the Profession outside of the Association, and to many within its ranks. Dr. Sibson described with glowing eloquence the wonderful effects the presence of a few members elected by the Profession at large would have on the deliberations of the Council; "their knowledge, their aims, their powers, united to your present influence, will give additional vigour to your action, moderation to your views, influence to your labours, and unity to your exertions;" but — dare we confess it? — this grand climax smacks to us just a little of stump-oratory. And as another member of the deputation said that "he believed the general character of the Council would be very little altered by the proposed measure. Probably gentlemen of the same standing and of the same eminence in their Profession as those now returned to the Council would be elected, and would hold similar views," it seems a little difficult to understand how all the magnificent predictions of the former speaker could be fulfilled. Some of the members of the Council were inclined to find fault with their President for having asked the leader of the deputation whether the Medical Association had any charge to bring against the Council of having neglected their duties, and whether they could point out any particular in which the Council could mend their ways for the future, as it *might* be some years before they could get the Council of the nation to reform them. But we suspect the President's questions were put with diplomatic and very skilful malice, for the answer was an entire disclaimer of any charge against, or any fault to find with, the Council. "As far as the powers of the Council went, the British Medical Association were satisfied that the utmost had been done for the Profession." The members of the Council must, no doubt, feel much greater and happier men since they were thus assured of the "high consideration" of the British Medical Association, and as the speaker did not explain how the addition of a few members to that body could increase its "powers," his reply could scarcely have added to the weight of the memorial, while it more than justified the questions of the President.

It is worthy of special notice that all the ex-Presidents and the President Elect of the British Medical Association who are members of the Council, four in number, were against the prayer of the memorial. It is true, and much to the credit of the Association, that, as was stated, their Presidents have nothing to do with the politics of the Association. Each one is selected as being one of the most distinguished Practitioners in the place where the Association is about to meet, and not on account of his political views. Still, it was, to say the least, unfortunate for the popularity argument of the memorial that all these eminent Practitioners, who must be supposed to know somewhat of the wishes and wants of the Profession in their respective districts, argued and voted against it.

Everything that could be said in favour of Dr. Andrew Wood's motion was well and forcibly said by its mover and by Sir Dominic Corrigan; but Dr. Paget, in his very able speech against it, completely carried the vast majority of the Council with him. Of course the advocates of reform did not omit to use the terror-argument—"You had better reform yourselves quietly and gently now, or somebody else will do it very roughly by-and-by;" but as the Council cannot in any way reform itself, and as it does not seem very probable that its views on the subject would be at all seriously listened to by Parliament, the argument rather failed in effect.

We do not see how it can be gravely argued that the Council does not represent the Profession. The vast majority of its members are men in large active daily practice, constantly meeting numbers of their fellow Practitioners, and at least as likely to be acquainted with their wishes as any General Practitioner, or any one elected by the votes of the Profession, would be; and it is not to be believed that their being returned by universities or Medical corporations can lead to their entirely forgetting or overlooking the interests of the Profession at large in those of the special bodies they represent. But our readers will doubtless study the debate for themselves; and of the speeches against Dr. Andrew Wood's motion we specially recommend to their notice those of Dr. Paget and the President. Should the Council ever be granted increased powers and larger functions, it would perhaps be wise and well to enlarge and widen it as a representative body, but, as things are, it has done rightly, we think, in accepting Mr. Syme's amendment to Dr. Andrew Wood's motion.

We mentioned last week that on Wednesday, the 1st inst., the Council appointed a committee "to consider a report on the Bill for the regulation of pharmacy now before Parliament." The report of the Committee was presented to the Council on Saturday, and taken into consideration on Monday, the 6th inst. The Committee stated that in their deliberations "they had had the advantage of the presence of Mr. Sandford, President, and of Mr. Bremridge, Secretary of the Pharmaceutical Society," and it does not appear that those gentlemen offered any opposition to the recommendations of the Com-

mittee. We cannot afford space to give the report, but the Council agreed to recommend the following alterations in the Pharmacy Bill:—"That the word 'pharmacist' be introduced in the wording of the Act as synonymous with the terms 'compounding chemist,' 'pharmaceutic chemist,' 'chemist,' or 'druggist.'" "That from and after the passing of this Act, 'pharmacists,' or 'dispensing chemists,' or 'druggists' duly qualified to open shops or establishments in England for the compounding of medicines, shall in like manner be deemed duly qualified to open like shops or establishments in Ireland." "That opium should be inserted in Schedule A." This schedule contains the list of poisons, and the promoters of the Bill stated that opium was included in the first draft of the Bill, but that they had received such strong representations from chemists residing principally in Cambridgeshire, Lincolnshire, and Norfolk, against interfering with their business—opium being one of their chief articles of trade—that the promoters felt compelled to strike opium out of the schedule. The Committee and the Council seemed very naturally to feel that this fact was one of the strongest possible of reasons for inserting it again in the list of poisons. The Council further recommended "that Clauses 3 and 4 be so amended as to limit the registration of pharmacists or chemists and druggists to members of the Pharmaceutical Society, and to such other existing chemists and druggists as the Council of that Society may recommend as fit to be placed on the Registry;" "that all pharmacists should be required to compound medicines according to the formularies of the *British Pharmacopœia*, unless otherwise specially directed in written prescriptions;" and "that there should be a clause introduced to provide that registration under the Act shall not entitle any person so registered to practise Medicine or Surgery, or any branch of Medicine or Surgery." A deputation was then appointed to place these recommendations, together with the report of the Committee, in the hands of the Home Secretary; and, later in the day, the deputation informed the Council that they had had an interview with the Under-Secretary of State, who "had promised to give the resolutions and report of the Committee his best attention in the progress of the Bill through the House."

On Thursday the first important business was the report of the Committee on Lunacy Certificates. The Committee had considered the subject remitted to them, in concert with Mr. Ouvry, the solicitor to the Council, and recommended that a letter, which, at their request, had been drawn up by Mr. Ouvry, should be transmitted by the President to her Majesty's Secretary of State for the Home Department. The gist of the letter, which was accepted by the Council, is contained in its last paragraph:—"I am instructed to suggest to you that an Act should be passed, applicable to the United Kingdom, which, while it will give to the Medical Profession the full privileges contemplated by the Medical Act, will, at the same time, insure that no person giving a false certificate shall escape the punishment justly due to his offence." If this leads to an Act which shall be imperial in its legislation, and do away with local difficulties and anomalies, it will be a highly useful and valuable piece of work.

The Council then passed to the consideration of a long and full report from the Committee on Vaccination, and, after a long discussion on the details of the report, it was moved "That the Council do sanction the proposal of the Committee, and issue to each licensing body in England, Scotland, and Ireland, for their adoption, the following recommendations relating to the knowledge of vaccination, by every person desirous of practising Medicine or Surgery." For these recommendations we must refer our readers to our report of the debates. They were finally accepted, but not without considerable opposition, Sir Dominic Corrigan and other members of the Council considering that the licensing bodies ought not to be content with certificates only of competent and practical knowledge of vaccination, but should also examine candidates on the subject, and the learned Baronet moved an amendment to that effect. This was lost, however, by a majority of 2. The original motion was carried, and a draft letter recommended to be addressed by the Council to the Medical Officer of the Privy Council was unanimously adopted. Seeing that the importance of efficient and careful vaccination cannot be exaggerated, we regret the decision of the Council, for while it is notorious that a certificate system is very liable to abuse, it surely would not have been very difficult to supplement and guard it by a system of examination, and, indeed, we believe that many of the licensing bodies have already intimated to the Council their readiness to provide this further security. And our regret is by no means lessened by the line of argument adopted by Dr. Storrar in speaking against Sir Dominic Corrigan's amendment. He observed that, "as the Medical Department of the Privy Council had recommended the principle of certificates, would it not conduce very much more to the honour of the Council, and also to the satisfactory relations which ought to subsist between the Council and the Crown, that they should not be at daggers drawn on this subject? He was convinced the Privy Council would take independent steps in the matter if the present suggestion of Mr. Simon was not adopted." That is to say, it is no use your having an opinion on the matter unless it is the same as the opinion of the Medical Officer of the Privy Council. However important a body you may be, and however weighty your opinion on a Medical subject ought to be, you must give way to the Medical Officer of the Privy Council, and if you do not really agree with him, you had better not say so. We venture to think that it would be much more to the honour and dignity of the Council to express their own opinions openly and fully, and, while allowing all the value possible to certificates of competent knowledge of vaccination, to state also (if they do believe what no one, we imagine, can deny) their opinion that it is highly desirable to strengthen and guard that system by the requirement of an examination.

The last matter before the Council on the Thursday and the first on Friday was a motion of Dr. Acland's, "That the Treasurer be authorised to pay £100" to an eminent and well-known experimental physiologist, "to aid him in his researches into the class of agents which can with safety be used as anæsthetics; that one-half be forthwith paid, and one-half on presentation of a report which shall have special regard to the several properties of the said agents and their fitness to be introduced into the British Pharmacopœia." The resolution excited so much opposition that at last its mover asked leave to withdraw it. Some of the Council were, however, disinclined to grant any grace to such a proposal couched in such terms, and they pushed their hostility to a division, when permission of withdrawal was granted by the casting vote of the President; the total result being, to put it commercially, that at least £60 worth of time was wasted over an abortive proposition to disburse £100.

The Committee on Medical Education and Examinations next reported that "they have put in train a series of arrangements by which they hope to be able to obtain valuable evidence from the principal teachers and examiners in the kingdom which may aid the Committee in drawing up a complete report for the next meeting of the Council."

The report of the Finance Committee was then received and adopted. The most notable point with regard to it is, that while the report recommended that an addition of £35 a year be made to the salaries of the clerks, Mr. Bell and Mr. Roope, the Council increased the addition to £50 a year each. We have no hesitation in saying that the increase of salary has been well earned; the clerks have been invariably efficient, diligent, and obliging.

A very important report from the Committee on Preliminary

Education was the next business, and the consideration of this report and the discussion on its recommendations extended far into the Saturday's sitting. The various resolutions adopted all tended to secure the gradual improvement of the Medical student in his preliminary education, and our readers will see in the reported debates that the Council advance in this direction with great caution and tenderness, though with proper firmness and decision. Their present requirements are not very extensive, yet general education is so deficient that they seem almost too severe. No stronger proof of this can be given than the statement made by Mr. Cooper, that "he could speak of a body which carried out most strictly the recommendations of the Council, and the consequence was that in the examination of January last forty-one gentlemen applied to be examined, but only thirty-five were admitted, of whom eighteen passed and seventeen were rejected, and of the latter eight had been previously rejected." The evidence of the imperfection of general education was so strong that the Council felt compelled most reluctantly to agree "that the year 1870 will be too soon to transfer Greek from the optional to the compulsory subjects."

Monday, the 6th inst., the eleventh and last day of the session, was a very busy one. Many of the items of business were merely formal and routine work, such as votes of thanks and the like, but the *pièce de resistance*, which occupied the greater part of the day, was a copious and instructive report from the Committee "On Observations by the Licensing Bodies and on the Reports of Visitations of Examinations of 1867-68." This report we must remark on on a future occasion, but we will notice here that the Committee observe that in the extracts they make "from the Reports of Visitations of Examinations they have had in mind rather to point out defects than to record acknowledged merits. They desire to add their conviction that there has already been a general and very great improvement in the Medical examinations throughout the United Kingdom during the short period since the Medical Council directed its attention more particularly to this subject."

"The Committee are confident that this general progress of improvement in the examinations must lead, and is already leading, to improvement in the acquirements of Medical Practitioners."

This "conviction" no one will dispute, and its truth must be very gratifying.

A set of rules for the method of conducting examinations was agreed to.

The Committee on State Medicine reported that "they have decided, with a view to presenting a more complete report at the next session of the Council, on taking evidence from various persons having special knowledge of the subject referred to the Committee."

The last work of the Council was one of the most useful and promising acts of the session, having been the re-election of Dr. Burrows as President. However open to criticism some of the proceedings of the Council may be, this one at least is sure of universal approval, and the Profession, as well as the Council, will feel grateful to Dr. Burrows for again accepting a dignity which brings with it so much labour, anxiety, and responsibility.

THE RECENT ELECTION AT THE COLLEGE OF SURGEONS.

The following little episode in connexion with the annual election of Fellows into the Council of the Royal College of Surgeons may ultimately produce an important reform in the mode of conducting these elections. It is well known that for some years past there has been an increasing feeling of discontent amongst the constituency in not being allowed to meet and question those gentlemen who already represent them or are ambitious of doing so in the Council of the College. This feeling was rather loudly, but respectfully, as became a great question, proclaimed at the recent election. Immediately after the President, Mr. Hilton, had concluded his address, and before the voting commenced, of which we gave an account last week, Dr. Edwin Morris, of Spalding, Lincolnshire, a member of the Council of the British Medical Association, stepped forward, and said: "Mr. President, is it competent for me to speak?" The President: "I am informed by the legal adviser of the College (who was present) that you cannot; no other business except that which has brought us together to-day can be allowed."

Dr. Morris: "Sir, with every respect for the chair, I addressed a letter to you as President, stating that it was my intention to provoke a discussion at the meeting of Fellows to-day, with a view of soliciting from the retiring members of Council who are again asking our suffrages to give us some account of their stewardship, so that we might know upon what grounds they asked our support." (Cheers.)

The President: "I am sorry I cannot allow you to go on. I received your letter, and we are advised that the charter distinctly states that the business of this day shall be for the balloting of members for the Council only. So far as I am personally concerned, I am sorry I cannot permit it."

Dr. Morris: "I, in common with many other Fellows, feel that we ought to have the opportunity of having the views of the new candidates, and of questioning the retiring Councillors, who are remarkably reticent. We want a more liberal construction put upon the charter of 1843. We came many miles to-day from our homes, and we have no chance of doing so except now. It may, sir, appear unseemly to have a discussion going on in the presence of the chair; will you, therefore, allow us a room in the College that we may retire to for that purpose?"

The President: "We have not one."

Dr. Morris: "Of course I bow with every respect to the chair."

Immediately the last speaker ceased, Dr. Wiblin, Medical Superintendent of Quarantine for the port of Southampton, availed himself of the opportunity of stating to the President that, although he was most reluctant to interrupt the ordinary course of business, he could not forbear giving expression to the strong feelings which he entertained as to the propriety—ay, the absolute necessity—of the Fellows being allowed to meet once or twice in the course of the year in some department of the College for the purpose of eliciting from the candidates seeking admission into the Council their respective opinions on the various reforms which a large majority of the Fellows were anxious to see introduced into the College. He further stated that, with great respect towards Mr. Hilton personally, and with due regard to the exalted position of President to which he had been so deservedly raised, he considered that the Fellows of the College had as much right as he and his colleagues had to meet and discuss, within the walls of their own College, matters of business connected with its dignity and welfare. (Cheers.) He further observed that many Fellows taking a deep interest in the welfare of the College travelled hundreds of miles to be present at, and take part in, the annual election, and that upon their arrival in town they enjoyed simply the privilege of recording their votes on behalf of the several candidates, and the further privilege of listening to a number of complimentary speeches at the annual dinner, without having an opportunity conceded to them of ascertaining from the candidates and the Council their respective opinions on the business which had brought them together. (Cheers, and great applause.)

The President: "I can only repeat to Dr. Wiblin the observations I have already addressed to Dr. Morris;" and added that, being under the law, he was subservient to the law, and therefore could not permit any discussion in that room. It was competent on the part of the Fellows to hold a meeting elsewhere—out of the College—where the merits of the candidates and of the retiring councillors could be freely canvassed. The admirable temper displayed by the President was warmly applauded; indeed, it was evident that he sympathised with the Fellows. Mr. Hilton may feel assured, on retiring from the President's chair, that the eloquent observations addressed to him on Thursday last in the Council Chamber, on the excellent manner in which he had discharged his collegiate duties, are fully responded to out of that institution by the Fellows generally.

After the election of Members of the Council, the Fellows dined together at the Albion Tavern—Professor Richard Partridge, F.R.S., in the chair. There were about 130 present, many of whom came from distant provincial towns. After the usual loyal toasts, Professor Longmore, on the part of the Army, noticed, in very felicitous terms, the arduous services of that branch of the public service during the recent Abyssinian expedition—(cheers)—he also referred to improvements in the Army Medical Department and in the position of military Surgeons, and added that the Medical officers of the English army now stood in a more satisfactory position than the same officers in most of the armies of Europe.

Mr. Cock, of Guy's Hospital, the senior Vice-President of the College, returned thanks, in an amusing speech, for the volunteers; and Mr. Geo. Cooper, J.P., the Master of the Society of Apothecaries, in the unavoidable absence of Dr. Burrows, responded to the "General Medical Council."

In proposing "The Medical Corporations," the Chairman observed that the College of Physicians had long maintained a high rank for their Medical knowledge, classical learning, and social character. The College of Surgeons had also long held a high position for its scientific character and influence on the progress of Surgery. The Society of Apothecaries was distinguished for the great impulse they had given to preliminary education long before its primary importance was generally acknowledged. (Hear, hear, and cheers.)

Dr. Edward Smith, F.R.S., on the part of the College of Physicians, alluded in gratifying terms to the cordial relations existing between the two Colleges of Surgeons and Physicians. The time had been when for a Physician to know anything of Surgery was almost a reproach, and it was thought impracticable for a Surgeon to study Medicine; but now all that was changed. Ardently trusting that such an intimate relationship between the Colleges might long continue, he would only say "*esto perpetuum.*"

Mr. Hilton, as President of the College of Surgeons, could entirely confirm the remarks which Dr. Smith had made respecting the happy relation of the two Colleges; he could not help expressing his deep sense of admiration of their magnificent Museum. (Hear, hear.) When he stood in the midst of that grand collection of anatomical and physiological preparations, he often felt quite overwhelmed; whether he observed their astonishing number, their exquisite condition, or their precious value, they were absolutely unrivalled. (Great applause.) The preparations used for the College examinations were reported as most satisfactory by the visitors deputed by the General Medical Council. There had been a tendency to make students more of physiologists at the end of their second year, but that was almost impossible. The examinations had now reached to the highest standard of consistency; 25 per cent. of those who underwent the ordeal being rejected; and it was determined to make the examinations such that they shall be most useful to students as future practitioners. The number of Fellows by examination is increasing most rapidly, and the College looks to that section of the Fellows more especially to sustain its prestige.

Mr. Cooper replied on the part of the Society of Apothecaries.

Sir William Fergusson, Bart., who was received with rounds of applause, said he had to propose a toast which he believed would be received with enthusiasm. He noticed with much satisfaction the large number of Provincial Fellows present as well as those resident in the metropolis. Time was when the metropolitan schools had been regarded as more important educationally, but of late years the provincial schools had risen to a high position, and this progress was most satisfactory, as from unavoidable circumstances many students must receive their education in the provinces. He would couple "The Provincial Schools" with the honoured name of Mr. Turner, of Manchester, whose history as a teacher and Surgeon Sir William reviewed in terms of warm admiration. Mr. Turner briefly replied, and stated that the association of metropolitan and provincial Fellows was singularly beneficial to both. In his concluding remarks Mr. Turner noticed, in feeling terms, the distinguished names and memories of Lawrence and Teale.

Mr. Le Gros Clark responded for "The Metropolitan Schools" as one of the oldest teachers in the metropolis. He alluded with gratification to the friendly rivalry existing between the London and provincial Schools. His long experience had suggested to him the consideration whether systematic teaching might not advantageously be curtailed, and practical instruction given a more prominent place in the curriculum of Medical education.

Mr. South, in proposing "The Chairman," referred to the success Mr. Partridge had achieved as an anatomical teacher, the great earnestness and ability with which he had filled the office of Examiner, his special services as a member of the Council, and, during his presidency, in improving the examinations and in promoting the union of the Colleges of Physicians and Surgeons; to that happy termination Mr. Partridge had largely contributed, and the College of Surgeons was much indebted to him. (Cheers.)

Mr. Partridge gracefully acknowledged the cordial approbation of his professional brethren.

Mr. Hancock, in appropriate terms, proposed "The Stewards," and Mr. Brooke, in responding, particularly adverted to the long and valuable services of Mr. E. C. Hulme as Honorary Secretary, who, in returning thanks, observed that he did so for the last time in that capacity.

This terminated the proceedings.

THE WEEK.

TOPICS OF THE DAY.

The Scottish Reform Bill has now passed both Houses of Parliament, and only awaits the Royal assent to become law. The Scottish University representation, like that of the University of London, gives a direct addition to the influence which the Medical Profession might, were it united, bring to bear upon the internal polity of the country. We very much fear that all chance of returning a Medical representative for the University of London is lost. The seat for that University, the great success of which has been almost entirely due to the Medical Profession, seems likely to become as much a mere political prize as that of the narrowest pocket borough. The hope of even returning a scientific candidate seems to have been given up, and the University, which by its choice might have given an impetus to the progress of science, supported the claims of our Profession, and conferred honour and name on its representative, seems content to shine by lustre borrowed from a gentleman whose reputation is already made in the House of Commons, and who, at least, has nothing to gain by the connexion. Mr. Lowe's standing is so high as a Liberal, but not a Radical, politician, that we cannot suppose his return is doubtful, if we allow that the graduates ought to be influenced merely by the motives of party politics. But we do not think this is the sole end of University representation. The mere fact that the University franchise is entirely different in character from the franchise of all other constituencies affords, we hold, unquestionable proof that it should be exercised on different grounds. If the Medical graduates of the University of London would vote as Medical men in their University, and keep their Tory or Whig prejudices for their boroughs and counties, a Medical, or at least a scientific candidate, such as Professor Miller, might be found in the new House of Commons to champion the claims of Medical men on State recognition, and to lead the House of Commons on those questions of science and social polity which are included under the term State Medicine.

If we turn to the Scottish Universities, we find the same tendency to exalt party politics above the special objects which, in our opinion, University representation ought to secure. We are glad to see that a meeting of the St. Andrews graduates has been summoned to consider the claims of the various candidates for the Universities of Edinburgh and St. Andrews. But in the coming election for these Universities there is great ground for fear that the Medical influence will be split up amongst the various candidates. If the Medical graduates are united, they will beyond doubt carry the election. But if a portion vote for Dr. Richardson, another section for Dr. Lyon Playfair, and Dr. Prosser James obtain a few stray votes, Mr. Campbell

Swinton, the lawyer, will assuredly be returned. With regard to the Universities of Aberdeen and Glasgow, the prospect seems to us certainly not more hopeful. It is announced that Dr. Forbes Winslow has been requested to offer himself to the Medical graduates on Conservative principles, but he does not wish to split the Conservative party, and so he declines in favour of the Lord Advocate Gordon, who has already published a portentous list of Medical supporters. On the Liberal side we yet hope that Dr. Andrew Clark may be prevailed on to stand. We are certain that no Medical representative would be more acceptable to the large majority of the Medical Profession. Of his Liberal compeers, it does not seem quite clear whether Mr. Moncrieff will offer himself. We believe he is holding back for promises of support. It is not likely that he will be again returned for the city of Edinburgh, and his affections are said to be divided between the Universities of Glasgow and Aberdeen and the borough of Greenock. Besides Mr. Moncrieff, Mr. Smith, of Jordan-hill, a lawyer and a Liberal, is, we hear, in the field. Dr. Andrew Clark's claims on the Medical graduates are certainly far higher than those of either of these gentlemen. Surely we have enough of lawyers in the House of Commons already.

Before quitting this subject, we would again urge upon the Scottish Medical graduates the paramount duty of registration, and upon gentlemen who think of becoming Medical candidates the duty of not weakening the chances of returning a Medical member by dividing the Medical interest. If Medical men recognised their opportunity, three influential Medical members would sit in the reformed House of Commons. Their presence there would, we verily believe, effect more for the Profession than will be done in the next twenty years by the combined forces of the General Medical Council, the British Medical and the Poor-law Medical Officers' Associations.

The cloud which perennially hangs over Auld Reekie is symbolical—

> "Oh, wad some power the giftie gie them
> To see themselves as ithers see them!"

The brotherly feeling which prevails amongst the magnates of the University has borne fruits in the rejection, as Principal, of the one Medical Professor who has done certainly more than any living Scotsman to support that seat of Medical learning in its high position amongst the Universities of the Old World. Sir James Y. Simpson has been rejected as the Principal of the University of Edinburgh, and Sir Alexander Grant has been elected in consequence of a memorial signed by a number of Sir James's Medical colleagues in the University. For Southrons, comment is superfluous.

A list of Members proposed by the authorities of the Royal College of Physicians for election to the Fellowship has been circulated during the last week or two. We purposely abstain from publishing the names of the gentlemen proposed, as we cannot believe that the list in its present state will meet with the approbation of the general body of Fellows. It is sufficient to say that it is proposed that a number of gentlemen should be again passed over whose claims have been long recognised by the Profession and the general public. If the Fellows acquiesce in the patent injustice of these proceedings, they do it to the damage of their own character for English fairness and at the peril of the stability of their College.

The four successful candidates in the late election at the Royal College of Surgeons have honourably and worthily obtained their new dignity. Four members of Council of higher Professional, scientific, and social standing could not have been found. With regard to the unsuccessful candidates, we shall hope to see at least some of them in the field another year. Mr. Gay is, we think, tolerably certain of being returned on the next occasion, and the large support rendered to Mr. Erasmus Wilson may probably induce him to stand again. We repeat that we should be glad to see both of these gentlemen in the Council. Mr. Holden and Professor Humphry have high claims as teachers, but there ought to be a place in the Council of the College for members who have won their spurs outside the great Hospitals and schools.

Nitrous oxide gas for anæsthetic purposes has been obtained in a new form. Dr. Evans, of Paris, who was one of the first experimenters with the gas, has brought over nitrous oxide liquefied by the combined agency of compression and cold. The liquid nitrous oxide is contained in an hermetically sealed vessel, in shape something like a small cannon, made of gun metal. On turning a tap the fluid escapes, and immediately volatilises with intense cold. For anæsthetic purposes it may be conveniently received in a "Clover's bag." The gas thus liberated has been administered by Mr. Clover in four dental cases, and in a case of strabismus operated on by Mr. Haynes Walton. Mr. Clover informs us that he still retains his confidence in the safety of this agent. He has now given it in two hundred and fifty cases without the slightest misadventure, and he has no reason to regard it as specially dangerous.

The appointment of Mr. Grote to the Presidency of University College, vacant by the death of Lord Brougham, is hailed by the literary friends of the College as a circumstance likely to impress upon that institution a less technical character than it has hitherto held as a place of education. Mr. Grote's high reputation as a scholar, and his tried friendship for University College, render him a most eligible successor to Lord Brougham. We doubt, however, the wisdom of depreciating the technical character of University College. It has achieved its success as a school of scientific and especially of Medical learning, and it may be well content to sustain it.

Our notice of the new preparations added within the past year to the Museum of the College of Surgeons was far from exhausting what may be said either in the way of description or eulogium. Surgical pathologists will be well repaid by a study of Mr. Christopher Heath's beautiful series illustrative of diseases of the jaws. Amongst the preparations the hypertrophied spleen removed during life by Mr. Spencer Wells is worth seeing; and Mr. T. M. Evans has contributed two carefully prepared and remarkable specimens of syphilitic deposit in the lungs and heart. The new osteological specimens have attractions both for the ethnologist and comparative anatomist. There is a cast of the celebrated Engis skull, presented by Sir Charles Lyell, and a number of distorted and typical human crania. Mr. Flower's description of the huge skeleton of the spermaceti whale, published in the *Transactions* of the Zoological Society, deserves a more extended notice than we can give it here; but the skeleton should be studied by its help. We hear that the accomplished Conservator of the Museum has been lately engaged in some investigations on the teeth of the so-called monophyodonts, which may lead to a revision of one of the accepted classifications of mammals according to dental peculiarities.

The Medical Profession, and especially the class of alienist Physicians, will be gratified by the announcement in a late Court Circular that her Majesty has been graciously pleased to confer the honour of knighthood on Dr. Hood. Sir William Charles Hood's career in the line of practice which he has adopted has been deservedly a successful one. We are glad also to announce that the treasurership of Bethlem has given a fitting completion to his connexion with that Hospital.

Diarrhœa and so-called cholera have sprung up amongst us during the past few weeks with more than ordinary severity. The deaths during last week exceeded by 201 the estimated number, and diarrhœa was fatal in 286 cases. Of these 230 were cases of infants under one year, and 35 were under three years of age.

The Medical Profession will be sorry to read of the death of

Signor Matteucci, so well known for his researches in animal electricity. Matteucci was equally illustrious as a politician and a man of science. He was for some time Minister of Public Instruction in Italy under King Victor Emmanuel, whose special favour he enjoyed, and he is said to have worked so hard in the cause of Italian education as to have seriously accelerated the chronic malady from which he suffered. Besides animal electricity, he distinguished himself in the application of electricity to telegraphic communication. He died at Leghorn.

In defence of the certificate rejected by Mr. Knox, we have to record that a further certificate to the effect that Madame Rachel is suffering from inflammation of the bladder, signed by Dr. George Johnson and Mr. Barnard Holt, has been presented by her counsel, and has been accepted by the judge of the court in which she is to be tried. Her trial is therefore postponed. We hear that one of the lady's late bail for £1000 has been for a long time an out-patient at the Charing-cross Hospital!

ROYAL COLLEGE OF SURGEONS.

At a meeting of the Council of this institution on Thursday last, Mr. Richard Quain, F.R.S., Consulting Surgeon to University College Hospital, was elected President in the vacancy occasioned by the retirement from that office of Mr. Hilton; and Messrs. Edward Cock, Surgeon to Guy's Hospital, and Samuel Solly, F.R.S., Surgeon to St. Thomas's Hospital, were elected Vice-Presidents of the College for the ensuing collegiate year. At the same meeting the Council proceeded to the election of an Examiner in Dental Surgery in the vacancy occasioned by the resignation of Mr. Luke, when Mr. Partridge, F.R.S., the late President, was elected. Another important election then occupied the attention of the Council—viz., that of Examiners in Medicine, in pursuance of the recent regulation which will come into operation at the commencement of the ensuing winter session, requiring all candidates for the diploma of Membership, not possessing a Medical licence or diploma, to undergo an examination in Medicine. The choice of the Council for these examiners fell on Dr. Samuel Wilks, Physician to Guy's Hospital, and Dr. T. B. Peacock, Physician to St. Thomas's Hospital, both being Members of the College of Surgeons.

THE MEDICAL SERVICE AND THE VOTE OF THANKS TO THE ABYSSINIAN ARMY.

It is the old tale. There is never an occasion when the Government has the power to acknowledge the services of Medical officers that it does so. It was as unjust as it was ungenerous to omit all reference to the army Medical officers in the public vote of thanks accorded by Parliament to the Abyssinian army; and we can quite understand the discontent it has produced and, what is worse, the evil it is calculated to do. We had begun to believe that things were mending in the Army Medical Department, and that under the present *régime* the old sources of discontent were passing away, and that in process of time the army would again recruit the ranks of its Medical Department from the London and Scotch schools. So long as we find that no labours, however successful, will insure a word of recognition or gratitude, the authorities may be sure that highly educated gentlemen will think twice before entering it. We feel bound to say that we exempt Sir Robert Napier and the Duke of Cambridge from blame in the matter; the former honestly acknowledged the merits of the Medical officers, and the latter spoke in warm terms of the cordial and valuable assistance which he had received from the different departments, and it is well known that frequent references were made to that at Whitehall-yard. The Queen, moreover, forwarded her recognition of the labours of the Medical officers. The pecuniary acknowledgment of a campaign of this kind does not repay the Medical officers for their arduous labours, discomfort, and risk to life, and they naturally look forward to sharing the honours which are freely conferred upon others. What made the omission peculiarly ungracious on the present occasion was the fact that Dr. Currie was an old and distinguished officer, the head of a department, and the senior in rank and position to other officers whose names were included. Sir Robert Napier is a man of too generous and just a character to have willingly omitted mentioning any one worthy of his favourable opinion, and we regard it as an unfortunate oversight on his part that he did not refer to the Hospital ships and their Medical officers at Zoulla, particularly as he touched upon such subjects as the tubular wells and photography. These vessels were inspected by one of our staff, and he expressed a high opinion of the way in which they had been fitted up and equipped—a labour which was discharged by Dr. Massey, the head of the sanitary branch of the Medical Department. The season during which they were employed permitted of their being utilised to the fullest extent, and the Medical officers on board them had to bear the heat of the Red Sea, without any of the excitement attending a campaign in the more healthy highlands of Abyssinia. We should have been glad, therefore, if a place had been found for them in Sir Robert's despatches. Still, this was an insignificant omission compared with that in the vote of thanks, and we venture to say that the "Medical Officer" in the *Daily News* has expressed the feeling of regret with which a large body of Medical officers read that vote and the speeches delivered in the two Houses of Parliament.

THE METROPOLITAN FOREIGN CATTLE MARKET BILL.

This Bill, as amended by the Select Committee, is very properly undergoing a full discussion in the House of Commons. Its object is to provide on the banks of the Thames a landing-place, market, and slaughter-houses for cattle brought from abroad into the port of London—cattle which have hitherto been transported through the streets to the Cattle Market at Islington. That there is great need for some provision of this sort can scarcely be questioned. We all recollect the history of the cattle plague outbreak of 1865, the all but absolute proof that was obtained of its origin in a cargo of cattle landed at Hull from Revel, and the absolute proof that from the Metropolitan Cattle Market, to which some of these beasts were despatched, the disease was disseminated far and wide through the country. No Government would be free from blame that should decline to adopt the recommendation of those to whom the inquiry into the matter was entrusted, and that should permit the nation to undergo the risk of another invasion of disease and another loss of some six millions of money. Restrictions imposed under the pressure of an immediate necessity upon the importation of foreign cattle cannot be continued for ever, while, in consequence of the ready railway communications, cattle bearing with them the seeds of disease are at all times liable to be received at the north-western European ports from which cattle are shipped for England. The danger to which we are exposed is not one which existed only in 1865. It is true that cattle plague is not always raging at these ports—it may even be a very rare visitor—but for all that the danger is one which may arise at any time, and, as we have already been made to feel, may affect us when we believe ourselves to be in complete security. Inspection of imported cattle has miserably failed to effect it end. It has over and over again failed to prevent the introduction of diseased animals; it failed to prevent the entrance of infected animals into the Metropolitan Cattle Market in 1865. We entirely agree, then, with the principle of the Bill, under the provisions of which it will be impossible in future that cattle brought into the port of London shall be mixed with others to whom any disease which they may bring

with them may be communicated. One objection raised to the Bill is its piecemeal character. It provides for the slaughter of beasts brought into the port of London, but leaves other ports still open. But, as we understand the matter, this is a difficulty which will not be long left to impede its beneficial operation, for the plan once adopted in London must, and necessarily will, be extended to other ports at which cattle are habitually landed from abroad. We are sorry to see the opposition which the Bill is meeting with at the hands of persons with whom vested interests and limited considerations are permitted to outweigh the exigencies of national safety, and especially are we sorry to see the matter treated on grounds of party politics, as if the Bill were an attempt to supersede the principle of free trade, under the operation of which we have now for several years been flourishing as a nation. This is not a question of party politics at all; it is a measure proposed in accordance with ordinary common sense, and after full and careful inquiry and consideration, to avert the recurrence of a calamity which fell upon us unforeseen and unexpectedly, and for which consequently we were unprepared—a calamity which our permanent and customary machinery of inspection did not then avert, and cannot be supposed equal to avert at any future time. The financial objections raised to the Bill are not such as we can enter upon. Our own belief is that, whatever the cost of the establishment of this and other similar markets and abattoirs, the money will be well spent; and, even should it result in a demand upon the national exchequer, there will be nevertheless, in the long run, a national saving in the preservation of our own herds from the ravages of foreign disease.

TYPHUS EPIDEMIC AT BRIDGEWATER.

Fever has been for some time prevalent in Bridgewater, as well as in the neighbouring town, Taunton. The epidemic is not confined to the poorer classes, some of the most respectable families having been attacked. We cannot wonder at Bridgewater being subject to epidemics, inasmuch as every real sanitary work seems to have been opposed on the score that the pocket would primarily suffer. At some late meetings, a resolution was passed which annulled the decision of a former meeting of the whole town in favour of the introduction of pure water. This decision had been arrived at after the most careful inquiry into the whole matter. A committee was formed of gentlemen who had earnestness of purpose, knowledge, and philanthropy as guarantees that they could be trusted with the important question; they drew up an admirable report, which proved in every line how grievously pure water was wanted. Yet can it be conceived, after all the warnings, in the dreadful forms of cholera and typhus, to which this town has been subject even so lately as 1866, that the earnest appeal of these gentlemen in favour of pure water was derisively treated at the meetings to which we have just alluded? Typhus is now raging at Bridgewater. Can we, we will reiterate, wonder at it, when we remember that the water that is drunk is impure, and the air that is breathed during this hot weather by every passenger over the bridge is laden with emanations from the foul inky ooze that is vomited from the four *cloacæ maximæ* which open just below the quay close to the abutment whence springs the arch of the great thoroughfare of the town?

PARLIAMENTARY.—POOR-LAW MEDICAL INSPECTORS (IRELAND) BILL—A ROYAL COMMISSION ON LEGAL MEDICINE—CONTAGIOUS DISEASES ACT AMENDMENT BILL—SCOTTISH REFORM BILL—PHARMACY AND SALE OF POISONS BILL.

On Thursday July 2, in the House of Commons, the Poor-law and Medical Inspectors (Ireland) Bill was read a second time.

On Friday Mr. Clive asked the Secretary of State for the Home Department whether her Majesty's Government had determined to recommend the appointment of a Royal Commission to report on the mode of conducting Medico-legal inquiries, and as to the operation of the sanitary laws.

Mr. Hardy said that an influential deputation had waited upon him to urge the appointment of a Royal Commission, and the subject would not be lost sight of. Some documents were about to be laid before the Government, with a view of seeing what steps should be taken in the matter.

On Monday the Contagious Diseases Act Amendment Bill passed through Committee.

The Poor-law Medical Inspectors (Ireland) Bill was read a third time and passed.

On Tuesday, July 7, in the House of Lords, the Representation of the People (Scotland) Bill was read a third time and passed.

In the House of Commons, in reference to the Pharmacy and Sale of Poisons Bill,

Mr. Lowe said that a Bill upon this subject of very great importance was passing through the House, and he hoped that some facilities would be given for discussing its principle. The noble lord the Vice-President of the Committee of Council had given notice of a motion for referring the Bill to a Select Committee, but that notice had been withdrawn and some amendments substituted which did not appear to touch the main question—namely, whether powers of licensing persons to sell dangerous drugs should be intrusted to a mere voluntary association.

Lord R. Montagu said that after a conference with the right hon. gentleman the member for Newcastle and the President of the Pharmaceutical Society, and having regard to the fact that this Bill had been introduced in the other House by Lord Granville, and assented to by the members of the Government there, he had thought it expedient to withdraw his own notice of motion, and, merely introducing certain amendments, to allow the Bill to pass, if possible, in the present session. The Bill, however, was not in his charge, and he could therefore give no undertaking as to the hour at which it would be proceeded with.

The Contagious Diseases Act Amendment Bill was read a third time and passed.

SALE OF POISONS AND PHARMACY ACT AMENDMENT BILL.

Dr. Gibbon presents his compliments to the Editor of the *Medical Times and Gazette*, and begs to inform him that the Under-Secretary of State for the Home Department, Sir James Fergusson, Bart., has undertaken to present the enclosed petition to the House of Commons.

39, Oxford-terrace, Hyde-park, W., July 8.

To the Honourable Commons of the United Kingdom of Great Britain and Ireland, in Parliament assembled.

The humble petition of the Parliamentary Committee of the British Medical Association showeth,

That the object of the "Sale of Poisons and Pharmacy Act Amendment Bill," now depending in your honourable House, is to restrict the retail sale of poisons and the compounding of medicines to the members of one trade, guild, or corporation.

That, in the opinion of your petitioners, such a measure will restrict trade and manufactures, as well as inconvenience the general public, without affording any effectual protection against criminal and accidental poisoning.

That a Select Committee of your honourable House in 1865 reported that legislation was required to regulate the sale of poisons, and that the Government ought to frame a Bill for the purpose, but postponed the consideration of the necessity of the instituting a compulsory examination and registration for chemists and druggists.

Your petitioners therefore humbly pray that this Bill may not pass your honourable House without further examination and inquiry, and your petitioners will ever pray, etc.

Signed on behalf of the Committee,

W. O. Markham, President.

Septimus Gibbon, Honorary Secretary.

KING'S COLLEGE, LONDON.

(*From a Correspondent.*)

King's College, London, is entering upon a new era in its existence, and it is now that it must show that it can mould itself to the form and exigencies of the time.

Last week an unusual amount of activity was displayed by this institution. Archbishops, and bishops, and deans, leading members of both Houses of Parliament, men distinguished in science and art, and lions (social ones) from Abyssinia, were collected within its walls. On one occasion, it was a sumptuous banquet, presided over by his Grace the Archbishop of York, at which the members of the governing body and the teachers in the College and school met together. On another, it was the presentation of a handsome testimonial to the retiring Principal. The new Principal, Dr. Barry, was prevented, by domestic bereavement, from being present at the dinner; he appeared on the second occasion, and was received with great warmth. Mr. Gladstone was selected at the dinner to propose the toast of "Prosperity to King's College, London," and took especial pains to point out that the success of King's College must depend mainly upon its adaptability to the wants of the times.

The Medical department of King's College has been in existence between thirty and forty years, and no other school has done so much, in the same period, to improve the education and raise the social position of the members of the Profession of Medicine. It is indeed remarkable to note the number of distinguished Medical men who have received their education in this College. There are at the present time but two Medical Schools in London—the ancient Hospitals of Guy's and St. Bartholomew's—which do not number amongst their staff of teachers men who have received their Professional education in the Medical School of King's College, whilst in the provinces and in the colonies King's College men take a foremost rank.

It was in King's College that regular collegiate discipline was first associated with Medical teaching and daily chapel service, the residence of students under the guidance and direction of a college tutor, the foundation of scholarships for the promotion of previous general education—all these were initiated by King's College, London, with what happy results are well known. No institution has had greater reason to be proud of its teachers and its pupils. Where shall we look for such a brilliant array of names as those we find amongst its past and present teachers? Amongst its past Professors were such men as Watson, R. Fergusson, Green, Arnott, Farre, Mayo, Todd, Bowman, Budd, Forbes, Henfrey, Daniel, and Royle; while, of its former students, such names at once occur to us as Brinton, Simon, Bowman, Henry Lee, Hulke, Heath, Anstie, Headland, Druitt, Teale, Hyde Salter, Nunn, Lawson, Price, Jordan, Sadler, Tanner, Inman, and a host of others, not to mention the eminent men who are at present attached to its Medical School. The system of teaching adopted in King's College was universally admitted to be most successful, and several other Medical Schools attempted to follow the same plan with more or less success.

The past history of the Medical department of King's College has been exceptionally brilliant and successful; what its future is to be will depend *much* on the character of the new Principal, *more* on the discretion and justice of the governing body (which have of late years been called in question), *most of all* on the energy and earnestness of its staff of teachers.

We have said that King's College has done much to raise the standard of general education amongst Medical students. Let her now apply herself to the improvement of the prevailing system of Medical education. Let her initiate some of those reforms which every one admits to be desirable, but which no one seems desirous of starting. It is a *rôle* in every respect worthy of her past history and present position, and one which will find its account in a certain *future*, if not immediate, success.

The Drought in France.—A correspondent, writing from the south of France, states that while in some parts rain has occurred, in Provence and other districts the drought is excessive, water being almost entirely wanting. At Nismes, the railway carries washerwomen and servants with their linen, etc., *gratis* to Beaucaire, to enable them to wash in the Rhône, in order to economise the water in the fountains, which are at a very low ebb, for alimentary purposes.

GENERAL MEDICAL COUNCIL.

ELEVENTH ANNUAL SESSION.

Debate on the Representation of the Profession on the Council.

Sixth Day.—Tuesday, June 30.—*Continued.*

Dr. Paget said he should not like to give a silent vote on this occasion. He had listened with very great interest to the discussion, because he had been anxious to hear what would be said in favour of the resolution, particularly as it came recommended by an association to which he felt somewhat attached, and to which he had the honour of being President only a few years ago—an Association which he believed was doing a great deal of good by its gatherings and local meetings. Some reasons in favour of the course proposed had certainly been heard, but he confessed that in his mind they had not preponderated over the objections which he saw to the scheme. Before entering upon them, however, he wished to join with Mr. Hargrave in rejecting the view which Sir Dominic Corrigan took of the course taken by the President, and he did so especially as Dr. Burrows was not present to defend himself. He thought the questions put by the President were perfectly fair, and not only so, but necessary. The very fact of a deputation coming to the Council and requesting it to take into consideration, and actually to take part in steps towards, the alteration of its constitution, implied *primâ facie* dissatisfaction with the acts of the Council, and that was abundant justification for putting the question whether there was any charge to be brought against the Council. Moreover, the resolutions which were read implied the same thing in another way. One of them was, "That we are of opinion that if the Council, in consequence of the addition of the members to be elected by the Profession, should deem it advisable to recommend the diminution in the number of the representatives of the corporations, a corresponding reduction may then be made in the representation of the Profession." What was that but a tolerably plain indication of an opinion that the proceedings of this Council were rather adverse, as it was at present constituted, to the interests of the Profession? Or else why should a bargain be proposed that in proportion as the numbers of one part of the Council were reduced, the numbers of another part should be also reduced? (Hear, hear.) The question put by the President was, therefore, not only fair, but necessary. (Applause.) There was one argument which, if he were to admit it, would at once convince him that what was proposed ought to be done, and that was the question of right. That was put by one of the speakers of the deputation and repeated by Sir D. Corrigan, "no taxation without representation." No doubt there was a just and proper connexion between those two things, which was always recognised in the constitution of the country, and properly recognised; but they must not be misled by mere words. They must consider what the principle involved in that phrase was. It was this, that those who are liable to be taxed ought to be represented in the body that taxes them. But how did that bear upon the present question? To whom were they proposing to give a voice in this Council? The registered Medical Practitioners. Well, had the Council any power to tax them? [Dr. Andrew Wood: Yes.] None whatever, except in the instance of a gentleman for five shillings wishing to add an additional qualification to his name. (Cries of "No, no," and "Yes, yes.") He repeated the Council had no power whatever to tax the registered Medical Practitioner. It was quite true that the fee of two or five pounds, as the case might be, was paid by gentlemen when they entered the Medical Profession and wished to put their names upon the register; but it was not proposed that those gentlemen should be represented in the Medical Council. It was either Medical students or gentlemen who had hitherto abstained from registering. (Applause.) But the representation was proposed to be put into the hands of those who had already registered, and those the Council had no power of taxing. (Applause.) It was, in fact, a misuse altogether of the term to speak of this fee as a tax. Every one knew the effect of increasing or reducing a tax; they felt it when the income-tax was reduced or increased so much in the pound. Apply that test to the registered Practitioners. Suppose registration were reduced from £5 to £1, would the registered Practitioners be

a bit the better off? (Applause.) Or, taking the reverse and supposing the fee were increased from £5 to £50 — (Dr. Andrew Wood: You cannot)—suppose it were, by way of illustrating the case, would any of the registered Practitioners be a bit worse off for that? On the contrary, the only effect would be to check the ingress of new members into the Profession, and the registered Practitioners, as far as they would be affected at all, would be better off with an increased tax than without. Therefore, it was really a misuse of terms to call the fee a tax at all; it was a mere entrance-fee—the same sort of thing as was paid by a man when he graduated or took out a diploma from the universities or from one of the Medical colleges.

The hour of six having arrived, the debate was adjourned till the morrow.

Seventh Day.—Wednesday, July 1.

Adjourned Debate on the Representation of the General Profession in the Council.

Dr. Paget continued his speech. He had alluded already to the fallacy that because representation should follow taxation, the payment of registration fees was supposed to give a right to the members of the general Profession to return delegates to the Council. It was also said that because the Council was the governing body of the Profession, therefore there was a right on the part of the governed to be represented upon it. He felt he ought to apologise to the Council for taking up its time in refuting that argument. But as it had been repeated again and again, until he had no doubt it was accepted generally by the Medical Profession, it was necessary to say a few words on the subject. Every one in that room was aware that there was no truth in the statement. He would test it in this way. If any one of the registered members of the Profession were asked individually whether since the time the Council was established it had in any way governed him since his registration, he would speedily give a negative answer. Looking at the Medical Act, and reading it through, in what way did it confer any power of governing the registered members of the Council? There was only one single instance—happily, a very rare one—in which the Council had direct power of interfering with members of the Profession, and that was when a registered member had been guilty of infamous conduct in a Professional sense. Not only were those cases extremely rare—only happening about once a year—but even in them the Council did not act in a governing, but in a judicial capacity. By clauses 18, 20, 21, and 22 of the Medical Act, powers were given to the Council. What were those powers, and over whom were they exercised? They were to inquire into the proceedings of the different Universities and other licensing bodies what their course of studies was for Medical degrees, what their modes were of Medical examination, and to test those examinations by visitation. The Council had also powers, through the medium of the Privy Council, of depriving those Universities and licensing bodies of the right of granting degrees and diplomas. Those were the parties governed by the Council; therefore it was according to the very principle which had been quoted by the supporters of this proposition that those were the parties who had been represented on the Council, and must be represented if the Council were expected to work as well as it had done hitherto. The talk upon this subject as to its being a question of right, therefore must be given up. But there was another view of the subject. Without there being any right in the matter, it might be advisable that the general Profession should have direct representation on the Council. But then it was incumbent on the advocates of the measure to prove that the addition of such members would increase the power of the Council for doing good, and would enable it to perform better than it had hitherto done the duties imposed upon it. The *onus* of proof was on the advocates of the measure, and he confessed he had heard nothing like a satisfactory case made out. He did not see that the mode of election of those members would provide the Council with more efficient members than it already possessed. If it did so happen that the members of the Council were composed of Professors and officials of the different Universities and Medical corporations, and there were no Medical Practitioners in the Council, then there would be a strong argument in favour of the present scheme, but as a matter of fact the great majority of the Council were Practitioners, and it was a matter of almost certainty that their successors would continue to be so. He could, therefore, see no reason why the present members of the Council should not be just as good judges of matters which would come before them as if they were elected by the Profession at large. Sir Dominic Corrigan had quoted instances in which the questions brought before the Council were not purely questions of education. No doubt those instances had some weight as far as they went; but how far did they go? and what a very small proportion they bore to the amount of discussion and labour bestowed upon the subject of Medical education! He could state that since he had been a member of the Council, he did not remember a single question that had been brought before it in which there had not been an abundance of Medical information afforded by the members of the Council. Dr. Andrew Wood had stated very fairly and truly what was entitled to some weight—namely, that the election of members in the way proposed would increase the interest of the Profession generally in the Council. That was true, *quantum valeat*. He also said that the members so elected would be better acquainted with the feelings of the Profession generally. He (Dr. Paget) did not think so: he doubted it very much. He would take this as a test. Supposing the alteration to be made, in the natural course of things, the very gentlemen who appeared before them yesterday as a deputation would be many of them, the majority of them probably, returned as representatives of the registered members of the Profession. Now, taking the recommendations of those gentlemen (and they were as fairly open to criticism as the proceedings of the Council), he did not think that they by any means indicated a very near acquaintance with the feelings of the Profession. He would take one of them as an instance. He found them stating this—"The Sub-committee entertain no doubt that the Profession will willingly pay the additional cost of their own representatives." Now, as we must all know, amongst the 20,000 registered Practitioners there was not one in a thousand that entertained the same opinion as those gentlemen forming the Sub-committee—namely, that the Profession would willingly pay the additional cost of their own representatives. (Hear, hear.) Therefore he thought that it was at least open to doubt whether those gentlemen, eminent as they were, really represented the feelings of the Profession generally better than the members of the Council now sitting round the table. Again, it was actually said yesterday by the advocates of this matter that it would strengthen the hands of the Council, and increase its influence with the Government and the public. (Hear, hear.) He cordially agreed with what Dr. Rumsey had said upon that point. He thought it was about the greatest mistake possible to think that the addition of those members would increase the influence of this Council with the Government and the public. Suppose the Council were very anxious to amend Clause 40 of the Medical Act so as to gain increased powers of putting down the most notorious quacks, was it to be supposed that when deputations from the Council to a Cabinet Minister went to tell him their anxiety about the matter, that deputation would be listened to more readily, or its recommendations more readily attended to, if they said we speak the voice of the Profession? He (Dr. Paget) thought quite the contrary. (Applause.) The influence of the Council with the Government and the public would be lessened by its being known or supposed that they merely represented the mass of the Profession.

Dr. Andrew Wood: Not "merely;" that is not what we propose.

Dr. Paget said he had not the same command of language which Dr. Andrew Wood so happily possessed, and therefore did not always express himself with such exactness; but he was willing to withdraw the word "merely." He had read a communication which had appeared in one of the Medical papers from a gentleman who had expressed his views so admirably that he would read his letter as part of the observations he wished to make. The gentleman's name was Bewley, and he dated from Clara, King's County, Ireland. He appeared to be favourable to the proposal now before the Council; but he said, "The Council was never designed by the Legislature to represent the interests of the Profession. It was formed for the promotion of the interests of the public; and it is my belief the Legislature never cared, or will care, one straw for the private or personal interests of the Medical Profession, or any other profession as such. In the eye of the Legislature, the Medical Council, as well as all the other licensing Medical institutions, except only for one object — namely, the good of the public." (Applause.) At the close of his letter he gave the Council a little advice. He said:—"If we are wise, we hall keep our individual interests in the background, and

endeavour to prove, through the medium of the Council, the Medical Association, and the press, that it is for the interest of the public that every Physician or Surgeon shall be an educated gentleman." (Applause.) If he (Dr. Paget) could express his sentiments so well as they had been expressed in that letter, he would not have borrowed it; but it seemed to him to be the shrewd good sense of the matter. (Applause.) There was one objection to the proposed scheme, which he thought ought to have been attempted to be met in some way by the advocates of the measure—namely, that the addition of members would increase the amount of talk. (Laughter.) Dr. Andrew Wood attempted to meet it by simply asserting that the addition of six members would *de*crease the amount of talk. (Laughter.) Now, with the greatest possible respect for Dr. Andrew Wood's opinion in this particular instance, he would have liked to have seen it supported by argument. (Hear, hear, and laughter.) It seemed to him, as a matter of arithmetic, that the addition of six members would add to the talk by exactly one-fourth, and indeed, if these gentlemen were expected to advocate the interests of their electors (and that was one of the grounds upon which the proposal was based), they must make speeches in order that they might be read—(laughter)—and his opinion was that they would add considerably more than one-fourth to the talk. (Hear, hear.) In fact, that was one of the chief objections, and it was not to be met by what was really nothing more than an expression of opinion the other way. Again, with regard to proportionate representation, the proposal of the deputation yesterday was such that the vote of one gentleman north of the Tweed would go further than that of three south of the Tweed, the Practitioners in England and Wales being more than six times more numerous than in Scotland. He was quite satisfied with the constitution of the Council as it was, and he thought that Mr. Hargrave hit a good point yesterday when he said, what a good thing it was that by means of the Medical Council the Medical men of the three kingdoms had been brought together, and had come to a common understanding upon so many subjects. (Applause.) He quite agreed with that, and he was prepared to maintain that the Medical Act had done for Medicine what legislators in the Houses of Lords and Commons had never been able to accomplish for the other learned professions. Not to refer to religious questions, look at the profession of the law. Englishmen could scarcely understand Scotch terms of law—(a laugh)—and he supposed there would be quite an outcry in Scotland if it were proposed to adopt the term "endowment" instead of "mortification." (Laughter.)

Dr. Alex. Wood: It would indeed be a shocking barbarism. (Loud laughter.)

Dr. Paget: Or, if it were proposed to assimilate the law of marriage in Scotland to that of other countries, he would be quite prepared for a rebellion—("hear, hear," from Dr. Alexander Wood)—but on the subject of Medicine the Medical Act had brought about a complete union between the countries. (Applause.) Again, the method of election which was proposed would not be so simple as seemed to be imagined. He (Dr. Paget) represented a university where the elections were conducted by voting papers, and it had required the recognised official, with the assistance of three assessors, to sit three or four days working hard in order to get through the labour. The number of votes given was 3334, and he ventured to say that if all the votes had been given by voting papers, as proposed by the scheme, it would have taken more than four days, and very hard work it was. The legitimate expenses of advertising, etc., to which the two members had been put amounted to above £2000 at the last election, and it was not by any means a strong contest, both gentlemen being of the same politics. But the proposers of this had no notion of what they were putting upon the Registrar, or of the questions that would arise in cases where there was a close contest. This question was not one of sentiment—(applause)—but what they had to consider was whether the scheme was good and ought to be followed. He felt bound to give a little advice to the proposer and seconder of the resolution, and hoped they would take it in a friendly way. The body that returned Sir Dominic Corrigan was a very popular body. But all the old universities of England were popular bodies. The constituency that returned him (Dr. Paget), which was larger than any, was a popular body having more members than any of the electoral districts proposed by Dr. Andrew Wood—it numbered 5400 voters.

Dr. Andrew Wood: Had you an open poll?

Dr. Paget: Any one of those gentlemen can vote if he likes; it is perfectly open. He would suggest to Sir Dominic Corrigan, who was elected by a most distinguished body of twenty gentlemen—(a laugh)—the Council or Senate of the University—that the Queen's University in Ireland had, like the University of Cambridge, a number of graduates. At Cambridge the franchise was restricted to Doctors and Masters of Arts; and supposing the Doctors and Masters of Arts of the Queen's University of Ireland were to be privileged to elect their representatives to the Council, that would be a good beginning of public representation—(laughter)—and might be carried out without any difficulty. Again, he would give the same advice to Dr. Andrew Wood, with regard to the body he represented; and he gave that advice the more readily because he was sure the choice of those bodies, upon the basis of a wider constituency, would still fall upon the same gentlemen to represent them. (Applause.)

Dr. Sharpey had listened with extreme satisfaction and very great instruction to the speech of Dr. Paget. He nevertheless meant to vote for the motion, and for this reason, that neither the motion nor the amendment pledged the Council to anything more than an inquiry. He believed the inquiry would be necessary before any amended Medical Act was proposed for the acceptance of the new Parliament. (Applause.) It was quite evident the question of the constitution of the Council would be raised, if not by the Council itself, by gentlemen out of doors; and therefore he thought it incumbent upon the Council to be prepared for that event, so as to be in a position to offer an opinion to the Legislature as to what course should be taken. As Dr. Andrew Wood's motion brought forward the main principle more specially than the amendment, he should vote for the former. At the same time, he agreed with Dr. Paget's view upon the supposed theory of representation following taxation, and if he voted for the proposed change, it would be on public grounds, not as acknowledging any such imaginary right because gentlemen paid a fee at the commencement of their career for having their names put upon the Register. That was an erroneous argument, and it was putting this great question upon too low a footing altogether. (Hear, hear.)

Dr. Stokes was disposed to vote against the resolution and the amendment. They had no proof before them that the addition of new members elected by the mass of the Profession would at all improve the Council. It must be remembered that the Council was already elected, though indirectly, by the Profession at large, a point which seemed to be overlooked; for, with the exception of the Crown nominees, the representatives of the various corporations were voted for by the members of those corporations. Again, there was no more prevalent error than that we expected the full result of legislation in a very limited period of time. It must have time to work and adjust itself before it could be judged of; and he maintained, without expressing any opinion upon the merits of the proposal, that it was at least premature. It could not be denied that great good had followed from the establishment of the Council, and it was universally admitted that great good would further follow from their labours; but, what was to be feared from the popularisation of the Council was that other questions besides those which involved the real interests of the Profession would be brought forward—questions simply monetary—(applause)—questions of remuneration for public services: coroner's fees, for instance, and the fees for giving evidence in the higher courts—(applause)—and, still worse, questions of private Professional differences, the discussion of which always brought the greatest amount of discredit upon the Profession. It was in vain to suppose that any attention would be paid by the Legislature to the wishes of the Council upon any questions which were not for the public benefit; the more private interests of the Profession would weigh as nothing, and ought to weigh as nothing, with the Government. It was quite ridiculous to call upon the Legislature to interfere in the matter; and, with regard to relieving the grievances of the Profession, the best and only course was to elevate its educational status, and, if that were effected, then the Profession would take a higher social position, and public consideration for it would be increased. (Applause.)

Dr. Storrar entirely adopted the speech of Dr. Paget as expressing his opinions upon the subject. The proposal before them was an entirely novel one, and involved questions which the Council was not called upon to solve. Let the British Medical Association and those who were interested in the question bring it before the Legislature, and get as good a measure as they could upon the subject; but to require the Council, who

had barely time to do the work which they were called upon and which they desired to do, to occupy their time in an endeavour to solve a problem which, so far as they were concerned, was insoluble, was really too hard, and he would therefore hold up his hand against the motion and against the amendment.

Dr. Risdon Bennett said that after the observations of Dr. Paget, which were clearly unanswerable, it was not necessary to take up the time of the Council at any length. There were two or three fallacies to be detected in the statement of the requisitionists—first, that the Council did not represent the popular element in the Profession. He (Dr. Bennett) was a fair illustration of the members sent by the licensing bodies, and his constituency really consisted of all the Fellows of the Royal College of Physicians. (Hear, hear.) Another fallacy was the assumption that the Profession at large had expressed any opinion upon this subject or manifested any desire with reference to it. He was not prepared to admit that the British Medical Association, however useful that Association might be, represented the Profession at large; and further, he had failed to gather from the answers of the deputation to those questions, so properly put by the Chairman, any satisfactory proof that this proposal even represented the opinion of the majority or any considerable portion of the British Medical Association itself. Dr. Sharpey had used an argument which was entitled to some weight—that it was well to be prepared for the time when it would be necessary to consider this question; but he (Dr. Bennett) thought it would depend very much upon the character of the Act which would then be proposed whether it would be necessary to take this subject into consideration at all, and until the Council knew what general measure would be brought forward, it was hardly worth while considering this subject.

Dr. Parkes said, the question before the Council being whether or not a sufficient case had been made out for the Council to consider its constitution, he confessed that he thought the affirmative of that proposition had been established. He thought especially that the utility of the Council might be improved by the introduction of a fresh order of minds upon it, and that for a deliberative assembly the more quarters they could get their information from, within certain limits, the better. He conceived, therefore, that the influence of the Council would be strengthened considerably by having the opinions of persons chosen in a different way from those who now constituted it. Dr. Paget had raised many objections which were entitled to great weight against the proposal, but, upon the whole, he thought the promoters of this scheme had made out their case. It must be admitted, without depending too much upon the representations of the British Medical Association, that there had been expressions in the various Medical journals and on behalf of that large Association of a very strong desire that the Council should consider this matter seriously, and he thought they would not be doing justice to the various persons who had expressed that opinion if they did not do so. At the same time he claimed perfect freedom of action as to what result the consideration of the subject might lead to; it was extremely probable that he might come to the conclusion that the Council could not alter its constitution with good effect. On the other hand, it might turn out that the difficulties which had been raised would disappear, or that means might be found for obviating the difficulties which Dr. Paget had so well put forward. But the sole question before the Council being whether they should inquire into the subject, he felt bound to vote in the affirmative.

Mr. Syme said he had reason to believe Dr. Alexander Wood intended to withdraw his amendment.

Dr. Alexander Wood said he was in favour of the inquiry, but not in favour of limiting it in the direction stated by Dr. Andrew Wood. If it would shorten the proceedings of the Council, he would withdraw the amendment; at the same time he must be distinctly understood that he would not vote for the motion.

Mr. Syme said he must in that case move an amendment, and preface it with a few words. In the proposed consideration of this subject, the Council must arrive at one of two decisions—either that it is desirable, or that it is not, to change its constitution. If, on the one hand, they decided in the negative, they would give offence to a very large and influential body of the Profession; and, without being a great admirer of popularity, he did not think it was consistent with prudence to give unnecessary offence. (Applause.) On the other hand, if they decided in the affirmative, it was evident, as the President had stated yesterday, that there was not the slightest chance of obtaining any legislation on the subject for a long time; and until the change was made the Council would be in the position of having publicly and solemnly declared their own constitution to be imperfect. Under those circumstances, what possible good could they do by making the inquiry at the present time? He would move "that, under the present circumstances, it would not be expedient for the Council to consider the propriety of attempting to obtain a change of constitution."

Mr. C. Hawkins seconded the amendment. He saw no necessity for a change in the present constitution of the Council. It was impossible that any measure could be carried, as it was at present constituted, against the welfare of the whole Profession, and, if the proposed change were made, they would have precisely the same class of men returned. The British Medical Association did not represent the general Practitioner. It was largely composed of Physicians and Surgeons of eminence throughout London and the provinces, a great proportion of its members being elected in London. Its leader was not a general Practitioner and not a provincial man, but a London Physician. (Hear, hear.) By adopting the proposed measure they would have a great deal more talk, and he saw no good purpose it would serve. Moreover, the Crown nominees were appointed with a view of representing the Profession at large; and, finally, it was impossible to carry out the system of election advocated by Dr. Andrew Wood.

Dr. Acland, while expressing his intention of voting against the motion, was bound to say that the representations of such a body as the British Medical Association were entitled to great weight; and he could not agree with Dr. Bennett that that body did not represent, to a great extent, the Profession at large. After entering to some extent upon the merits of the question, he stated that he heartily wished it had never been brought before the Council, and if the last forty-eight hours could be swept away, he would be for "voting the previous question." But the measure having now been brought forward, there was no escaping from it. He considered the introduction of the question at the present time not only inopportune, but really unfortunate, considering the important questions the Council had at present in hand. However, the matter could not be properly shelved; but he wished it could be made known to Dr. Sibson and those interested in the subject that some delay is absolutely necessary, and that it was not probable that an amended Act could be prepared in time for the commencement of the next session of Parliament. And, even if it could be, all knew perfectly well the time of the Legislature would be so absorbed by questions of the utmost importance that it was not likely the matter could be profitably considered by them. Moreover, when it did come to be considered, it could not be discussed upon the footing which Dr. Andrew Wood proposed; but the whole question of the education of the Medical Profession would be raked up. Considering, therefore, that they had a committee now sitting upon State Medicine, which was proposing to introduce a new qualification in the registry, and to form a new class of Practitioners, in the event of the committee deciding to recommend that course to the Council, and in the event of the adoption of such a course by the Council—considering also the event of the Government appointing the Royal Commission now in contemplation for inquiring into that subject along with the Council, in order to settle the education of that class of Practitioners, he could not help saying that nothing could be more inopportune and unfortunate than the introduction of a discussion which would be conducted most probably not very calmly, concerning the constitution of the very body to which the administration and settlement of all these difficult questions would be confided.

The President wished to reply to some observations which had been made upon the manner in which he had received the deputation. It was necessary to consider what that deputation professed to be—namely, a deputation from the Committee of the Council of the British Medical Association. That title seemed to him to diminish a good deal the force of the memorial, and he wished to ascertain whether the memorial was to carry with it the force of the great Association itself, or whether it was merely a memorial coming from an active committee of that Association. (Hear, hear.) With that view he put what he thought were pertinent questions, in order that the Council might be able to judge how much weight should be attributed to it. But there was also another reason, which the Council would at once see if they examined the wording of the memorial:—"The deputation from the

British Medical Association beg to submit to the consideration of the General Medical Council the following propositions founded on resolutions passed at the annual meeting." So that it was not the resolutions which were passed then, but it was a proposition founded upon those resolutions, with which the Council had to deal. It was well known that certain resolutions might be passed by a general meeting, and upon being put into the hands of a Committee, propositions might come out of those resolutions which were really not exactly the precise opinions of the body that sent them to the Committee; and therefore he wanted distinctly to know whether those propositions really had the sanction of the whole body or not. He did not feel at all sure, even now, that the propositions contained in the memorial had been all adopted by the British Medical Association. He did not suppose for a moment there was any attempt to deceive the Council, but he thought it was doubtful whether the propositions separately were proposed to the meeting at large. If they were, they would have great force, but if it were merely the spirit of them, that force would be diminished. He wished to make this explanation to those members of the Council who were not quite satisfied with the course he had pursued, not for his own sake, but to put the Council in possession of the real facts of the case. With respect to the question at issue, upon the motion of Dr. Andrew Wood, seconded by Sir Dominic Corrigan, he confessed that if he had before him a printed copy of the speech of Dr. Paget, he would say, These are my arguments, and this is my statement, but conveyed in a manner so much more forcible than I can hope to adopt that I beg you to accept it as my speech—in the same way as Dr. Paget himself has read those admirable observations from a Practitioner in Ireland. It appeared to him (the President) that the Council ought to represent certain interests of the Profession, and there was no doubt that it did represent the interests of the Profession so far as those interests were concerned in matters over which the Council had control. It also ought to represent the public interests as well as the interests of the Profession, and if the Council did not represent the interests of the public as well as the Profession, he did not believe it would have anything like the influence or the authority that it had. But what were the interests of the Profession upon the Council? The Council was, as Dr. Storrar had well pointed out, an administrative body, called upon to carry out an Act of Parliament, and with duties fixed by Act of Parliament. If the constitution of the Council were different from what it is—if it were not a Council of Medical Education and Registration—if it were a council that was to be converted into a Medical Parliament—if it were a council to represent all the interests of the Profession, the material and pecuniary interests of the Profession, and those other social questions which had been alluded to so forcibly and ably by Dr. Stokes—then he would agree that the Council did not at present represent the Medical Profession, and that some such change as that now proposed would be a proper and right one to be made. But the Council did not attempt to represent such interests, and, having in view its proper duties, if the present suggestions were carried out he could not say that the Council would be improved, or that any force would be added to its deliberations. They must all bear in mind that the Council had limited objects in view, and they must know perfectly well that, looking through the Profession far and wide, there were many men in it, some active energetic spirits, others men of humane and philanthropic tendencies, who did not find the routine of the Profession sufficient to occupy their minds. They were fond of discussing public questions regarding not merely their own Profession, but questions of social and sanitary science. Then there were many excellent, amiable, and good men who were full of benevolence and philanthropy, who saw and knew that there were a great many things which were done most unjustly towards the members of their Profession, and who felt the Profession did not hold that social position that it ought to hold, and that some of its members got a very inadequate remuneration for their services. Men of that class came forward whenever they had an opportunity of vindicating the rights of their brethren, and strove to get redress if possible. Now, he was satisfied that if this proposition were adopted, they would have introduced into their Council a body of men such as he had alluded to, who would possess the confidence of a large portion of their Professional brethren, and would come to the Council to represent that sort of Professional interests. (Hear, hear.) He did not think the assistance of gentlemen of that class would advance the Council in the solution of the questions they were called upon to discuss; and for these, among other reasons, he was opposed to the increase in the size of the Council, and particularly to the extent and in the manner proposed by the motion. If, then, the Council was not to be increased in numbers (which would be attended with a great increase of talk and of expense), certain members of the Council must naturally retire to give place to this new representation. He did not know what portion of the Council was to be asked to retire. As long as the Council was to have the control over the various universities and licensing bodies, it would not be fair to deprive them of representatives. (Applause.) On the other hand, he supposed nobody in this Council, and hardly anybody out of it, would dream of suggesting that the gentlemen nominated by the Crown should retire. The Council, and its weight, authority, wisdom, and influence with the Profession and the public, would be most seriously diminished if such men were abstracted from its members. He, therefore, could not see his way to meeting the wishes of the memorialists by reducing the number of members or by increasing it, and his wish would be, for the present, that the Council should endeavour to do its duty, as it had hitherto done. He believed they all most conscientiously desired so to do, however much they might differ in the modes by which the action of the Council should be carried out. He agreed with Dr. Acland that it was a most unfortunate thing that this important matter should have been brought forward at so inopportune a time as the present, when the Council had so much on its hands; and he must therefore vote against the motion.

Dr. Andrew Wood, in reply, said he was not prepared to admit that it was either unfortunate or inopportune to have brought forward this question. Nor could he admit Dr. Storrar's charge that it was "too bad" to occupy the time of the Council with such matters. What would be worse would be to show a slight to the strongly expressed opinion of the Profession out of doors, as manifested by what had appeared in the Medical press as well as the memorial before the Council. Mr. Syme's amendment was equivalent to "moving the previous question," and if such a course were adopted, it would not place the Council in a favourable position towards Parliament if once the amendment of the Medical Act came under consideration. Others would bring under their notice the fact that the Council had refused even to consider the question. He was quite prepared to amend his motion so as not to pledge the Council to anything beforehand. One objection against the admission of popular representatives was that its powers and objects were so limited. Considering the Council had power to decide the amount of qualification required for entering the Profession, and also the power of striking off names from the Register, and of depriving licensing bodies of the privilege of granting diplomas, it could not be considered as having only limited powers. He dissented altogether from Dr. Paget's view that the fees paid on registration were not analogous to taxation, and that therefore the principle of taxation entitling to representation would not apply. The expenditure was not fixed, and depended upon the discretion of the Council, and the fees were in the nature of a compounding tax, which otherwise might be annually levied. Parliament had only fixed the maximum, and the Council had the power of lessening it. At all events, the Profession considered it a tax, and thought themselves entitled to representation, in accordance with the analogy of our political institutions. The argument that the Crown nominees might be laymen was the strongest argument in favour of a direct representation of the Profession at large. He had no desire to do away with the Crown element in the Council; he was only desirous to consolidate the variety of interests on the Council by admitting the popular element. And there having been such a strong expression of opinion on the part of the Profession, it was at least desirable to take the matter into consideration. He had been reminded that the Medical Act was passed, not for the benefit of the Profession, but of the public. He quite agreed; but he was prepared to maintain that whatever was for the benefit of the public was good for the Profession also. It was wise to be prepared in time, for this question would be forced upon the attention of the Council; and it must be remembered that the experience of the past few years had shown how unwise it was to resist popular claims. He trusted, therefore, they would not give the go-by to this application by adopting Mr. Syme's amendment.

The President then put the amendment, and it was carried by a majority of 16 to 4.

On the motion of Dr. Andrew Wood that the names be recorded, the result was as follows:—Majority: The President, Dr. Bennett, Mr. Hawkins, Mr. Cooper, Dr. Acland, Dr. Paget, Dr. Storrar, Dr. Fleming, Mr. Syme, Dr. Thomson, Dr. A. Smith, Mr. Hargrave, Dr. Leet, Dr. Apjohn, Dr. Quain, Dr. Stokes. Minority: Dr. Embleton, Dr. Andrew Wood, Sir D. Corrigan, Dr. Parkes. Declined to vote: Dr. Alexander Wood, Dr. Rumsey.

Upon being put as a substantive motion,

Sir D. Corrigan moved an amendment for the appointment of a Committee to consider and report upon the arguments for and against such an alteration of the Council; but

Dr. Alexander Wood pointed out that it was not competent to move an amendment which was in substance a reversal of the decision just arrived at.

The President ruled against the amendment, and

Sir D. J. Corrigan then spoke to Mr. Syme's motion, and said it, in point of fact, admitted the principle that the subject must be taken up sooner or later, adding, however, that the present moment was inopportune. He took issue upon that, and, in view of the approaching legislation, urged that the time had now arrived when the Council ought to be prepared to give some well-considered opinion upon the subject. He did not hold himself bound to any particular view of the matter; but he did consider it was the duty of the Council to meet the question in a fair and open way, and not to put it off by this temporising resolution until the very eve of legislation, when they could not approach the question with that calmness which was desirable.

Dr. Alexander Wood wished to state, before the vote was taken, that he did not consider the Council was the proper place for debating this question, and that when the discussion of it was opened, there were those who would introduce much more sweeping alterations than that now proposed. If the Medical Association wished to put their views in force, let them go to the Legislature for that purpose, and he only hoped they would meet with more success than the Council had hitherto been favoured with.

After some remarks from Dr. A. Smith,

Mr. Syme replied, and the motion was carried by a majority of 18 to 4.

The Pharmacy Bill.

Dr. Rumsey then moved—"That a committee be appointed to consider and report on the Bill for the regulation of Pharmacy now before Parliament, in order that, if it should appear desirable, the opinion of the General Medical Council may be represented by petition to Parliament, or by memorial to her Majesty's Ministers, before the said Bill shall become law." In calling attention to the present Bill, he stated that almost every recommendation made by the Committee of the Medical Council in 1865 had been ignored. In the first place, this Bill was confined to Great Britain, and did not include Ireland. Next, there was no obligation on chemists and druggists to use the Pharmacopœia which had been so creditably and beneficially issued by the Council. Moreover, the Bill contained no prohibition against registered chemists and druggists practising Medicine—an omission which involved serious danger to the public—he said nothing about the interests of the Profession. Before the reign of James I. apothecaries were in a position similar to that of chemists and druggists at present. The Society of Apothecaries was chartered, and thus a new body of Medical Practitioners was brought into existence. The chemists and druggists now call for incorporation, with exclusive privileges; and the question was whether at this time of day a new body of unqualified Practitioners should be let loose upon society to practise Medicine under a false title. The Committee of this Council recommended in 1865 that all pharmaceutical chemists should be subjected to some controlling body; but the Bill contained no such security. And he believed this was the only civilised country in which there was not some such control. The list of poisons was very imperfect and inadequate. It omitted a substance now largely consumed in this country with the most injurious effect upon the public health—opium. It did not extend, as it should have done, the most important provision of the Arsenic Act to the other fatal poisons contained in the list—viz., that purchasers should register their names as a means of identification. The Committee had also recommended that more satisfactory evidence of qualification should be required; but that recommendation had been totally neglected. Moreover, the Bill extended its protection to the commoner chemists and druggists in the land, many of whom were nothing better than grocers, while there were some who even carried on the business of drapers. Yet they were to be permitted to register as legally qualified chemists and druggists; and not only so, but this privilege was extended to all assistants in their shops, and further, to all boys who had served two years' apprenticeship. (Laughter.) The demands of the chemists and druggists were monstrous, and this Council would do well to interfere to prevent such a measure passing into law.

Dr. Acland seconded the motion.

Dr. Leet did not approve of extending the Bill to Ireland, because it would introduce into that country an inferior class of dispensing chemists. At present the Licentiates of Apothecaries' Hall (who had to pass a careful examination) were the only persons allowed to dispense Physicians' prescriptions, and that system had been found to work so well that the Senate of the Queen's University had passed a high eulogium upon the results of it.

Dr. Alexander Wood opposed the motion of Dr. Rumsey on the ground that the Bill would have the effect of changing the chemists and druggists of the country into a trade or guild who would speedily raise themselves into an independent body granting licences to practise similar to the body which Dr. Leet so ably represented (the Apothecaries' Hall, Ireland), which granted its diplomas at 10s. 6d. each. (Laughter.)

Dr. A. Smith said the condition of pharmacy in Ireland had degenerated enormously since the passing of the Medical Act. So much was this the case that gentlemen were getting ashamed of being called apothecaries, and removed the word from their doors. He recollected the time when Dr. Leet had the word on his door, but he was one of the first to remove it.

Sir D. J. Corrigan, in reply to the remark of Dr. Leet that the Queen's University had passed a high eulogium upon the Apothecaries' Hall, said that was in the year 1855; but at the present time the restrictive regulations of the Apothecaries' Hall were such that out of Dublin, Belfast, Cork, or Galway, it was impossible in Ireland to get a Physician's prescription made up. The Apothecaries' Hall educated its members to such an extent that they were not content to practise in country towns. He did not wish to deprive the Hall of the privilege of granting licences to practise as Apothecaries, but what he desired was that legislation should be extended so that men should be at liberty to open shops to compound medicines if they had passed an examination in pharmacy alone, without being obliged to attend to Medicine, Surgery, and Midwifery. With that view, having been in correspondence with two members of the House of Lords, he had proposed the following clause:—"That from and after the passing of this Act, every person duly qualified and registered under this Act, and thereby qualified to open a shop as compounding chemist in Great Britain, shall in like manner be entitled to do so in Ireland without being subject to any prosecution or penalty, notwithstanding any enactment to the contrary in the Apothecaries Act of Ireland (1791)."

The motion was put to the vote, and unanimously adopted.

Dr. Rumsey then moved that the Committee be authorised to communicate with the Pharmaceutical Society upon this subject.

Seconded by Dr. Quain, and carried *nem. con.*

The Gratuity to Dr. Redwood.

Dr. Quain moved "That the treasurers be authorised to pay the sum of 50*l.*, recommended by the Pharmacopœia Committee of 1867 to be paid, to Dr. Redwood for his special and extra services in the preparation of the work, but omitted in the amount submitted for payment to the Council at its last session."

Dr. Apjohn, having been on the Committee, had no recollection of such a recommendation, and moved as an amendment "That there is no evidence before the Council to justify such an outlay."

Dr. Sharpey (also a member of the Committee) said he recollected the subject being brought before the Committee, but he agreed that there had been no recommendation upon the subject.

Dr. Quain explained how it was the 50*l.* did not appear upon the accounts of the Committee, and agreed to substitute the word "voted" for "recommended."

Dr. A. Smith seconded the amendment of Dr. Apjohn.

After some discussion, which at one time threatened to become somewhat warm, the amendment was lost, and Dr. Quain's motion carried *nem. con.*

Adjourned.

EIGHTH DAY.—THURSDAY, JULY 2.

At the meeting of the Council, after some business of a private character, the report of the Pharmacopœia Committee was read by the Registrar. It stated that "the Pharmacopœia Committee for watching over the progress of pharmacy, and for making such additions and corrections as would facilitate hereafter the preparation of the next editions of the British Pharmacopœia, had engaged the services of Dr. Redwood, who had rendered such valuable assistance in the preparation of the last edition of the work. Dr. Redwood had prepared a report, a portion of which refers to some typographical and minor errors which require correction in the Pharmacopœia of 1867. The Committee recommend that this portion of the report should be published, so that those who possess the Pharmacopœia may themselves be enabled to make the necessary corrections; and the Committee also recommend that these corrections be printed as a slip, in the copies hereafter sold."

Dr. SHARPEY moved, and Dr. STORRAR seconded, its adoption.

Dr. A. SMITH moved "That it be an instruction to the Pharmacopœia Committee to furnish to the Executive Committee a report at the termination of each year on the progress of pharmacy, and to suggest such additions and corrections as will facilitate hereafter the next edition of the British Pharmacopœia, and that the report be published by the Executive Committee for the consideration of the Profession."

After a somewhat animated discussion,

Dr. QUAIN said he would withdraw from the whole thing, as he felt so much personal feeling had been introduced into the subject that it was impossible the committee could sit with any advantage.

Upon this understanding Dr. A. SMITH withdrew his amendment.

THE LUNACY LAWS.

The report of the Committee was read. They state that Mr. Ouvry had drawn up a draft letter to the Home Secretary as to Medical certificates in lunacy. In the present state of the law, certificates signed by Medical men in Scotland do not constitute a valid authority for the detention of lunatic patients in England and Wales, and *vice versa*. The same rule plainly applies to such certificates granted by Medical men in Ireland. The reason for such restriction seems to be that "all persons signing a certificate should not merely be duly qualified, but should also, by residence within the jurisdiction, be responsible for the penalties expressed in the Lunacy Acts for irregularities contravening their provisions; and that a person against whom such penalties could not be recovered in the event of illegality or irregularity being found in the certificate signed by him, is not a person whose certificate is contemplated by the Act, or receivable under it." The letter concludes by suggesting to Mr. Hardy that an Act should be passed, applicable to the United Kingdom, which, while it will give to the Medical Profession the full privileges contemplated by the Medical Act, will at the same time insure that no person giving a false certificate shall escape the punishment justly due to his offence.

Dr. ANDREW WOOD, in moving its adoption, said the Committee recognised the evils which had arisen from partial legislation upon this as upon other subjects. If the union of the three kingdoms was to be real, there should be imperial, and not partial legislation—(applause)—instead of having one law for England, another one for Scotland, and a third for Ireland.

Dr. FLEMING seconded the motion.

Dr. THOMPSON, as an illustration of the inconvenience of the existing law, stated that a local judge in Scotland refused the certificate of an M.B. in a lunacy case because that title was not contained in the Lunacy Act—that Act having been passed some years previous to the Medical Act constituting the Council. He mentioned this because he presumed it would be generally admitted that the certificate of any of those who held their qualification from bodies mentioned in Schedule A of the Medical Act would be received throughout the country. (Applause.)

The motion was put to the vote, and carried *nem. con.*

REPORT OF THE COMMITTEE ON VACCINATION.

After a long discussion upon the details of this report, in the course of which several verbal alterations were adopted,

Mr. C. HAWKINS (the Chairman) moved that the Council sanction the proposal of the Committee to issue to each of the bodies in England, Scotland, and Ireland, for their adoption, the recommendations of the Committee relating to the knowledge of vaccination required by every person desirous of practising Medicine or Surgery.

Dr. BENNETT seconded the motion.

Dr. ANDREW WOOD required that the recommendations should be brought before the Council *seriatim*.

The following recommendations were then brought forward by Mr. HAWKINS:—

1st. That a certificate should be required by each licensing body from every candidate for its degree, diploma, or licence to practise Medicine or Surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph, and is thoroughly informed in every necessary part of the subject.

2ndly. That such a certificate should only be received by any licensing body from recognised vaccine stations, or from recognised vaccine departments in Medical schools, or Hospitals, or other public institutions where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (perhaps eight or ten on an average weekly) as may be found, after due inquiry in the first instance, confirmed by authentic returns or inspections from time to time, to be sufficient for this purpose at each place.

After some remarks from Drs. EMBLETON, HARGRAVE, and STOKES,

Sir D. J. CORRIGAN moved as a substitution for the two recommendations of the Committee, "That each licensing body should examine every candidate for its degree, diploma, or licence to practise Medicine or Surgery, as to his knowledge in the different stages of the vaccine vesicle, of the several measures for preserving lymph, and of every other necessary part of the subject." There was one thing which, to his mind, was fatal to the proposals of the Committee—viz, that its effect would be to substitute certificates for examination. (Applause.) He had had some experience of the certificate system, and knew its worthlessness. He knew one instance of a gentleman who came over to Dublin with a certificate for midwifery from an institution called "the Poplar Hospital." He had devoted his leisure in London to visiting that institution to see what opportunities there were for the study in question, and to his surprise he found, not only that there was not a single woman there, but that there never had been—(laughter)—the Poplar Hospital being a Hospital for Seamen. (Loud laughter.) The certificate system in general had been entirely repudiated by the Medical Council, and this being an attempt to revert to it, in a matter which not only might endanger individual life, but the health of entire communities, he felt bound to offer it every opposition in his power. (Hear, hear.)

Dr ALEXANDER WOOD seconded the amendment. He objected to all speciality with regard to vaccination, whether it took the form of special vaccinators, special teachers, or special licences; and he agreed with Sir Dominic Corrigan that of the two ways of securing the knowledge of vaccination the certificate system was the worst, and the examination system the best. (Applause)

Dr. ANDREW WOOD maintained that the Legislature having made vaccination a speciality, and compulsory upon the community, it was incumbent upon the Council to secure a thorough practical knowledge upon the subject—which was not so simple as was sometimes represented. He agreed with Dr. Alexander Wood in one respect, and suggested a modification of Mr. Hawkins' motion by the adoption of the principle of examination in place of certificates.

Dr. FLEMING agreed with Dr. Andrew Wood that this subject was a special one. He, however, defended the recommendations of the Committee, and supported Mr. C. Hawkins's motion.

Dr. STORRAR reminded the Council that the Medical Department of the Privy Council had recommended the principle of certificates with regard to vaccination. Would it not conduce very much more to the honour of the Council, and also to the satisfactory relations which ought to subsist between this Council and the Crown, that they should not be at daggers drawn on this subject? He had no hesitation in saying that in the case of licensing bodies, such as the Royal College of Surgeons in London, it was impossible to adopt the system of practical examination in vaccination with due regard to the time necessarily taken up by other important subjects. The value of the certificate system depended upon the respectability and care of the bodies granting the certificate; and he was quite prepared to vote for such a modification of the present motion as should require the student to have performed the operation a minimum number of times. He was convinced the Privy Council would take independent steps in the matter if the present suggestion of Mr. Simon was not adopted.

Sir D. J. Corrigan suggested the insertion of the words, "That each licensing body shall require such certificates as it may deem necessary, and shall examine, etc.," thus making examination a *sine qua non*.

Mr. C. Hawkins having replied, the amendment was put and lost by 9 to 7, and

The original motion adopted by 10 to 6.

On the motion of Mr. Hawkins, seconded by Dr. Storrar, the draft letter recommended by the Council to be addressed to Mr. Simon was unanimously adopted.

Dr. Acland then moved "That the treasurer be authorised to pay £100 to Dr. Richardson, F.R.S., to aid him in his researches into the class of agents which can with safety be used as anæsthetics; that one-half be forthwith paid, and one-half on presentation of a report which shall have special regard to the several properties of the said agents and their fitness to be introduced into the British Pharmacopœia." There were three questions involved in the resolution—first, whether the Council had the necessary power; secondly, if so, whether it was advisable, as a general principle, to exercise the power; and, thirdly, whether the particular instance mentioned in the resolution was a right and proper one for the Council to select.

He was proceeding to argue for the affirmative of each of these propositions, when the hour for adjournment arrived.

Ninth Day.—Friday, July 3.

At the sitting of the Council this morning, on the motion of Dr. Alexander Wood, seconded by Dr. Storrar, the Council agreed to appoint the same gentlemen as last year to constitute the Pharmacopœia Committee.

The Gratuity to Dr. Richardson.

Dr. Acland proceeded with the adjourned debate upon this subject, and urged the importance of liberality in conducting investigations which should improve the efficiency of the Pharmacopœia.

Dr. Stokes seconded the motion.

Dr. Andrew Wood felt bound to vote against the motion. To adopt a favourite expression of the mover, it was both inopportune and unfortunate that such a proposal had been brought before the Council—(laughter)—and, to quote Mr. Syme, it was "under present circumstances"—(a laugh)—when there was a deficit in the funds of the Council—most unwise to vote away its money upon subjects wholly alien from those for which it was established. (Applause.)

Dr. Stokes, Dr. Rumsey, Sir D. J. Corrigan, and Dr. A. Smith also spoke against the motion; and

Dr. Acland, in reply, stated that the name of Dr. Richardson having been introduced into the proposal, and many of the speakers against the motion having regretted that circumstance, he thought the most fitting course to take would be to withdraw the motion altogether.

Dr. Alex. Wood objected to the motion being withdrawn after two hours of valuable time had been wasted in its discussion.

Dr. Paget was of opinion that Dr. Acland should be permitted to withdraw the motion on the ground stated.

The President took the sense of the Council upon this question, and the numbers being equal—ten to ten—gave his casting vote in favour of the withdrawal.

Dr. Bennett called attention to the inconvenience of such a course as this being possible, and gave notice of motion to alter the standing orders in this respect. (Applause.)

Committee on Medical Education.

The following interim report was presented upon this important subject:—

The Committee on the subjects of Medical education have to report to the Council that after taking into consideration the points referred to them, they have put in train a series of arrangements by which they hope to be able to obtain valuable evidence from the principal teachers and examiners in the kingdom, which may aid the Committee in drawing up a complete report for the next meeting of the Council.

(For Mr. Syme) Andrew Wood, Acting Chairman.

The report of the Finance Committee was then read, and on the motion of Mr. Hargrave, seconded by Dr. Rumsey, and unanimously agreed to, the salaries of the clerks were raised by £50 a year, in lieu of £35 as recommended by the Committee.

On the motion of Dr. Parkes, a vote of thanks was accorded to the Army and Navy Medical Department and to the Right Hon. the Secretary of State for India for their kindness in furnishing examination returns to the Council.

With reference to a communication from the Branch Council for Ireland relative to two applications for registration in the "Students' Register," a motion proposed by Mr. C. Hawkins, seconded by Mr. Cooper, approving of the course pursued by the Branch Council, was unanimously adopted. It appears that at the Queen's College, Galway, an illiberal regulation exists by which students who may have passed their *preliminary* examination there are refused a certificate thereof till too late for them to join another school. The Branch Council for Ireland rebuked this custom, relieved the students from the difficulty it imposed upon them, and said:—"This Branch Council considers it unjust to withhold from any students who have successfully passed a preliminary examination the usual certificate—a practice which obtains at the Queen's College, Galway—thus preventing any such from registering as students, should they desire to pursue their studies elsewhere than in that College."

It was then proposed by Dr. Storrar, seconded by Dr. Sharpey, and unanimously agreed to, that the "application from Dr Frederick Milford to be registered as M.D. (by examination) Heidelberg, June 27, 1856," be acceded to.

Assumption of Medical Titles by Unqualified Practitioners.

The following letter from Dr. James Mason relative to the Medical Acts Amendment Bill was ordered to be entered on the Minutes:—

Somerset-house, St. Philip's-road, Sheffield, May, 1868.

Gentlemen,—As the Bill of the Amended Medical Acts of 1868 is about to be submitted to Parliament for sanction, I again beg to remind you of the very great necessity and importance of inserting the words "Obstetrician or Accoucheur" along with the others of Doctor, Physician, Surgeon, etc., in the clause relating to the assumption and preservation of titles. These terms are daily becoming more generally used by quacks, because they find that such are used by duly qualified Practitioners, and not protected by the Medical Act. There are actual examples of it here, and a large number of patients requiring obstetric treatment do not find it out till they have received its penalties.

I am, gentlemen, yours truly,

James Mason, M.D., M.R.C.S., L.M., etc.

To the General Medical Council, London.

The Adjudication of the Carmichael Prize.

A letter from Dr. Edwards Crisp relative to the adjudication of this prize was read by the Registrar.

This communication was received by the Council with derisive cheers and much laughter, and upon the Chairman inquiring, in the usual way, whether any gentleman proposed a motion upon the subject, a member of the Council suggested it should be referred to the Committee on Lunacy. (Loud laughter.)

Mr. Hargrave said every one knew the College of Surgeons of Ireland had been purity itself on all occasions. Moreover, this matter did not come within the province of the Council. He would therefore move—"That this Council is of opinion that the matter referred to in the memorial presented by Dr. Edwards Crisp is not within the powers of the Council as limited by the Medical Acts, and the Council therefore declines to enter upon its consideration."

The motion was seconded by Dr. Fleming, and adopted *nem. con.*

A letter from the same gentleman was also read, "On the Increase of Half-qualified Practitioners since the passing of the Medical Act (1858)."

Ordered that the receipt of the communication be acknowledged, and that it be referred to the Committee on Returns from Licensing Bodies and the Registration of Students.

A memorial from the north of Scotland relative to the position of parochial Medical officers was ordered to be acknowledged, with an intimation that the subject did not come within the province of the Council.

A letter from Dr. Barnes, relative to the use of his surname by a non-registered person in offensive advertisements, having been read,

Dr. Bennett said he believed Dr. Barnes would be satisfied with having brought forward this matter as an illustration of the inconvenience experienced by the Profession in consequence of the imperfect powers of the Medical Council under the existing law for protecting the Profession and the public from the inroads of quackery. He moved that the letter be acknowledged, and its general purport entered upon the Minutes.

Agreed to.

The Report of the Committee on Preliminary Education was then brought up and read. The gist is contained in the following excepts:—

It is quite apparent that the defects which require to be remedied in the education of students of Medicine are to be found less in the subjects of Professional study than in provision for that preliminary mental culture which would enable the student to grasp with vigour the varied,

intricate, and complicated sciences on which Medicine is founded, or with which it claims affinity

Your Committee are therefore of opinion that while the present list of examinations continues to be sanctioned, the Branch Council in each division of the kingdom should make arrangements for visiting and reporting on them all, whether they are conducted under the superintendence of Medical boards, or under that of the national educational bodies.

It appears that the largest Medical examining body in England (Royal College of Surgeons) does not consider two years' notice as sufficient before introducing the very small additions which the Council proposed to make to the branches of geometry and algebra, and that even in 1870 it only agrees to introduce the additional branches, "provided the several other licensing bodies will agree to make them compulsory."

In regard to the subject of Greek, which the Council resolved in 1866 to make compulsory after 1869, your Committee have great doubts whether it is possible at present in our grammar-schools to get such an amount of knowledge of Greek as would be of real use either as a branch of knowledge or as a means of mental culture. While, therefore, they are most unwilling to recommend the Council to lower its standard of preliminary education in any respect, they think it would act wisely in deferring to enforce a knowledge of Greek on all students until it is seen what direction the reform of the grammar-schools, which cannot now be long postponed, will take.

It consists with the knowledge of those members of your Committee who have had experience in the examination of Medical students that they are extremely deficient in that precision of thought and language which would be conferred by some knowledge of the art of reasoning and of the first principles of logic. No means, however, exist for acquiring a knowledge of this branch at present in any schools, and not even in all our colleges.

In conclusion, your Committee consider it their duty to impress on the Council the necessity of securing that the preliminary examination should in all cases be really preliminary, and that the licensing bodies should be recommended to make this rule absolute. One great use of general education is to confer that amount of mental preparation which will enable the student to profit by his Professional studies; and every teacher will endorse the opinion of the Committee that in proportion as the mind of the student has been prepared by general culture, in the same proportion will be his progress in his Medical studies.

It was ordered to be received and entered on the Minutes.

Dr. Alexander Wood then moved—"That it be recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in—1. English language, including grammar and composition. 2. Arithmetic, including vulgar and decimal fractions. Algebra, including simple equations. 3. Geometry: First two books of Euclid. 4. Latin, including translation and grammar."

Dr. Apjohn said the University he represented would not consent to be hampered by such minutiæ as were enumerated in the proposal of the Committee.

Dr. Parkes thought it could scarcely be objected by anybody that the list was too severe. It had been considered by some members of the Council to be not severe enough; but he thought anybody reading it carefully would see there was nothing in it that might not reasonably be required from young men of 17. Therefore there ought to be no hesitation on the part of the Council in recommending the licensing bodies to require that extent of education at least. He hoped the resolution, which was merely carrying out what had been formerly decided by the Council (and to which no objection had been taken at the time by anybody) would be unanimously adopted.

Dr. Paget did not understand Dr. Apjohn to object to the list as too severe, but rather that there might be examinations far above the minimum prescribed by the Council, but which nevertheless might not include clearly and distinctly all the subjects—such, for instance, as English grammar. If it were possible so to word the resolution as not to encounter that difficulty, it would be an advantage, because otherwise the Council might come into collision with bodies that were really doing more than the resolution asked, simply because they did not conform strictly and literally to all its recommendations.

Dr. Alexander Wood said this standard of education had been laid down by the Council, and approved year after year. The Committee, having sat upon the question, found in point of fact that obedience was not accorded to the recommendations of the Council, and they now suggested how those recommendations should be enforced. The only thing to be done was, if the examinations did not conform to the requirements of the Council, they must not be recognised. The Council must insist upon conformity with the list drawn up by the Committee as the minimum, and which had been so often agreed upon by the Council that it was hardly in order to raise a question upon it now. Because if they agreed to what Dr. Paget suggested—to allow laxity in one subject because the examination was high in another—who was to be the judge? It would be, in point of fact, better for the Council to give up its educational supervision altogether than to admit such a principle. (Applause.)

Dr. Paget: Would you insist upon this being done by the Universities of the kingdom—"To write a portion of an English author from dictation?"

Dr. Alexander Wood: Certainly.

Dr. Andrew Wood said he felt inclined to rub his eyes and to imagine that he was a kind of Rip van Winkle when he heard the speech of Dr. Paget; because he was under the impression that the question had been settled three years ago. The Council had issued certain recommendations to all the licensing bodies of the kingdom—to the Colleges of Physicians and Surgeons, and various others; and they had been, most satisfactorily, doing all in their power to comply with those recommendations, until they had raised their standard up to that recommended by the Council. He was not, then, prepared to admit that bodies, over whom they had no power of visitation, should be allowed to say—Because we examine upon so and so, therefore we consider that an equivalent for something else. (Applause.)

Dr. Paget: That is not what I suggested.

Dr. Andrew Wood: It is equivalent to what you suggested. It would never do to open the meshes of the net in that way, because if they did it to one they would be required to do it to all, and would be retrograding instead of advancing in Medical education. If those bodies whom they had hitherto recognised did not choose to come up to the standard laid down by the Council, they must disfranchise themselves; it would not be the act of the Council, it would be their own act. He therefore trusted that Dr. Alexander Wood would persevere, and that there should be no vacillation and uncertainty with regard to the matter. (Applause.)

Mr. Cooper could speak of a body who carried out most strictly the recommendations of the Council; and the consequence was that in the examination of January last forty-one gentlemen applied to be examined, but only thirty-five were admitted, of whom eighteen passed, and seventeen were rejected; and of the latter, eight had been previously rejected. With such facts before them, he thought they should not increase the severity of the preliminary examinations. Above all, however, every student should have a positive knowledge of his mother tongue, a knowledge of Latin, and he could wish a knowledge of Greek in order to enable him to understand the technical terms of science; but he very much doubted whether the secondary education in the kingdom was such as would warrant the Council in requiring too severe a curriculum.

Mr. Cæsar Hawkins questioned whether it was wise to lay down minute rules for such bodies as Oxford, Cambridge, and Dublin, whose standard must be higher than the minimum required by the Council.

Dr. Apjohn was quite satisfied, if the motion was carried as proposed, the University he represented would not accept it.

Dr. Fleming thought it came to be a question how far the Council ought to insist upon such a thing as "English grammar and composition." He believed, if the resolution were passed, the ancient universities would not consider themselves bound to act up to it, or to modify their examinations so as to comprise the details which the resolution required. On the other hand, there was not a body in the kingdom more willing to conform to the recommendations of the Council, so far as reason went, in questions of preliminary education, than the University of Dublin.

Mr. Hargrave differed from Dr. Apjohn and the last speaker in their view that the University of Dublin would not agree to the terms of the Council—he believed they would comply at once.

Dr. Storrar really could not hear so strong a statement as that which had proceeded from Mr. Cæsar Hawkins—that the Universities would refuse to conform to the views of the Medical Council—without giving evidence of his own willingness to take his share of the responsibility of passing the motion. He called attention to resolutions already passed by the Council with reference to this matter, and added that Dr. Parkes had not used too strong an expression when he said that those were solemn decisions of the Council come to upwards of two years ago. Fair notice had been given to all educational bodies of this determination of the Council, and now, because those bodies had not chosen to put themselves in a proper position with regard to the Council, it was attempted to be said that the recommendations of the Council should be altered for their convenience. If they yielded one inch upon this question, they might as well throw up their duties altogether.

Dr. Embleton hoped the Council would hold by its recommendations steadfastly and without change.

On the motion being put from the chair,

Dr. Paget moved what would properly come as a rider to the resolution, for the purpose of taking the opportunity of explaining what he meant (which seemed to have been entirely misunderstood) by the objection he took to the resolution. It was not an examination in English that he objected to at all; but it was that bodies like the ancient universities of England should be obliged to conform to all the minutiæ pointed out in the resolution. He would therefore move to rescind the resolution of the Council of June 6, 1867—

That the General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1st. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation, as well as to composition. 2nd. To write a portion of an English author to dictation. 3rd. To explain the grammatical construction of one or two sentences. 4th. To point out the grammatical errors in a sentence ungrammatically composed, and to explain the nature. 5th. To give the derivation and definition of a few English words in common use.

And, in conclusion, he would ask Dr. Storrar whether, in the University of London, students were required to write a portion of an English author from dictation.

Dr. Storrar: Yes.

Dr. Paget: Well, I must confess I doubt whether my university would think it a necessary thing.

The hour of six having arrived, the debate was adjourned.

Tenth Day.—Saturday, July 4.

Report on Preliminary Examination.

The adjourned debate on the above subject was continued by Dr. Paget, who said that in cases where there was an examination more extensive and more difficult than the minimum proposed by the Council, such examination should stand as a substitute for the minimum required by the Council—in other words, that the major should include the minor. The curious effect of the resolution of Dr. Alex. Wood, coupled with the previous resolution of the Council last year as to the mode of conducting examinations, would be this—that graduates of Cambridge, and he believed of the other ancient universities, would not be able to receive certificates of having passed the examination now required by the Council. Because, *e.g.*, such a test as writing from an English author from dictation was not applied at Cambridge, therefore a man might have taken the highest honours in classics, mathematics, and natural science, he might be, and ordinarily would be, 23 years of age, he might be as well able to write good English as any member sitting on the Council; yet, after all, that he would not be allowed to begin his Medical studies. True, he might have passed his examination in writing from dictation from an English author when he was a boy of 12 or 14; but, inasmuch as the university did not apply that test, it could not give the certificate that would be required.

Dr. Alexander Wood said that laws were not made for the good, but for the bad, and that it was known as a positive fact there were men seeking to enter the Medical Profession every day who, whatever might be their knowledge of Latin, Greek, or mathematics, were utterly ignorant of their mother tongue. In order to remove all difficulty, he was content to modify the resolution by inserting the words, "Provided also that the Branch Council may accept any examination which seems to them equally to secure on the part of those passing it a sufficient grammatical knowledge of English."

The debate was continued by Dr. Andrew Wood, Dr. Thomson, Mr. C. Hawkins, Sir Dominic Corrigan, Mr. Hargrave, and Dr. Apjohn, and the resolution was finally adopted in the following form:—"That, in reissuing the regulation regarding the examination in English adopted last year (Minutes, vol. v. p. 224), the following be added:—'Provided always that an examination may be accepted as satisfactory that secures on the part of the candidate passing it, a sufficient grammatical knowledge of English.'"

The Supervision of Preliminary Examinations.

Dr. Alex. Wood, in introducing the second paragraph of the report, said the Committee had to consider "whether any plan could be devised by which the Council could better supervise the preliminary examinations." He would move, "That the Branch Councils be requested to make arrangements for visiting and reporting on such preliminary examinations as have not already been visited, and regarding which it may appear to them desirable to procure information. That the reports made on these examinations be transmitted in the usual manner to the Executive Committee for the consideration of the General Council at their next session."

Sir D. J. Corrigan, on behalf of the Branch Council of Ireland, would positively and distinctly state that he must decline to accept any such responsibility.

Dr. Alexander Wood: I think, if we find Sir Dominic Corrigan has neglected his duty in this respect, we must depute somebody else to perform it for him.

Dr. Apjohn said he believed Sir D. Corrigan was the only member of the Council that declined to act.

Dr. Storrar thought the resolution would only carry out in a more formal way what the English Branch Council had already agreed to. Last year they had visited and reported upon the matriculation examinations of the University of London and the Medical examination at Durham. He thought it would be advantageous to visit the examinations of the College of Preceptors, and also the local examinations of Oxford and Cambridge. It was advisable to have the power of exercising a discretion in the matter as to what they should inquire into, and when.

Mr. Hargrave would rest altogether on the authority of the University. As for going down to Galway, Cork, and Belfast, he felt bound to say it would be impossible.

Dr. Alexander Wood had always thought the Council had made a mistake in taking upon itself the duty of visitation. At the same time, if the Council had decided to do so by vote, the duty must be discharged. He therefore felt bound to press the resolution.

It was seconded by Dr. Storrar, and agreed to.

General Education.

Dr. Alexander Wood said the Committee, having taken this matter into consideration, had authorised him to move the following resolution:—"That the Executive Committee be instructed to watch over any Bill on general education with a view to such arrangements as will enable the various boards to secure the due preliminary education of Medical students."

Dr. Storrar seconded the motion, and it was carried *nem. con.*

Centralisation of Examining Boards on Preliminary Education.

Dr. Fleming, in introducing this subject, moved—"That it be remitted to the Branch Councils to consider and report how far it would conduce to a more efficient and satisfactory system of conducting the examination of students in preliminary education if a board was appointed by each Branch Council to arrange and conduct, under their supervision, these examinations; and that, should the Branch Councils approve of such a system, they be requested to indicate the method by which they would propose to carry it out." At one period he had been of opinion that it would be better to withdraw these examinations from licensing boards altogether and place them entirely in the hands of the National Education Boards; but from what he had seen and heard it was his belief that confidence could not be placed in them, and that if the Council could organise some central plan, it would be both a great facility for students and also an advantage to the Profession at large. Taking London, for instance, he would suggest that the Executive Council should appoint a committee of five examiners, who should prepare a list of questions which, upon being printed, should be sent down to the various licensing bodies. The students would then write their answers to those questions, and they would be returned to the examiners, who would judge upon them and decide whether the candidates deserved to pass or to be rejected. Of course it would be necessary that those examinations should be conducted at all the various Colleges on the same day and at the same hour, but that could easily be effected, and thus the Council would have fully nine-tenths of the preliminary examinations of students under their direct control. Under these circumstances, it would be an easy matter for the Council to increase or diminish the requirements as they thought fit from time to time, and if it was thought necessary, and could be done with confidence, those papers might even be sent down to some of the principal provincial schools, as Bristol, Leeds, Manchester, and could be carried out there as well as anywhere else. (Applause.) Of course such an arrangement would not interfere in any way with the degrees of universities, which would still be accepted as at present. In regard to the expense, it could be met if a fee of ten shillings were exacted from every student coming up for his preliminary examination. One of the principal recommendations of this scheme was that it would prevent—what was too common at the present time—students saying, "I will go to this board or to that, and see if they will pass me, and if I am rejected I will go to the Apothecaries or some other body and try them." He knew that that was done in Scotland, and he had

no doubt the same thing occurred in the other divisions of the kingdom.

Dr. Alexander Wood seconded the motion.

Sir Dominic Corrigan cordially supported it. It was a step in the right way, because it would insure that young men entering the Profession had a sufficient preliminary education, which was not secured under the present system, and, he believed, never would be, while they had something like twenty-two or twenty-three bodies entitled to issue certificates for preliminary education, over which bodies the Council had no sufficient control. It was their fatal lukewarmness with regard to general education that produced such scenes as that described by the *Daily Telegraph* of the current day as having taken place in the House of Commons. He would read it for their instruction :—"Non-combatants in Mounted Corps.—Captain Vivian asked why non-combatant officers were appointed to mounted corps and compelled to pay ration, although they received no mounted pay? Sir J. Pakington said it was impossible to deny that, especially as regards Medical officers, there was an inconsistency in the system, but, notwithstanding this, Medical officers are always found anxious to obtain appointments to cavalry regiments." He would like to know would Sir John Pakington say the same thing of his own office—namely, that if the salary was only £100 a year it should not be increased because there were to be found many persons ready to take it at that rate? The reason Medical men were treated in that way was quite in accordance with the well-known axiom of political economy —namely, that in proportion to the abundance of the supply the price of the article would be depreciated. By narrowing the door of preliminary education they would remedy this evil, and, at the same time, raise the status of the whole Profession. (Applause.) Suppose, next year, all the licensing bodies rejected 70 per cent. instead of 25 per cent., would either society in general or the Medical Profession in particular sustain a very great loss from the absence of the other fifty who were declared unfit to enter the Profession? (Laughter.) But Sir D. Corrigan was of opinion that society would go on very well, and perhaps a good deal better, without any Doctors at all than with bad ones.

Dr. A. Smith expressed his entire concordance with the motion of Dr. Fleming.

Dr. Alexander Wood reminded the Council that there was no power, under the Act of Parliament, of enforcing their recommendations upon the various bodies.

Dr. Andrew Wood trusted the Council would carry the resolution. It was not a new proposal, but had been already well considered.

Dr. Storrar said, anxious as he was to see it realised, there was no power to do what was suggested without an Act of Parliament. They could only recommend it to the various bodies. He would offer a word of encouragement to those bodies which had courage enough to honestly raise their standard: that it had the effect of increasing the number of candidates. For whatever might be said about there being a body of students who were anxious to get through their examination on the easiest terms, there was a very large proportion who would never be satisfied unless they got the "best thing going." He mentioned as an illustration that three years ago there had been a very merciless rejection at the matriculation examination of the University of London; but, notwithstanding that, the number of students in the succeeding years had very largely increased. (Applause.)

Dr. Paget would move that the resolution be amended as follows :—"That it be remitted to the Branch Councils to consider and report how far it would conduce to a more efficient and satisfactory system of conducting the examination of students in preliminary education, if boards were appointed by the General Medical Council, or by the Branch Councils respectively, to arrange and conduct, under their supervision, these examinations; that, should the Branch Councils approve of such a system, they be requested to state the method by which they would propose to carry it out, or any difficulties which may stand in the way of doing so; and that these reports be transmitted to the Executive Committee at least one month before the next session of the Council."

The President, while agreeing with much that had been said, thought it should be publicly known, for the defence of the Council, that although they were one and all most anxious to raise the education of the Profession, both preliminary and Professional, they must always bear in mind that their regulations were not intended for men who were aiming at the highest honours of their Profession. (Applause.) He thought the hon. and learned Baronet and others had rather gone beyond what was just in making a comparison between the requirements of the Council and those of such a body as the University of London. Those who came under the latter went of their own free will, and for the purpose of obtaining a very distinguished degree. (Applause.)

Dr. Fleming was willing to adopt Dr. Paget's alternative proposition, and also the emendation of Sir D. Corrigan.

The amended motion was then adopted.

The Study of Greek.

Dr. Alexander Wood proposed the following resolution upon this subject—"That the Medical Council, while unwilling to come to any resolution that will have the appearance of lowering the standard of preliminary education, is of opinion that the year 1870 will be too soon to transfer Greek from the optional to the compulsory subjects."

Dr. Embleton seconded the motion.

Sir D. J. Corrigan totally dissented from the resolution, and it was the paragraph in the report which made him say the tone of the document was retrogressive. There was a phrase in the report which he desired a definition of from Dr. Alexander Wood—viz., "grammar school."

Dr. Alexander Wood, upon being pressed, said it meant a school where grammar was taught.

Sir D. Corrigan said that in Ireland it meant charity schools, the education of which was totally insufficient for any one intending to enter the Medical Profession.

Dr. Andrew Wood defended the principle of the resolution.

Mr. Hargrave thought it would have the effect of postponing the study of Greek not only to the year 1870, but to the Greek Kalends. (Laughter.)

Dr. A. Smith was quite convinced that if the Council required Greek from the candidates they would obtain it.

Dr. Storrar thought that for the sake of thoroughness it was well to postpone the subject of Greek for the time stated, because he thought sufficient notice had scarcely been given. For that reason, and for that reason only, he would support the resolution.

Dr. Acland supported the motion on the ground stated by Dr. Storrar, and also because there was a general inclination gaining ground in the country to substitute foreign languages as an alternative for Greek.

After a few words from Dr. Alexander Wood in reply, the motion was put to the meeting and carried by a large majority.

The Study of Logic.

A resolution upon this subject—"That the Branch Councils be instructed to consider and report how far it be desirable to add some knowledge of the elements of logic to the preliminary examination of the Medical student, and, if considered desirable, how it could best be carried out"—moved by Dr. Alexander Wood and seconded by Dr. Rumsey, was passed unanimously.

A resolution endorsing paragraph 8 of the report was also carried *nem. con.*

Adjourned to Monday 12 o'clock.

Eleventh Day.—Monday, July 6.

This being the last day of the session, the Council met by appointment at 12 o'clock, Mr. Cæsar Hawkins occupying the chair in the unavoidable absence of the President.

Pharmacy.

The following is the report of the Pharmacy Bill Committee :—

The Committee appointed to consider and report on the Bill for the regulation of pharmacy now before Parliament, beg to submit the following report to the General Medical Council; and they desire to state that, in considering the matter, they have had the advantage of the presence of Mr. Sandford, President, and of Mr. Bremridge, Secretary of the Pharmaceutical Society.

The course adopted was, in the first instance, to read the recommendations, in order, of the Committee of the General Medical Council on the pharmacy question in 1865, and to ask the President and the Secretary of the Pharmaceutical Society for information as to the reasons of the promoters of the Bill for not adopting the suggestions of that Committee. Mr. Sandford and Mr. Bremridge most kindly and most frankly met all the questions. The following are the questions and replies, divided under the two heads, "Pharmacy," and "Sale of Poisons."

Pharmacy.

Suggestion No. 1.—Why was this suggestion (*vide* vol. iii. p. 303, Minutes of General Medical Council), proposing to extend the Bill to Ireland, not adopted?

Reply.—1st. That the Pharmacy Bill of 1852 did not extend to Ireland.

2nd. That the promoters were informed that the dispensing chemists of Ireland were a superior class of men to those in England.

3rd. That the promoters do not now object to the extension of the provisions of the Bill to Ireland.

Suggestion No. 2.—Why was it not rendered imperative on all chemists and druggists to follow the formularies of the British Pharmacopœia in compounding prescriptions?

Reply.—It was considered that such compulsion was not within their jurisdiction, but belonged wholly to higher authorities. The promoters do not object to the insertion of such provision.

Suggestion No 3.—Why are persons admitted on what appear to be too easy terms, and why are the privileges proposed in 1865 to be given only to those then in business, now extended by the present Bill to a wider class of unqualified persons?

Reply.—That such extension was given by Parliament in protection of vested interests; that a committee of the House of Commons in 1865 recommended such extension, and that without such extension the Bill would have no chance of passing through Parliament.

Suggestion No. 4.—Why is some provision not inserted (vol. iii. p. 304) to prohibit dispensing chemists from practising any branch of Medicine or Surgery?

Reply.—1st. That the power to prevent unqualified persons from practising Medicine or Surgery rested, in their opinion, with a higher authority.

2nd. That they object as strongly as any others to dispensing chemists practising Medicine or Surgery, and that Sect. VIII. of the Pharmacy Act of 1852, which remains in force by this Bill, strictly excludes any examination in Medicine, Surgery, and midwifery from the examinations.

Sale of Poisons.

Suggestion No. 1.—Why are not the provisions of the Arsenic Act extended to the sale of all the more fatal poisons?

Reply.—That the provisions of the Arsenic Act remain a dead letter.

Suggestion No. 2.—What restrictions as to sale of poisons are to be imposed upon registered chemists?

Reply.—There was no restriction in the original draft, but Clause No. 1, as amended in the House of Lords, provides that all chemists shall "conform to such regulations as to keeping and selling of such poisons as may be prescribed by the Pharmaceutical Society, with the consent of the Privy Council."

The promoters of the Bill consider this restriction quite sufficient.

Suggestion No. 3.—Why does not the list of poisons in Schedule (A) include opium?

Reply.—Opium was included in the first draft of the Bill, but the promoters of the Bill received such strong representations from chemists residing principally in Cambridgeshire, Lincolnshire, and Norfolk, against interfering with their business—opium, as they stated, being one of their chief articles of trade—that the promoters felt compelled to strike opium out of Schedule A; but that Clause 2 of the Bill provides for the addition, from time to time, of any article deemed a poison to Schedule (A), with the consent of the Privy Council, and that, at any time, it and any other poisons might be so inserted

Your Committee now beg to report their own conclusions, and they would here recommend the introduction of the single word "pharmacist," for the several terms now used, "chemist and druggist," "compounding chemist," "pharmaceutical chemist," etc.

Pharmacy.

Your Committee desire, in the first place, to correct a mistake in the information conveyed to the promoters of the Bill—viz., "That the dispensing chemists of Ireland are a superior class of men to those in England." The fact is, that there are no such persons in Ireland as compounding chemists, while there are more than 6000 compounding chemists in England and Wales The only persons permitted to compound medicines in Ireland are licentiates of the Apothecaries' Hall of Ireland, any other person opening a shop for compounding medicines in Ireland being liable to a fine of £20 for every offence of compounding a prescription, at the prosecution of the Apothecaries' Hall of Ireland, and to obtain such licence it is required by the Apothecaries Hall of Ireland that the candidate should have gone through a four years' course of study of anatomy, Surgery, Medicine, and midwifery.

Your Committee are of opinion that some provision should be introduced into the Bill by which pharmacists, duly examined according to the provisions of the Pharmacy Act of 1852, and registered under the proposed Act, shall be permitted to open shop in like manner in Ireland as in England, without being liable to prosecution or infliction of penalty; and that if there be any obstacle in the Apothecaries Act of Ireland to prevent the licensing by the Apothecaries' Hall of Ireland of pharmacists in Ireland, that that obstacle should be removed, giving reciprocity of practising pharmacy throughout the United Kingdom.

In reference to the introduction of a clause rendering it compulsory on pharmacists to follow the formulary of the British Pharmacopœia, the Committee observe that the obligation to compound acording to the formulary of the British Pharmacopœia is provided for to some extent by sections 2 and 3 of Act 25 and 26 Vict. c. xci., which are as follows:—

Sect. II.—"The exclusive right of publishing, printing, and selling the said Pharmacopœia shall rest in the said general Council, subject to this proviso: that it shall be lawful for the Commissioners of the Treasury from time to time to fix the price at which copies of the said work are to be sold to the public."

Sect III.—"The British Pharmacopœia, when published, shall for all purposes be deemed to be substituted throughout Great Britain and Ireland for the several above-mentioned Pharmacopœias, and any Act of Parliament, order in council, or custom relating to any such last-mentioned Pharmacopœias shall be deemed, after the publication of the British Pharmacopœia, to refer to such Pharmacopœia.'

Your Committee regret that this Act of Parliament, or the above sections, were not printed in the last edition of the Pharmacopœia, as they were in the first, and suggest to the Council the propriety of giving them publicity.

Your Committee are, however, of opinion that the above sections are not sufficient to enfore the desired object, and recommend that a provision should be introduced into the Bill to render it imperative on all registered pharmacists to dispense medicine in strict accordance with the British Pharmacopœia, unless when otherwise specially directed in written prescriptions.

Your Committee beg to call particular attention to the provisions of this Bill, which would register indiscriminately every person who may be at the present time engaged even partially in the business of chemist and druggist. The proposal in this Bill goes farther than the corresponding proposal in the Bill of 1865, inasmuch as it would qualify for registration every assistant and every apprentice of two years' standing. To such extensions your Committee strongly object.

In a measure which constitutes a registered body, to which would be committed the power and responsibility of dispensing medicines which may be poisonous, or injurious, or worthless, if not properly prepared and from pure materials, some better plea for indiscriminate registration should be adduced than the protection of vested interests. The health and safety of the community are surely of more consideration than the vested interests of traders. Your Committee therefore recommend that the legalised right to dispense medicine should be confined to members of the Pharmaceutical Society, and to such other existing chemists and druggists as the Council of that Society may recommend for the privilege of registration.

On the question of inserting a stringent clause in the Pharmacy Bill to prevent pharmacists from practising any branch of Medicine or Surgery, your Committee observe that they would be liable, in common with all other unqualified persons, to the penalties provided in the Medical Act of 1858, but your Committee are of opinion that such provision is not sufficient, and that a provision of a similar kind to that recommended by the Committee of 1865 should be added to Clause 16 of the present Bill, after the words "Medical Practitioner," viz.:—"or entitle any person registered under this Act to practise Medicine or Surgery, or any branch of Medicine or Surgery."

Sale of Poisons.

Your Committee, as already stated, are informed that the provisions of the Arsenic Act have become a dead letter; and if such be the case, they would not recommend that the provisions of the said Act should be embodied in this Bill.

Your Committee are of opinion that Clause No. 1 of the present Bill would sufficiently provide for the regulation of the sale of poisons, if the same power were extended to the General Medical Council as to the Pharmaceutical Society, viz.—to represent to the Privy Council what in their opinion should be inserted in Schedule A as poisons, and, from time to time, to make such other representations to the Privy Council for the protection of the public as may seem advisable.

With regard to the omission of opium from the list, your Committee are of opinion that opium should be inserted either at once, or under the provisions of Clause 1; and that the reasons which have been put before this Committee—viz., that regulations as to the sale of opium would interfere with the trade profits of druggists in certain parts of England—constitute, in the opinion of your Committee, the strongest grounds for inserting opium in the list of poisons.

With regard to the sale of opium and other poisons in Ireland, there is already in force in Ireland an Act, 31 Geo. III., cap. 34, applying to the sale of arsenic, etc.; and it may be advisable, in the next session of Parliament, to consider the expediency of extending the provisions of that Act, or of the present Bill, to that part of the United Kingdom.

Dr. Rumsey said he regretted the Committee had only had the opportunity of conferring with the representatives of one of the bodies which were promoting this Bill—namely, the Pharmaceutical Society; the other large body—the chemists and druggists of the country—they had not been enabled to communicate with. He also regretted that it did not appear practicable to adopt the Pharmaceutical Society under the Act of 1852 as a basis of legislation. It would then have been necessary merely to prohibit the use of the title of pharmacist by those who were not on the register, dealing with them just in the same way as unregistered Practitioners of Medicine are dealt with by the Medical Registrar—not prohibiting such as were now in business to continue in business, but not allowing them to be on the Register, which gave them a sort of legally established position in the country. The number of chemists in the country was very much larger than it was stated to be by the Pharmaceutical Society, who put the number at between 6000 and 7000, whereas, taking the census of 1861, there were found to be not less than 16,000 males entered as belonging to the occupation. No doubt many of them would be assistants, but still the difference between 6000 and 16,000 was rather astonishing. The Committee were unanimous in not desiring to interfere, further than was necessary for the public health and safety, with chemists and druggists now in business. The Apothecaries' Act of 1815 had been quoted on behalf of existing interests, but that did not apply to the present proposal, because it did not create a registration of members, but merely protected existing members from any interference.

Mr. Cooper said there was a register kept at the Apothecaries' Hall for the purpose.

Dr. Rumsey was sorry the great principle of supervision had been omitted in the present report. Perhaps it was prudently done, but he was bound to say it was a principle which the Council had already laid down in a report adopted by them. Add to that the fact that England was the only country in the civilised world where pharmaceutical chemists were not subject to control, and he thought he sufficiently justified himself in calling the attention of the Council to the matter. With regard to Mr. Sandford's statement that the provisions of the Arsenic Act had become a dead letter, after having the advantage of hearing a statement of Mr. Simon upon the subject, he could not admit the truth of the assertion. He believed that those provisions had exercised a most salutary effect in curtailing the unlimited sale of so frightful a poison as arsenic, and he would have liked to see in the report a recommendation for applying similar safeguards to the sale of other virulent poisons. He thought it should be in the power of the Medical department of the Privy Council to issue regulations in refer-

ence to these matters from time to time. He was sorry to say the Pharmacy Bill now under discussion did not give that power. It gave power solely to the Pharmaceutical Society *with the consent of the Privy Council*, thus leaving the initiative with the Pharmaceutical Society. With regard to the sale of opium, the reply received from the Pharmaceutical Society was most curious and instructive—namely, it "was included in the first draft of the Bill, but the promoters of the Bill received such strong representations from chemists residing principally in Cambridgeshire, Lincolnshire, and Norfolk against interfering with their business—opium, as they stated, being one of their chief articles of trade—that the promoters felt compelled to strike opium out of Schedule A." (Hear, hear.) It was a very remarkable thing that those three counties the Medical officers of the Privy Council had shown to be distinguished fatally for the highest infant mortality in the kingdom, and they attributed that mortality and the degradation of race that was going on in those counties to the enormous consumption of opium - (hear, hear)—yet, with that frightful fact before the community, the promoters of the Bill struck out the word opium in deference to the traders in those counties. He now moved that the report be adopted by the Council, following upon which some resolutions would be moved by Sir D. Corrigan on the subject.

Dr. Paget said that with reference to the "degradation of race" in the counties of Cambridgeshire, Norfolk, and Lincolnshire, he was interested in two of those counties, and could not assent to the proposition. So far from there being any evidence of physical degradation, as far as he knew the people of those counties were rather remarkable for being a fine race of men.

Dr. Rumsey: The stunted development of the children has been particularly noticed of late since the consumption of opium has increased. If you will look at the report of the Inspectors of the Privy Council, you will see abundant evidence of what I say. (Applause.)

Dr. Quain thought the report should be discussed paragraph by paragraph, because to some parts of it he felt bound to offer considerable opposition. For example, it was most desirable that the Act should extend to Ireland, but, on the other hand, that all the chemists should adopt the British Pharmacopœia was most inconvenient. No one had greater desire to extend the Pharmacopœia than he had, but to adopt it indiscriminately and by force of law in that way would lead to very dangerous results. For example, many were in the habit of having old prescriptions made up; a chemist in such case might be guided by his reason and judgment; but under the proposed clause, as far as he understood it, a chemist had no alternative under the law but to use the British Pharmacopœia.

Sir D. J. Corrigan: That case is provided for.

Dr. Quain: Not legally. He had consulted some of the principal chemists and druggists upon the subject, and they said it would be a most dangerous thing to insist upon the indiscriminate and compulsory use of it.

Sir D. J. Corrigan, in introducing the first resolution founded upon the report—"That the term pharmacist be introduced into the wording of the Act as synonymous with the terms compounding chemist, pharmaceutic chemist, chemist or druggist"—said the word "pharmacist" had been chosen by the Committee as more in accordance with the usage on the Continent, and also as a term which it was thought would in time supersede the variety of terms at present in use.

The resolution was seconded by Dr. Storar, put to the Council, and unanimously adopted.

Sir D. J. Corrigan, in introducing the second resolution—"That, from and after the passing of this Act, 'pharmacists,' or 'dispensing chemists,' or 'druggists,' duly qualified to open shops or establishments in England for the compounding of medicines, shall in like manner be duly qualified to open like shops or establishments in Ireland, and shall not be liable to penalty or fine for so doing, and that in like manner persons licensed in pharmacy, and registered by the Apothecaries' Hall of Ireland, shall not be liable to penalty or fine for so doing in Great Britain"—said that, whereas the Bill provided certain poisons should not be sold by such and such persons unless they conformed to such regulations as to the sale of them as might be prescribed by the Pharmaceutical Society with the consent of the Privy Council, the Committee proposed to introduce the words "or by the General Medical Council," thus giving them power to initiate any steps they might think necessary.

Dr. Andrew Wood expressed great satisfaction that a new class of dispensing chemists (who would not assume the power of prescribing) would, by this resolution, be introduced into Ireland. (Applause.)

In moving the third resolution—"That in clause 1 of the Pharmacy Bill, after the words 'may be prescribed' should be inserted the words 'by the General Medical Council or,' and that in clause 2, line 3, similar words should be inserted after the word 'and,' and again after the word 'thereupon' in line 7"—

Sir D. J. Corrigan said the object was to give power to the General Medical Council as well as the Pharmaceutical Society to suggest to the Privy Council such questions as this—that certain dangerous drugs should be put into Schedule A, containing poisons dangerous to human life and health.

Mr. Hargrave seconded the resolution. After prolonged discussion the resolution was lost.

Dr. Rumsey then proposed, as a solution of the difficulty, that the words "the Pharmaceutical Society with the consent of" be omitted from the Bill—thus leaving the initiative with the Privy Council.

This resolution was negatived.

The Sale of Opium.

Sir D. J. Corrigan, upon this subject, moved "That 'opium' should be inserted in Schedule A." Unanimously adopted.

Druggists' Assistants and Apprentices.

The following resolution, moved by Sir D. J. Corrigan, and seconded by Dr. Andrew Wood, was passed unanimously: "That clauses 3 and 4 be so amended as to limit the registration of 'pharmacists' or chemists and druggists to members of the Pharmaceutical Society, and to such other existing chemists and druggists as the Council of that Society may recommend as fit to be placed on the registry."

The New Pharmacopœia.

Sir D. J. Corrigan moved "That all pharmacists shall be required to compound medicines according to the formularies of the British Pharmacopœia, unless otherwise specially directed in the written prescriptions."

Dr. Quain objected as before to such a clause, in consequence of the hardship and inconvenience which he was convinced from practical knowledge it would impose upon pharmaceutical chemists. It was a well-known fact that certain Medical men did not use the British Pharmacopœia, and at the same time did not indicate that fact upon their prescriptions. Chemists at present knew, from the quarter whence the prescription came, that it was intended to be made up under the London Pharmacopœia. But unless this was distinctly stated, under the proposed clause, they would be compelled by law to dispense under the British Pharmacopœia and no other; and the responsibility of any mishap would be thrown back upon the Medical man.

The resolution was carried.

The Practice of Medicine by Pharmacists.

It was then moved by Sir D J. Corrigan, and seconded by Mr. Cooper, "That there shall be a clause introduced, providing that registration under this Act shall not entitle any person so registered to practise Medicine or Surgery, or any branch of Medicine or Surgery."

Carried unanimously.

Sir Dominic Corrigan then moved, and it was seconded by Dr. Storrar, and agreed to, "That a deputation consisting of the President, Sir Dominic Corrigan, Dr. Rumsey, Dr. Leet, and Dr. Alexander Wood, be requested to place, without delay, before the Home Secretary the resolutions of the General Medical Council in reference to a report of the Pharmacy Bill Committee this day considered by the General Council, placing in his hands both the report of Committee and the resolutions adopted by the Council."

At a subsequent period of the meeting, Sir Dominic Corrigan, in the absence of Dr. Rumsey, Chairman of the Committee on Pharmacy, reported to the Council that the deputation had had an interview with Sir James Fergusson, Bart., Under-Secretary of State for the Home Department, and had handed to him the resolution of the General Medical Council agreed to this day, and that Sir James Fergusson had promised to give the resolutions and report of the Committee his best attention in the progress of the Bill through the House.

Report of the Committee on the Observations of the Licensing Bodies and Reports of Visitations of Examinations, 1867–8.

From the first part, consisting of observations on the licensing bodies, we extract the following:—*University of Edinburgh*: "The Committee observe that in all the examinations of the

University, in the subjects of both general and Professional education, a candidate, though failing in one or even two subjects of the examination, is allowed to pass in the rest, and that his re-examination is confined to those subjects only in which he has failed. It does not appear after what interval of time the re-examination takes place; but the Committee would observe that, if any considerable interval occurs between the two examinations, the effect of this arrangement must be to facilitate the passing of men of inferior capacity." *The Royal College of Physicians of Edinburgh* is rebuked for objecting to the expense of practical chemical examination. Regarding minimum number of marks, the Committee think there should be a minimum on *each* subject in all examinations.

Secondly comes the Report of the Visitors of Examinations, 1867-8. The only remarks that need attention are those which complain of the laxity of the classical examinations at the Royal College of Surgeons of Ireland, and the fact that boys of 14 and 15 are admitted to them. In several instances candidates who could read and translate Greek did not know the Greek names of the letters. "The reporters desire to add their conviction that there has already been a general and very great improvement in the Medical examinations throughout the United Kingdom during the short period since the Medical Council directed its attention more particularly to this subject."

The report was received and entered on the Minutes.

After a considerable discussion upon various questions contained in the report, the first resolution founded upon it was adopted:—"That the General Medical Council are of opinion—1. That it is desirable that the different licensing bodies should combine their examinations, when this is practicable, so as to secure that the knowledge of every Practitioner whose name appears on the Register shall have been tested in all the subjects of Professional education which the Council has determined to be essential—viz.: 1. Anatomy. 2. General Anatomy. 3. Physiology. 4. Chemistry. 5. Materia Medica. 6. Practical Pharmacy. 7. Medicine. 8. Surgery. 9. Midwifery. 10. Forensic Medicine." Upon the second resolution—"As to the method of conducting examinations"—the following recommendations were discussed *seriatim*:—"1. That they should be both oral and in writing. 2. That not less than two examiners, or one examiner with an assessor, should be present at every oral examination. 3. That the oral examinations should be so far public as to be open, as far as practicable, to the Medical and Surgical graduates, or members of the examining body. 4. That the questions to be answered in writing should be so numerous, and embrace such a variety of the details of each subject, as may adequately test the proficiency of the candidate; and that they should be submitted to the body of examiners or governing body for consideration and for revision, if desirable, before being proposed to the candidates. 5. That the written answers should be submitted to more than one of the examiners. 6. That practical examinations should be held in all the subjects in which they can be employed. 7. That excellence in one or more subjects should not be allowed to compensate for failure in others. 8. That if a candidate be rejected for failure in any one subject he should be re-examined in all."

They were unanimously endorsed by the Council after a very short discussion.

The third resolution founded on the report of the Committee was—"That examiners should only be elected for definite periods, with power of re-appointment." And this, on the motion of Sir D. J. Corrigan, was modified as follows:—"That examiners should only be elected for definite periods, and be eligible for re-election."

The Registrar was directed to forward these recommendations to the various bodies.

Dr. Alexander Wood moved "That the Registrar be directed to draw up, in the usual form, the recommendations and opinions of the General Medical Council with regard both to the preliminary and professional examinations; and that copies be issued to the various licensing bodies."

The motion was seconded by Dr. Andrew Wood, and passed *nem. con.*

On the motion of Dr. Paget, seconded by Dr. Fleming, it was unanimously resolved—"That copies of the (1) Observations of the Licensing Bodies upon the Report of the Committee, 1867, of the Medical Council on the Visitations of Examinations; (2) the Reports of Visitations of Examinations which have been made since the last session of the Medical Council; and (3) the Report of the Committee thereon, entered in this day's Minutes, be sent to the various licensing bodies, together with the Resolutions of the Medical Council thereon."

The report of the Committee of last year upon the same subjects was, on the motion of Dr. Fleming, seconded by Dr. Alexander Wood, dropped.

The last subject brought under the consideration of the Council was the report of the Committee on returns from the licensing bodies of Professional examinations and their results, and on the registration of students for the year 1867.

1. The Committee beg leave to present a table, compiled from the returns, according to Recommendation 6, sec. v. of the Recommendations of the Council, 1866 (vol. iv. p. 311)—viz., that returns from the licensing bodies in Schedule (A) be made annually, on January 1, to the General Medical Council, stating the number and names of the candidates who have passed their first as well as their second examinations, and the number of those who have been rejected at the first and second examinations respectively.

Table for 1867.

Licensing Bodies.	Qualifications.	No. Passed.			No. Rejected.		
		1st Exam.	2nd Exam.	3rd Exam.	1st Exam.	2nd Exam.	3rd Exam.
R. Coll. Phys. London	Licence	37	71	..	5	9	..
R. Coll. Surg. England	Membership	418	353	..	122	52	..
Soc. Apothecaries, London	Licence	160	254	..	43	30	..
University of Oxford	M.B.	3	2	..	3	2	..
	M.D.	..	1	1	..	..	..
,, Cambridge	M.B.	10	5	8	4	1	1
	M.C.	1	..	..	..	..	..
,, Durham	L.M. and M.C.	1	2	..	..	..	..
	M.C. and M.D.	..	1	..	..	..	..
,, London	M.B.	*25	22	..	20	3	..
R. Coll. Phys. Edinburgh	Licence	1	167	..	12	31	..
R. Coll. Phys. and R. Coll. Surg. Edinburgh	Licence in Med. and Surg.	73	101	..	24	26	..
R. Coll. Surg. Edinburgh	Licence	6	47	..	4	10	..
R. Coll Phys. Edin. and Fac. Phys. Surg. Glasg.	Licence in Med. and Surg.	17	29	..	13	5	..
Fac. Phys. Surg. Glasgow	Licence	25	28	..	18	22	..
University of Aberdeen	M.B.	47	45	41	6	13	5
,, Edinburgh	M.B. & M.C., M.D.	82	59	88	27	30	11
,, Glasgow	M.B. & M.C., M.D.	60	29	..	12	5	..
,, St. Andrews	M.D.	..	..	10	..	..	..
K. Q. Coll. Phys. Ireland	Licence in Med.	1	69	..	..	9	..
	Ditto in Midwifery	..	9	..	..	5	..
R. Coll. Surg. ,,	Licence in Surgery	99	85	..	39	16	..
	Ditto in Midwifery	..	8	..	..	..	..
Apothecaries' Hall, ,,	Licence	12	27	..	..	6	..
University of Dublin	M.B.	12	34	..	16	2	..
Queen's Univ. Ireland	M.C.	..	19	..	..	5	..
	M.D.	79	39	..	23	18	..
Totals		1169	1504	148	379	300	17

* Three of this number were examined in physiology only.

The Council will observe with satisfaction that this year the table comprises returns from the whole of the nineteen licensing bodies without exception, and the Committee are not aware that any person has entered upon the study of the Profession without having been previously registered as a student in Medicine.

2. The number of students registered during the year 1867 is as follows:—

In England	457
In Scotland	258
In Ireland	212
Total	927

According to the Medical Students' Register, every person registered during the year 1867 has passed the required preliminary examination (No. 2 of Recommendations on Registration of Medical Students), but your Committee have been informed that in Ireland a good many students have been allowed to enter upon Medical study on condition of their passing an examination in general education before the end of their second year of Medical study.

The following five paragraphs show the present state of things in reference to this point:—

The King and Queen's College of Physicians of Ireland hold no preliminary examination themselves, every candidate for their qualifications, with very rare exceptions, having already passed elsewhere an examination in preliminary education.

With the Royal College of Surgeons of Ireland the rule is to require candidates to pass a preliminary examination before commencing Medical study; the exceptions to this rule are very few.

The Apothecaries' Hall requires in all cases the preliminary examination to be passed before Medical study is begun.

With regard to the University of Dublin, it appears that the Act of Parliament which sanctions the matriculation of Medical students without any previous examination in Arts, is practically a compulsion on the University to admit to the advantages of the Medical school students who do not intend to enter on the ordinary studies in Arts. This provision of the Act is not approved of by the University, but cannot be said to affect any persons who take degrees in Medicine, as such degrees are conferred on those students only who have previously graduated in Arts.

The Queen's University in Ireland does not require the preliminary examination as an antecedent to the commencement of Medical study.

The Committee would suggest to the Council that the Registrar be requested to address a letter to those licensing bodies in Ireland which do not require the preliminary examination to be passed before Medical study is begun, representing that throughout England and Scotland a complete uniformity has been brought about by the adhesion of the licensing bodies to the recommendation of the General Medical Council in

this respect, and that it is highly desirable that students in all the three divisions of the kingdom should be placed on the same footing, making a rule absolute requiring preliminary education and examination to be really preliminary to Medical study.

3. In regard to the resolution of the Medical Teachers' Association referred to the Committee—viz, "That, in the opinion of the Association, the registration of the metropolitan students of Medicine should be performed at one office only"—the Committee beg leave to say that the Council has only one office of registration for metropolitan students—viz., that at No. 32, Soho-square—and to this no student is obliged to go, as the object can be entirely effected by correspondence.

The registration is of two facts only—viz., that a pupil has passed his preliminary examination and has commenced his Professional study. The Medical Council have no authority over the licensing bodies as to the registration of students, and the internal regulations frequently include many more facts than the above, and some of these are registered at different periods of Professional study.

4. The Committee have had before them and considered the letter of Dr. Edwards Crisp "on the increase of half-qualified Practitioners since the passing of the Medical Act." They think it may be advantageous to have an official analysis, under the care of the Registrar of the General Medical Council, of the *Medical Register*, such as that made by Dr. Crisp, and which should appear on the Minutes of the Council. They are of opinion that the Council has no power under the Medical Act to interfere with the number and kind of qualifications that Practitioners choose to obtain, and that the consideration of Dr. Crisp's "Representative Faculty of Medicine" does not come within the scope of duty of this Committee.

5. The Committee have to recommend to the Council that to the list of preliminary examinations, recognised by the General Medical Council, be appended the names of those examinations which, by the Branch Councils, have as special exceptions been admitted. (No. 9.—Regulations as to Registration of Medical Students.

Dr. Embleton, in reading the report, said there were several inaccuracies, which it would be necessary to correct before it was entered on the Minutes.

On the motion of Dr. Embleton, seconded by Dr. Wood, it was unanimously resolved that this report be received and entered on the Minutes.

Dr. Embleton then moved—"That the Registrar be requested to address a letter to those licensing bodies in Ireland which do not require the preliminary examination to be passed before Medical study is begun, representing that throughout England and Scotland a complete uniformity has been brought about by the adhesion of the licensing bodies to the recommendation of the General Medical Council in this respect, and that it is highly desirable that students in all the three divisions of the kingdom should be placed on the same footing by the Irish licensing bodies using every means to obtain the necessary powers to enable them to require that preliminary education and examination shall be really preliminary to Medical study."

The motion was seconded by Dr. Alexander Wood.

Sir D. J. Corrigan said he must object to consider any resolution founded upon a report which was a tissue of errors from beginning to end, and which the Council had had no opportunity of considering in its existing form, Dr. Embleton having made various important alterations and additions not contained in the printed copy. The learned Baronet proceeded to criticise the various inaccuracies of the report, and urged that, at the present late hour (six o'clock), it was necessary the entire matter should stand over for full discussion next year.

Dr. Alexander Wood must say that Sir D. Corrigan's speech bore very little upon the motion; and it reminded him of certain animals which, when closely pursued, were said to eject a black liquid to conceal themselves. (Laughter.) In the same way Sir D. J. Corrigan, when he found the body he represented was closely pressed, had ejected a considerable amount of irrelevant matter to hide its imperfections (Loud laughter.) All the Council was asked not to adopt the report, but to convey the expression of opinion contained in the motion to the licensing bodies, and he challenged Sir D. J. Corrigan and all the Irish Professors, with all their talents, to educate properly a Medical student whose mind had not been previously prepared by preliminary examination.

First Report of the Committee on State Medicine.

The following *interim* report was read:—

The Committee on State Medicine beg leave to report to the Council that, having carefully considered the resolution of the Council by which the Committee was appointed on June 27, 1868, they have decided, with a view to presenting a more complete report at the next session of the Council, on taking evidence from various persons having special knowledge of the subject referred to the Committee.

Replies were then ordered to be sent to the Secretaries of the Medical Teachers' Association and Dr. Edwards Crisp in the following terms:—

That a letter be addressed by the Registrar to the Secretaries of the Medical Teachers' Association to the effect that the Council has only one office of registration for metropolitan students—viz., that at No. 32, Soho-quare—and to this no student is obliged to go, as the object can be entirely effected by correspondence. The registration is of two facts only—viz., that a pupil has passed his preliminary examination and has commenced his Professional study. The Medical Council have no authority over the licensing bodies as to registration of students, and the internal regulations of those bodies frequently include many more facts than the above, and some of these are registered at different periods of Professional study.

That a letter be addressed by the Registrar in answer to Dr. Edwards Crisp's letter "On the increase of half-qualified Practitioners since the passing of the Medical Act," to the following effect—viz., that it may be advantageous to have an official analysis, under the care of the Registrar of the General Medical Council, of the Medical Register, such as that made by Dr. Crisp. That the Council has no power under the Medical Act to interfere with the number and kind of qualifications that Practitioners choose; and that the consideration of Dr. Crisp's "Representative Faculty of Medicine" does not come within the scope of duty of this Committee.

Votes of thanks were then unanimously accorded to the Treasurers, the Royal College of Physicians (with a gratuity of twenty guineas to the resident officials), Dr. Andrew Wood (Chairman of the Business Committee), and the President.

The President, in acknowledgment, said: I beg to thank the Council for this compliment that is now offered me. I wish my services had been more efficient than they have been, but I have done my best, faithfully and impartially, to execute the duties entrusted to me. I feel extremely grateful for the manner in which every member of the Council has received my services. At the commencement of this session I ventured to suggest to the Council that my term of office was coming to a conclusion, and that I was very anxious that the members of the Council should confer together as to the time when it would be most convenient that I should vacate my office, and also as to who might be the best person to succeed me. I am very glad to learn that the Council has had a private conference, and from the Chairman of that private conference I learn that it will be for the convenience of the members of the Council, and for the good of the conduct of the business of this Council, that I should offer my resignation at the termination of this session, as I propose to do. From a communication that has been made to me by the chairman of that private conference, I find another circumstance has been mentioned, which is of course most highly flattering to me, and most gratifying to my feelings—namely, that if I resign my office into your hands, the Council might be disposed to re-elect me to such a distinguished honour. Gentlemen, I assure you I almost hesitate even to allow my name to be proposed again to fulfil the arduous and responsible duties of the President of this Council. For I do assure you, that although I occupy what I consider a post of honour, and one which I highly value, yet, at the same time, my position is by no means always a bed of roses. I find very great difficulty in performing my duties here to my own satisfaction; and of course they must be very often imperfectly and unsatisfactorily performed to yourselves. (Cries of "No, no.") But it is not during the session, alone, that I feel my duties arduous and responsible; it is much more during the intervals between the sessions, when a great deal of responsibility devolves upon me personally. It is true that from time to time I have the great advantage of conferring and consulting with the eminent men whom you have elected upon your Executive Committee; but that can only be twice or thrice in the year, and in the intervals between the meetings of the Executive Council I am left very much to my own resources, and am obliged to assume a very considerable amount of personal responsibility. It is then that I feel my greatest difficulty, and I should be wrong—I should not be doing that which is agreeable to my own feelings—if, before quitting this chair, I did not say that I really could hardly have supported those responsibilities, or performed my duties to my own satisfaction in those intervals, unless I had had the great advantage and comfort of being able to rely upon the wisdom and the knowledge of business and the power and perfect independence of spirit of a friend who was once associated with me as treasurer here, and who still occupies that important office. (Applause.) There is another duty which devolves upon me as President which must necessarily fall upon any other President—that is to say, a great deal of correspondence devolves upon me in the intervals between our sessions. I do not think any gentleman sitting round this table is aware of the amount of correspondence which falls upon your President, both with the Government, the Medical bodies, the colonies, and private individuals. A great many of those letters, in reply, require consideration, care, thought, delicacy, and careful wording; and here I should be sorry to quit the chair without acknowledging my great obligations to the amiable and accomplished gentleman who fills the office of Registrar. (Applause.) His support, advice, and assistance in these matters of correspondence are really most valuable, and I am greatly indebted to him for his services. Gentlemen, I have nothing more to say but to renew my acknow-

ledgment for the past, and to say that, should your choice fall upon me for the future, I will endeavour to perform my duties to the best of my ability. But should it fall upon me again to be elected to this dignified office, I wish it to be distinctly understood that I cannot undertake the duties for the five years, and that I only accept them until such time as you can among yourselves find a successor whom you think worthy to occupy this chair. With these observations I retire from you, and wish you God-speed for another year. (Loud applause.)

The President then retired from the Council.

Dr. Paget was unanimously voted to the chair, and

Sir D. Corrigan, in a few appropriate words, moved the re-election of Dr. Burrows as President of the Council.

The motion was seconded by Mr. Hargrave, and unanimously adopted.

The meeting then separated, and immediately reassembled for the confirmation of the Minutes.

GENERAL CORRESPONDENCE.

THE PHARMACY BILL.

Letter from Dr. Carpenter.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Redwood openly challenged a refutation of his denial that the examination provided by the Pharmaceutical Society contributed in any way to foster counter practice among chemists and druggists, and now, because I have brought forward evidence to disprove his statement, he turns round and says that I have "advanced a very serious charge against men living, he presumes, in my neighbourhood." In what other way than the mentioning of known cases of counter prescribing by pharmaceutical chemists does Dr. Redwood think his challenge can be answered? But, as to my charge being against men "living in my own neighbourhood," Dr. Redwood will pardon my thinking that it would be better were he to "presume" nothing, but to confine himself to the consideration of my facts, which apply, more especially, to pharmaceutical chemists in other parts of the country.

Probably it may be "presumed" to be a fact, that the pharmaceutical examination leads to the granting of certificates of competency. Obviously, these certificates tend to show that those who hold them have a better knowledge of their business than those who are without them. It must therefore follow that when a given number of "practical (practising) chemists" adopt a system of counter prescribing, those of them who are certificated, and can consequently describe themselves as members of the Pharmaceutical Society, must necessarily hold an advantage, in public estimation of their assumed Medical knowledge, over that of their competitors. In every such instance where this advantage has been obtained, a clear and conclusive case of fostering counter practice has been established against the certificate of the Pharmaceutical Society. Manifestly, in all these cases people have been deceived by false representations; and it is of little consequence to the question at issue whether those representations have been open and direct, as by handbills and likewise, or only passively and covertly implied, as by simply undertaking to prescribe, the result in either case proving to be the same—namely, the establishment of an illegal and dangerous system of the practice of Medicine by a set of men who are totally ignorant of Medical knowledge. It appears to me, therefore, that all I have to do in reply to Dr. Redwood's challenge is to give cases where pharmaceutical chemists have acted as Medical men, and here are a few of them. A patient was prescribed for by a pharmaceutical chemist. Pills were supplied which contained mercury. Profuse salivation ensued. A portion of the lower jaw became necrosed, and it was removed in my presence by Sir Wm. Fergusson.

A patient, who had been under the care of the late Dr. Dawson, of Newcastle, for uterine disease, was prescribed for by another pharmaceutical chemist, who pronounced her disease to be "gravel." Pills were supplied which again contained mercury. Severe salivation came on, sloughs were formed on the cheeks and throat, and life was uncertain for several days. This case was seen with me by two Medical men who attended on behalf of the chemist who had prescribed the medicine.

A patient was suffering from inflammation of the larynx, and her breathing being too difficult to admit of her walking, she was taken in a cart to still another pharmaceutical chemist, who prescribed and put up for her a hot stimulating gargle, with which she returned home, and on the following day she died.

A patient in the last stage of "consumption," and whilst under the care of a Medical man, was persuaded by again another pharmaceutical chemist to take for his cough some medicine of which he had the prescription. The medicine, which was persevered with for some time, contained tincture of digitalis and potassio-tartrate of antimony. The patient died in an Hospital, and I have not the least hesitation in affirming that his death was accelerated by the pharmaceutical chemist's interference.

Will Dr. Redwood have mercy upon your valuable space, and consider these cases sufficient to demonstrate the fostering influence of the pharmaceutical licence in obtaining counter practice? If not, I can supply him with a variety of others.

In conclusion, I would say, and it would settle the question, that, were the Pharmaceutical Society to obtain for their Act of Parliament some clause prohibiting its members practising Medicine or Surgery, so far as I am aware of, no exception could be taken to the Pharmacy Bill.

I am, &c.

R. H. S. Carpenter, L.R.C.P. Lond. and L.S.A.

Red House, Crook, Durham, July 6.

LIQUOR CHLORI IN CHOLERA.

Letter from Dr. J. Althaus.

[To the Editor of the Medical Times and Gazette.]

Sir,—As cholera has again made its appearance in London, I beg you will allow me to inform the Profession, through your valuable journal, that during the last epidemic in Germany the liquor chlori has been given with apparently highly satisfactory results. The dose is from ten to thirty minims, and in very bad cases even a drachm, given repeatedly at short intervals, if necessary. It is stated that the first dose almost invariably checks the vomiting, and the distressing sensations of pain and thirst. The remedy is given either alone or in distilled water. Gargling with diluted liquor chlori is recommended as a prophylactic for Medical men attending cholera cases. The remedy appears *prima facie* to be a rational one, and as we know that all other remedies which have been used are ineffectual, it seems desirable that a fair trial should be given to the liquor chlori. I am, &c.

Julius Althaus, M.D.

18, Bryanston-street, Portman-square, W., July 3.

ON SEIZURE OF ONE LOWER EXTREMITY OF THE INFANT IN TURNING.

Letter from Dr. Thomas Radford.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your issue of this day Dr. Barnes in his excellent lecture says, "Dr. Radford insists upon seizing one foot only," for reasons which he very accurately enumerates. Although I have forcibly dwelt upon bringing down one foot in the operation of turning, yet I had not the least intention that this part of the infant should alone be searched for and brought down. After having accurately measured the circumference of the breech in a number of new-born infants—as in breech presentations, as in half-breech cases (one leg and thigh being flexed upwards, the other extended downwards), and also as in cases in which both legs are brought down—and having compared these several measurements with that of the head, my object was to recommend the converting the case (a cross birth) into a half-breech presentation. This will appear sufficiently clear from the following remarks:—"The foregoing observations authorise the conclusion that in undertaking this operation of turning we should make it a positive and invariable rule *never to bring down more than one foot or one knee*" (see Essay on Turning, page 17; also *Edinb. Med. and Surg. Jour.* 1832). I am, &c. Thomas Radford.

Manchester, June 20.

Petroleum as an Insecticide.—Petroleum oil possesses the highest efficacy as a destroyer of all kinds of insects injurious to plants or animals, and the less purified, and consequently the cheaper, it is, the better. Thirty parts should be mixed with 1000 of water, and applied where required. So also vermin of houses may be destroyed by introducing into the holes or cracks a few drops of petroleum.—*Union Méd.*, June 27.

MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 2, 1868:—

Barnish, William Croudson, Wigan, Lancashire.
Bately, John, Southtown, Great Yarmouth.
Brickwell, Eustace Arthur, Sawbridgworth.
Dod, Harry Davenport, Macclesfield.

The following gentleman also, on the same day, passed his First Examination:—

Davies, William Henry, University College Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GLASCOTT, CHARLES E., M.B., etc., late Resident Surgeon, Edinburgh Royal Infirmary—House-Surgeon to the Royal Eye Hospital, Manchester.

GRAY, Assistant-Surgeon R., M.B., Superintendent Central Gaol, Lahor—Civil Surgeon of Multan.

HENDERSON, Assistant-Surgeon G., M.D., Civil Surgeon of Amritsar—Superintendent of the Lahore Central Gaol.

HIME, THOS. WHITESIDE, M.B. Univ. Dub., etc.—Chair of Midwifery in the School of Medicine, Sheffield.

WARD, J. BYWATER, B.A. Cantab., M.R.C.S., L.S.A.—Assistant House-Surgeon in the Sheffield General Infirmary.

YARROW, G. E., M.D., etc.—Public Vaccinator for the whole Parish of St. Luke, Middlesex.

NAVAL AND MILITARY APPOINTMENTS.

SPEED, HENRY M.—Staff-Surgeon to the *President*.

WEY, WILLIAM J.—Acting Assistant Surgeon to the *Vixen*.

BIRTHS.

BUCHANAN.—On July 3, at 193, Athol-place, Bath-street, Glasgow, the wife of George Buchanan, M.D., Lecturer on Anatomy in the Andersonian University, of a son.

BURG.—On July 6, at Pinchbeck-street, Spalding, the wife of Wm. Henry Burg, M.D., of a daughter.

DAVIS.—On June 29, at Mortimer, Berks, the wife of G. H. Davis, L.R.C.P. Edin., prematurely of twin daughters.

HAYWARD.—On June 28, at 4, Hobart-place, Eaton-square, the wife Sidney Hayward, M.D., of a son.

MILLER.—On July 2, the wife of J. N. Miller, M.D., Blackheath, of a daughter.

RAY.—On May 6, at Hong Kong, the wife of S. K. Ray, Staff Assistant-Surgeon, of a son.

WATSON.—On June 24, at West-green, Tottenham, the wife of William Tyndale Watson, M.D., of a son.

MARRIAGES.

BLEST—BRISTOW.—On July 1, at St. George's Church, Wrotham, Kent, Anthony Ebenezer Blest, M.D., Retired List of Her Majesty's Indian Army, to Marianne, eldest daughter of Edward Bristow, Esq., of Wrotham. No cards.

DAVIES—HUSSEY.—On June 30, at St. Mary's Church, Ilchester, Somerset, Nathaniel Edward Davies, Surgeon, of Ilchester, to Augusta, second daughter of John Hussey, Esq., of Sock Dennis, Somerset. No cards.

KERSWILL—MARSHALL.—On July 2, at the parish church of St. Cleer, Cornwall, by the Rev. J. R. P. Berkeley, George Kerswill, Esq., of East Looe, Cornwall, second son of Robert Kerswill, Esq., of Fairfield, St. Germans, to Frances Dorothea, second daughter of William Marshall, Esq., of Treworgey House, Liskeard.

DEATHS.

BAYARD, ROBERT, M.D. and D.C.L., at his residence, Welsford, near St. John, New Brunswick, on June 5, aged 80.

CRIGHTON, JOSEPH, M.D., at the Crescent, Salford, on June 30, aged 65.

FENWICK, JAMES THOMAS, M.D., eldest surviving son of the late James Fenwick, of Longwitton Hall, Northumberland, at Bolton Hall, Alnwick, Northumberland, on June 15, aged 69.

GREENWOOD, GEORGE, Surgeon, at The Cottage, Ossett, Yorkshire, on July 1, aged 63.

LAWSON, W. ROBERT, infant son of Henry Lawson, M.D., at 8, Nottingham-place, on July 2.

LE MESURIER, FREDERICK, M.D., formerly of the Island of Guernsey, at Harpford, Devon, on June 18, in the 56th year of his age.

MARTINDALE, GEORGE ERNEST, M.R.C.S., of Guy's Hospital, at Tataeniu, New Zealand, on April 10, in the 24th year of his age.

PAINE, Mr. SAMUEL, Surgeon, at 8, Junction-road, Brighton, on July 3, aged 72.

SIMPSON, DR. JOHN, of Huntly Lodge, Stranraer, N.B., at the residence of his brother, Alexander Simpson, New Cross, on July 7, aged 73. Friends will kindly accept this intimation.

SPRATLY, ANNA MARIA ELIZABETH, the beloved wife of S. Spratly, M.D., at Rock Ferry, Cheshire, on July 7, aged 35.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Castle Ward Union.—Dr. Mason has resigned the Ponteland District; area 17,677; population 2002; salary £15 per annum. Also the Workhouse; salary £25 per annum.

Chertsey Union.—Dr. Kough has resigned the Windlesham District; area 5370; population 2048; salary £40 per annum.

Thingoe Union.—Dr. Cooper has resigned the Seventh District; area 13,710; population 1866; salary £70 per annum.

APPOINTMENTS.

Barnet Union.—Augustus E. Dixey, M.D. St. And., M.R.C.S.E., L.S.A., to the Fifth District.

Bridge Union.—Robert C. Kersey, M.D. St. And., M.R.C.S.E., L.S.A., to the Fifth District.

Dunmow Union.—George S. Watson, M.R.C.S.E., L.S.A., to the Thaxted District.

Edmonton Union.—George O. Spencer, M.B. Lond., M.R.C.S.E., L.S.A., to the Highgate District.

Epping Union.—Edward Horne, M.R.C.S.E., L.S.A., to the Buckhurst-hill District.

Epsom Union.—Geo. R. Barnes, M.D. Edin., L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Ewell District.

Newmarket Union.—George B. Mead, L.R.C.P., M.R.C.S.E., L.S.A., to the Workhouse.

MR. J. W. HULKE, of Middlesex Hospital, has been selected to fill the new appointment of Lecturer on Anatomy and Physiology to the College of Surgeons.

NEW FELLOW.—At a meeting of the Council of the Royal College of Surgeons on the 9th inst., Mr. Thomas Watkin Williams, Newhall-street, Birmingham, diploma of Membership dated April 3, 1840, was admitted a Fellow of the College.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting on Monday, July 6, Sir Henry Holland, Bart., F.R.S., in the chair, John Glas Sandeman, Esq., was elected a member. The managers announced that, in conformity with the deed of endowment, they had appointed William Odling, Esq., M.B., F.R.S., Fullerian Professor of Chemistry, in the room of the late Professor Faraday. The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

CLUB REMUNERATION.—At a meeting of the Medical Profession of South Staffordshire and East Worcestershire, held at the Dartmouth Hotel, Wednesbury, July 2, it was resolved: "That taking into consideration the introduction of Medical men into portions of these districts, who are acting contrary to the unanimous resolution of the Profession, we pledge ourselves neither to meet them professionally nor socially; and we further pledge ourselves not to consent to meet in consultation any Physician or Surgeon who recognises them. That a copy of the foregoing resolution be forwarded to the consulting Physicians and Surgeons of Birmingham and Wolverhampton."

ANOTHER CASE (the third lately) has just occurred in Liverpool, which shows the inconvenience to which a Medical man may render himself liable by signing a death certificate, according to the recognised form, without first seeing the body. On the 4th inst., application was made to Dr. De Zouche, a recently appointed district Medical officer, for a certificate touching the death of a little boy whom he had been attending, and whose case he certainly regarded as one likely to terminate fatally. Instead, however, of acceding to the application, he took the precaution of first visiting the house, where he found the child not only living, but to all appearance likely to live for hours, if not days. The coroner, before whose notice the matter was brought by Dr. De Zouche, regarded the case as very important, from its showing the necessity of certificates never being given by either Medical gentlemen or by the court over which he presided, without the dead body of the person to whom it relates being seen. Had the certificate been granted, and an improper use been made of it, the inconvenience to the Medical man might have been most serious.

PROFESSOR MATTEUCI. — The Italian journals are deeply deploring the loss of this eminent philosopher, who also held the post of Minister of Public Instruction. Although he has done much to effect much-needed reforms in the Italian educational system, he does not seem to have shone as an administrator. As a man of science his fame is European, especially in all that relates to electro-biology. In 1844, he received the Copley Medal of our Royal Society and the prize of the French Academy, and he has supplied an almost endless series of communications since that period. He was, at the time of his death, one of the Correspondents of the French Academy, and a candidate for the vacant post of

Foreign Associate. His works on electricity and physics have enjoyed a very large circulation.

A Delicate Discussion.—In a report on an adjourned discussion at the Dialectical Society, on a paper on Prostitution by Dr. Drysdale, we observe that one of the speakers—Miss Firth, of the British Lying-in Hospital—expressed her opinion that the Contagious Diseases Act ought to be much extended in its operations. Mr. Acton observed that this had been a very pleasant discussion, and that he had been especially pleased in hearing a lady's views on the question, which was quite a novelty. Wishing, we suppose, to profit by the presence of those of her sex at the meeting, and point out a new sphere of "woman's mission," he added: "And he would just say that if prostitutes could be persuaded *by members of their own sex* to keep themselves more cleanly, and to see that they were not infected, by carefully examining the other sex, their condition might be much ameliorated. When in Paris some time ago, he had attended the dispensary where prostitutes were examined, and one of these women mentioned that she carefully examined her customers and sent off at once all she found diseased."

Death of M. Pouillet.—This distinguished physicist has just died at the advanced age of seventy-eight, active, however, to the last, having drawn up a report on lightning-conductors, a subject which he devoted much attention to, only last year. His career had, for a man of science, been rather a troubled one. He held the post of Director of the Conservatoire des Arts et Métiers, and Professor of Physics at the Sorbonne, under Louis-Philippe, and was a member of the Chamber of Deputies. During the Presidency of Louis-Napoléon, a popular tumult arose on the occasion of the expedition to Rome, and Ledru Rollin, at the head of an armed mob, seized the Conservatoire as a stronghold, and held it for a time until repulsed by the National Guards. The Director was displaced on the ground that he had not prevented the invasion of the establishment, he declaring he had enough to do to preserve valuable collections which were under his charge. After the *coup d'état*, refusing the oath, he was also deprived of his Professorship. His treatise on "Physics" and "Meteorology is known everywhere.

Model Buildings in St. George's, Hanover-square.—Dr. Aldis has recently issued an annual report of the health of St. George's, Hanover-square, one interesting feature in which is an account of some new model dwellings lately erected in Lower Belgravia under the name of Gatliff-buildings. These contain 148 families of 500 persons, and seem to furnish an exception to the ordinary high standard of health prevailing in these institutions, inasmuch as twenty deaths occurred in the year and only eighteen births, and eleven of the deaths were at or under five years. Five of these were caused by zymotic disease, and ten by inflammation. Dr. Aldis describes the buildings as convenient, comfortable, and well-ventilated, but evidently seems at no loss to account for the mortality. He speaks of "houses newly erected where, either from dampness of the walls, or from disturbance of the ground in the neighbourhood, a somewhat high rate of mortality prevailed. The site, originally swampy, and of low elevation, formed a part of the parish shoot, and children in the vicinity often suffered formerly from gastric fever. Children encounter strong gusts of wind during winter, in the galleries and passages of these buildings. I have often seen the youngest infants carried about there with bare arms and necks in the coldest weather."

The Islington vestry, under the able guidance of Dr. Ballard, have issued a set of sanitary regulations for workshops, based on the Sanitary Act, 1866, and Workshops' Regulation Act, 1867. They require work-rooms to be kept clean and be well ventilated, and it is intimated that the Medical Officer of Health will regard any work-room as not sufficiently ventilated in which an unpleasant or animal odour is perceptible, or in which the temperature is found materially to exceed that of the external air in the warmer months, or 60° in the colder months of the year. Any work-room will be judged to be overcrowded in which, for the number of persons employed therein, a sufficient ventilation, as above described, cannot be constantly maintained without exposure of the workpeople to dangerous draughts; also any room in which a floor space of at least 36 superficial feet cannot be allotted to each person, or in which the cubical space of the room is such that at least 300 cubical feet of air are not allowed for each person.

Encouragers of Quackery.—Among the people of fashion in London quackery is cultivated. Can one wonder at lying advertisements, when it is known that Garrick, Lord Lonsdale, and the Bishop of London were for a while the patients of Myersbach? These were men of sense; but what is the intellectual state of our nobility? Perpetually enslaved by the novelty of fashion, however *outre*, they acquire a constitutional propensity to imitation in everything, and leave their Physician as they quit an old coat.—*Lettsom's Letters.*

Effects of Lightning.—M. Becquerel related to the Academy the fact that during the violent storm of June 21 a workman who was at some distance from the point struck by the lightning underwent a violent shock, from the effects of which he did not recover for two days. All the nails were torn out from the sole of one of his boots, which M. Becquerel exhibited as a proof of the occurrence. Several academicians cited similar facts, and, among others, M. E. de Beaumont an instance of where the nails were torn out from the butt-ends of muskets. M. Morin also alluded to a pile of balls placed near a powder depôt that was overturned two successive days during two storms which destroyed the lightning-conductor. Marshal Vaillant also mentioned the case of a man struck by lightning, one of whose shoes, picked up at a great distance, was found to have had all its nails drawn.—*L'Institut*, July 1.

Composition and Quality of the Metropolitan Waters in June, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	16·70	0·088	0 056	0·001	11·8	2·8
West Middlesex	14·78	0·070	0·050	0·001	11·3	3·3
Southwark & Vauxhall	22·13	0·117	0·072	0 002	12·0	3 5
Chelsea	17·86	0·075	0·106	0·002	11·8	2·4
Lambeth	18·60	0 083	0·105	0·002	12·5	2 6
Other Companies.						
Kent	27·02	0·024	0·305	0·001	17·6	6·0
New River	15·90	0·047	0·085	0·001	11·9	2·3
East London	17·04	0·056	0·038	0·001	11·7	2·6

All the samples were bright excepting that of the Southwark and Vauxhall, which was slightly turbid.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

An obituary notice of the late Dr. Kennion, of Harrogate, is in type, and shall appear shortly.

Dr. Macloughlin's interesting communication in our next.

A Provincial Fellow.—Messrs. Hodgson and Partridge, the late members of the Council of the College of Surgeons, have both filled the President's chair, the former in 1864 and the latter in 1866. Mr. Hodgson was elected a member of the Council in 1849, and of the Court of Examiners in 1856; Mr. Partridge a Councillor in 1852, and an Examiner in 1864.

Dr. Jenner.—There is no special *honorarium* attached to the office. A few years ago the Presidents of the Royal Colleges of Physicians and Surgeons respectively, as members of the Vaccine Board, received one hundred guineas annually for their attendance.

A Member of the B.M.A. and a Fellow.—The gentleman signing "F.R.C.S." after his name *is* a Fellow. The rule observable on these occasions is, when a Member is *elected* a Fellow, and pays the fee, he is at liberty to adopt the title, although he may not have been *admitted*. The other person named is *not* a Fellow. The title "Fellow Elect" is not a recognised title.

Arts Examination.—We are now informed that the report may be submitted to the Court of Examiners about the 20th inst., immediately after which the result will be communicated.

H. C.—We have always opposed the scheme of equalisation of poor-rates as mischievous and unjust. In the *Medical Times and Gazette* for November 3, 1867, we described it as a "plan for fining all the inhabitants of districts where the houses are good, let on leases, and inhabited by decent people, and giving a bonus to the owners of the squalid, tumble-down hovels inhabited by weekly tenants." Poor-rates, like tithe and every other charge in the land, are paid by the owner. A man with a plot of ground enhances its value by covering it with buildings adapted for that class of tenants who are a burden on the rates. Ought he not to pay those rates?

A Metropolitan Fellow.—The annual election always takes place about the same time. The retiring members of the Council will in all probability be Messrs. Mackmurdo, Solly, and Adams, unless there should be a vacancy caused by death or resignation. The late Sir William Lawrence did not resign until after the meeting.

The Proposed Degree in State Medicine.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I think that the proposal for granting diplomas in "State Medicine" is a good one. There is no doubt but that many would present themselves for examination—not that they might wish at present to accept the post of Medical Officer of Health; but if at any future time they should feel inclined to do so, then they would be qualified to put up for the post. I do not see why there should be any difficulty in the matter.

I may add that I think Medical men only should hold the office of officer of health, as they must of necessity be more acquainted with disease and its causes than any other class of persons. I am, &c.

July 8. Sanitas.

A Query.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—On the road leading from Westbourne-park to Kensal-green, in a druggist's shop, done in gold on the partition which is peculiar to such shops separating the window from the business part, appears the following inscription:—"Dispensary.—Patients seen daily by Dr. Holt Dunn on Tuesday and Friday evenings from 7 till 9." I know not what claim this "institution" has to the title of Dispensary more than an ordinary druggist's shop, but it appears to me that this is not a method of practice which can meet with the approval of the Profession.

London, July 7. I am, &c. M.D.

The Members of the College of Physicians.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have frequently asked myself what advantage has been reaped from having, many years since, become a Member of the Royal College of Physicians? What has been gained by an expenditure of some sixty pounds and the bother of an examination? The only reply which as yet has come to hand has been the privilege of being insulted every June by seeing those very much junior to me in the College put over my head. However, the Members may now congratulate themselves. The time has arrived when the Fellows have considered our position, and are determined to treat us with generosity. We are actually—incredible as it may appear—to be allowed to subscribe for the engraving of Sir Thomas Watson's portrait. There are to be artist's proofs at two guineas, and prints at one guinea. The Fellows who have subscribed to the portrait are, properly enough, to have the first choice; then the surplus copies will be "distributed by ballot to the Fellows of the College applying for each class, and the remainder among the Members of the College." Such condescension, Sir, is really overpowering. As it is the only advantage—plus the annual insult—which I have ever derived from my connexion with the College, it is impossible not to feel humbly grateful. The pleasure of paying one or two guineas for that which the Fellows do not want will be really overwhelming. We are to receive the crumbs which fall from the rich man's table, and it is to be hoped they will not induce either nausea or disgust.

I am, &c. M.R.C.P. (by Exam.)

COMMUNICATIONS have been received from—

Dr. Edwards Crisp; M.R.C.P.; Dr. Letheby; Dr. Sheridan Muspratt; Mr. R. L. Freer; Mr. W. F. Teevan; Dr. R. H. S. Carpenter; M.D.; Dr. William Bayes; Mr. John Manley; Dr. W. Carter: Mr. W. J. Smith; Dr. Septimus Gibbon; Dr. Wilks; Mr. J. Chatto; Mr. T. M. Stone; Mr. Spencer Wells; Dr. Beigel; Dr. Cholmeley; Dr. Althaus; Dr. Ballard; Dr. Gavin Milroy; Mr. W. H. Bridgewater; Sanitas; Dr. Mackay; Mr. Bruce.

BOOKS RECEIVED—

London Student, No. 4—Popular Science Review, No. 28—New York Herald of Health, June—Westminster Review, No. 67—Proceedings of the Kentucky State Medical Society—Reimann on Aniline—Brady on Irish Medical Reform—Smith on Hay-fever—Lee on the Principal Baths of France—Statistical Report of the Health of the Navy, 1865.

NEWSPAPERS RECEIVED—

Hampshire Chronicle—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 4, 1868.

BIRTHS.

Births of Boys, 1050; Girls, 1043; Total, 2093.
Average of 10 corresponding weeks, 1858-67, 1789·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	773	743	1516
Average of the ten years 1858-67	623·2	571·9	1195·1
Average corrected to increased population	..	..	1315
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	2	6	2	4	3	51	6
North ..	618,210	4	14	12	3	11	19	70	4
Central	378,058	1	5	4	2	5	3	34	2
East ..	571,158	..	18	3	..	7	14	69	4
South ..	773,175	3	16	11	4	22	7	62	3
Total ..	2,803,989	9	55	36	11	49	46	286	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·023 in.
Mean temperature	61·6
Highest point of thermometer	84·3
Lowest point of thermometer	47·8
Mean dew-point temperature	51·0
General direction of wind	N. & N.N.E.
Whole amount of rain in the week	0·01

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 4, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending July 4.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending July 4.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2093	1441	1516	84·3	47·8	61·6	0·01	1
Bristol (City)	167487	35·7	118	75	*65	..	..	..	..	..
Birmingham (Boro')	352296	45·0	238	171	147	77·8	51·0	63·0	0·00	0
Liverpool (Borough)	500676	98·0	363	290	248	74·3	52·0	62·0	0·00	0
Manchester (City)	366835	81·8	295	208	*231	79·5	46·0	62·0	0·00	0
Salford (Borough)	117162	22·7	92	59	56	78·5	44·9	60·8	0·00	0
Sheffield (Borough)	232362	10·2	195	122	154	78·0	47·8	60·7	0·00	0
Bradford (Borough)	108019	16 4	169	55	62	..	..	..	..	..
Leeds (Borough)	236746	11·0	157	120	114	79·0	42·5	59·3	0·00	0
Hull (Borough)	108269	30·4	84	50	53	..	..	..	..	..
Newcstl-on-Tyne, do.	127701	23·9	126	68	64	..	..	..	..	..
Edinburgh (City)	177039	40·0	136	85	86	82·7	42·0	62·4	0·00	0
Glasgow (City)	449868	88·9	369	262	227	80·2	47·6	62·7	0·00	0
Dublin (City and some suburbs)	319985	32·8	185	157	102	84·2	42·5	62 9	0·00	0
Total of 14 large Towns	6391080	34·7	4620	3163	3130	84·3	42·0	61·7	0·00	0
					Week ending June 27.	Week ending June 27.				
Vienna (City)	(1863) 560000	..	..	..	328	..	..	†72·5	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·023 in. The barometrical reading increased from 30·05 in. on Sunday, June 28, to 30·21 in. on Monday, June 29; decreased to 29·81 in. by 3 p.m. on Friday, July 3; and was 29·88 in. by the end of the week.

The general direction of the wind was N. and N.N.E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 63·6°.

APPOINTMENTS FOR THE WEEK.

July 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

13. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

14. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

15. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

17. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.

ELECTION

FOR THE

UNIVERSITIES OF GLASGOW AND ABERDEEN.

The following Medical Graduates of the Universities of Glasgow and Aberdeen have already intimated their intention to support the Right Hon. EDWARD S. GORDON, the LORD-ADVOCATE:—

Aitken, James M. C., M D, Kilmarnock.
Alexander, Charles, M.D., Nairn
Allan, Peter, M.D., Yealand Conyers, near Lancaster
Anderson, A, M.D., Inspector-General of Hospitals, Edinburgh
Anderson, Thomas, Professor of Chemistry, Glasgow College
Angus, George H.M. Indian Medical Service, Aberdeen
Armstrong, George C., M.D. Blackrock, Dublin
Arthur, Patrick, Lanbourn, Berkshire
Armstrong, John, M.D., Gravesend
Atkinson, Edward, M.D., Ballingarry
Atkinson, J. Parkinson, M.D., Bampton, Oxfordshire
Aveling, James H., M.D., Sheffield
Balbirnie, John, M.A., M.D., Sheffield
Barrett, Thomas, M.D., 38, St. James'-square, Bath
Barron, G. B., M.D., Summerseat, Southport
Bartlet, Alexander Henry, M.D., Ipswich
Batt, Edward, M.D., 8, Eaton-terrace, St. John's-wood, London
Battersby, J. G., M.D., Lismore, Waterford
Beith, Robert, M.D.
Bell, Rev. David, M.D, The Parsonage, Goole, Yorkshire
Bennett, Samuel, M.D., Braff, Co. Limerick
Bird, W. V., M D, 49, Mert n-road, Liverpool
Black, D Campbell, M.D., Glasgow
Blackeney, E. H., M.D., Rose-place, Claines, Worcester
Bolland, Edward H., M.D., 18, Gardiner's-place, Dublin
Bourne, William, M.D., Howard-street, North Shields
Boxwell, Henry H., M.D., R.C S., Wexford
Bradshaw, B. W., M.D., Tipperary
Bradshaw, William, M.D., Nottingham
Bremner, Bruce, M.D., Streatham House, Morningside
Brown, J. V., M.D., County Infirmary, Galway
Brown, William, M.A., M.D., Yeats, Kilmalcolm
Brownhall, Thos. Taylor, M.D., Beech Cliff, Newcastle, Staffordshire
Broxholm, John H., M.D., Sunbury, Middlesex
Buchanan, Robert, M.D., Knoxland, Dumbarton
Burns, John, M.D., Armagh
Burr, James, M D., Carlehill, Fyvil
Burton, Thomas C., M.D., Westport, Mayo
Cameron, John, M.D., Arisaig, Fort William
Carless, John, M.D., Rectory-place, Woolwich
Carmichael, James, M.D., Staff-Surgeon, R.N.
Chalmers, David, M.D., Liverpool
Charles, R. H., M.D., Cookstown, Co. Tyrone
Christie, John, M.D., Union-street, Aberdeen
Christie, Johnston, M.D. and Surgeon R.N., Huntly
Coats, John, M.D., 120, W. Regent-street, Glasgow
Colledge, Thomas R., M.D., Laurieston House, Cheltenham
Collins, Frederick, M.D., Wanstead Lodge, Essex
Cook, W. H, M.D., Aldridge, near Walsall
Cortis, W. S., M.D., 141, Kennington-park-road, London
Cosgrove, John, M.D., Standish, Wigan
Courtenay, Thomas, M.D., Galgirm, Ballymena
Craig, Robert, M.D., Glenurquhart, Inverness
Crawford, James, M.D., Longsight, Manchester
Crowther, Thomas, M D., Luddenden, near Manchester
Cullen, John F., M.D., Alexandria
Cullen, Wm., Carluke
Dalbey, W. T., M.D., 169, Kennington-park-road, London
Dangerfield, George W., M.D., Cheltenham
Davidson, Samuel, M.D., Meikle Wartle, by Pitcaple
Davies, Albert, M.D., Maidstone, Kent
Davies, John, M.D., Hertford
Davis, T., M.D., Manorhamilton, Co. Leitrim
Davison, Samuel, M.D., Dromara, Co. Down
Denholm, Jacob, M.D., 19, Capple-street, South Shields
Dickie, John, M.D, Alloa
Doyle, Michael, M.D., 76, Irishtown-road, Dublin
Drage, Charles, M.D., Hatfield
Duguid, W. R., M.B., Buckie
Duncan, J. M, M.D., Edinburgh
Duncan, Robert, M.D., Tunbridge Wells
Duncan, Alexander, M.D., Castlebrae, Aberdeen
Dundee, John, M.D., Belfast
Dunlop, John, M.D., Dep. Insp.-General of Hospitals and Fleets
Eddowes, J. H., M.D., Leicestershire
Edwards, William, M.D., Burnley, Lancashire
Elliot, W. H., M.D., Bouverie House, Exeter
Evans, John, M.D., 49, Dawson-street, Dublin
Evans, Maurice G., M.D., Narberth, Pembrokeshire
Eve, R. W., M B., 427, New-cross-road, New-cross, London
Faircloth, J. M. L., M.D., Bushmill Cottage, Northampton
Farquharson, R. A., M.B., 145, East India-road, London
Fergus, Andrew, M.D., Glasgow
Ferguson, Henry S., M.D., Belfast
Finlay, Hunter, M.D., Dawsholm, Maryhill
Fisher, Maddison W., M.D., Portarlington
Fitzpatrick, John, M.D., Ticehurst, Sussex
Foley, William, M.D., Kilrush, Co. Clare
Forest, John, M.D., Motherwell
Fraser, R., M.D., Staff-Surgeon, Bedford
Frater, A., M.D., 15, Thomas-street, Woolwich
Gaff, J. D., M.D., Stevenston
Garde, H. C., M.D., W. C. Artillery, Youghal
Gerrard, James, Surgeon, Aberlour
Geoghegan, Thomas G., Dublin
Gillan, Isaac J., M D., Crondall, Hants
Graham, Thomas, M.D., Paisley
Gray, Alexander, M.D., of Wheatfield, Lanark
Gream, G. T., M.D., 2, Upper Brook-street, Grosvenor-square, London
Green, Hugh, M.D., Kilmacthomas
Gregg, Thomas, M.D., 64, Southwall, Cork
Grieve, Robert, M.D., Yorkshire
Grigor, John, M.D., Nairn
Hadden, David, M.D., Sibbereen, Co. Cork
Hammond, J. H., M.D., Preston
Hamilton, John T., M.D., 3, Lower Sackville-street, Dublin
Hamilton, Mathie, M.D., Warwick-street, Glasgow
Harkan, Martin, M.D., Castlerea
Harrison, Wm. P., M.D., Ilkley, near Leeds
Harvey, Alexander, M.D., Professor of Materia Medica in the University of Aberdeen
Hatherly, M. C., M.D., Southmolton
Henry, Barclay, M.D., Arrochar
Henry, Wm. H., M.D., Bridport, Dorset
Hodges, R., M.D., Montague-street, London
Hunter, Thomas, M.D., Polquherter, New Camnock
Irvine, W. S., M.D., Craigatin, Pitlochry
Jack, Charles, M.D., Horsforth, Leeds
Jackson, G. H., M.D., Tottenham, Middlesex
Jamieson, J. A., M.D., Glencoy, Arran
Jamieson, R., M.D., Elmhill, Aberdeen
Jeffrey, James, M D., Glasgow
Jones, William, M.D., Greianfryn, Holyhead
Keith, G., M.D., Edinburgh
Keith, Thos., M.D., Edinburgh
Kelly, J. H., M.D., Medical Superintendent of Convict Prison, Spike Island, Queenstown
Kennedy, W., M.B., Canisbay, Wick
Kidd, A., M.D., Ballymena
Knight, Alex., M.D., Clones, Monaghan
Knox, John, M.D., Derbyshire
Kynsey, Thos. B., M.D., Athy, Ireland
Lang, Thomas B., Groombridge, Tunbridge Wells
Lang, G. W., M.D., Killanne, Enniscorthy
Lawrence, James, M.D., Cumnock
Leech, John, M.A., M.D., Glasgow
Leslie, Louis, M.D., Alton, Hants
Lindsay, Alex., M.D., Glasgow
Little, E. L., M.D., Hollymount, Co Mayo
Livingstone, James, M.D., Wishaw

[Continued on next page

ORIGINAL LECTURES.

ON "OPTIC NEURITIS" AS A SYMPTOM OF DISEASE OF THE BRAIN AND SPINAL CORD.(a)

By T. CLIFFORD ALLBUTT, M.A., M.B. Cantab., F.L.S.
Physician to the Leeds General Infirmary, etc.

(*Continued from page* 630, *Vol. I.* 1868.)

Hydrocephalus, or simple dropsy of the brain, is very destructive to the optic nerves, and blindness is often due to this cause. Ischæmia papillæ would seem to be the earliest change, as I have certainly noticed it in early cases more than once. Herein I am obliged to differ from Gräfe, who has only found simple white atrophy in cases of hydrocephalic amaurosis.(b) If, however, the affection be at all extreme, the disks and retinas become wholly disorganised, and the optic nerves become atrophied from pressure. With the mirror we see the disks atrophied, their outlines blurred or lost, the vessels distorted or closed, and brownish or whitish patches, blotches, and streaks upon the retina; some of these being old hæmorrhages, others exudations and fatty degenerations. I believe these changes are mainly due to pressure, though it would be difficult to deny that some subinflammatory action may be mixed up with the death by over-distension and prevention of nutrition. A dropsical effusion pressing down the floor of the third ventricle will, of course, press immediately upon the chiasma. M. Bouchut says that with the mirror we may distinguish the large square head of rickets from hydrocephalus. He would say, then, hydrocephalus had occurred in the course of rickets in the following case of a little child now under my care at the Infirmary. She is about 3 years old and the youngest of the family. There is a distinct history of rachitic symptoms, enlargement of the ends of the long bones, and some curvature in their length. The chest is characteristic also. The face is square and the head large, but neither its size nor the state of the fontanelles is sufficient to enable us to diagnose hydrocephalus. With the mirror the disks appear swollen and vascular, and the retinal veins are distended. Tumour may act upon the eye by the mediation of hydrocephalus. A case was lately recorded in the *Lancet* (March 21, 1868), in which there was cerebral dropsy due to the pressure of a cyst upon the venæ Galeni. The child is reported as "having the special senses, sight, etc., perfect." The case passed out of notice, and when seen again blindness is reported. No doubt changes in and near the disk might have been seen long before much disturbance of vision was noticed. I must warn you, therefore, against accepting any cases on the negative side in which the mirror was not carefully and repeatedly used.

Tumours, by which I mean not only malignant growths, but aneurisms, cysts, and all other local enlargements and thickenings, are a frequent cause of ischæmia and neuritis. Setting aside meningitis of the base, perhaps they are the most frequent cause. Now, although I distrust all aphorisms, yet I think you may safely say that ischæmia is always due to pressure; neuritis to encephalitis, cerebral or meningitic. That ischæmia, then, should result from the pressure of tumours, is what we should expect; but how is it that we find neuritis so often? No doubt a large number of cases of "optic neuritis," caused by tumour, are really cases of ischæmia, the optic trunks being unaffected. This I have verified at some autopsies, even when the pressure was not, as it seemed, directly upon the basal sinuses. The brain contents are, however, so mobile and so exquisitely packed that pressure at any point is distributed almost as it would be in a dense fluid. On the other hand, it is certain that optic neuritis is common in cases of tumour, as common perhaps as ischæmia. How is this? Now around most tumours there is at some time an inflammatory movement—there is, I mean, lesion with resistance—and this disturbance seems to travel readily along the delicately hung nervous fibres. In meningitis, to take a plain instance, the inflammatory process often travels, say from the chiasma, not only up to the eye, but also back to the corpora quadrigemina. I now show you a microscopic section of one of these tubercles from a rapid case of meningitis, with mischief about the chiasma, in which the tracts and the quadrigeminal bodies had undergone a neuritis or cerebritis by extension. In no case do we see this more curiously than in tumours which may have a subinflammatory character themselves—such as syphilitic growths, for instance—or which cause any lesion in cerebral matter and its connective tissue which is followed by resistance. The process is analogous to the transmission of heat along an iron bar. Matter always tends to impart its own state to neighbouring matter until an equilibrium is attained; and this is true not only of simple dynamic states, like locomotion or heat, but also of the more complex states. But the more complex the mode of motion, the more necessity is there for a previous similarity of constitution between the contiguous aggregates. The more special the mode, the more necessity for a previous affinity between the active and the passive; the more general the mode, the less necessity.(c) If the two factors are of close likeness, there is a rapid movement towards equilibrium, the wave being propagated so long as there is a continuity of susceptible molecular groups. This is the propagation of inflammation by continuity; the parts of a nerve fibre receive and transmit the disturbance as a row of billiard balls will receive and transmit locomotion. Now there is, no doubt, a great extent of commissural connexion between the optic trunks and other parts of the brain. The tracts are themselves extensive; they send fibres to the crura cerebri, the thalami, and the quadrigeminal bodies, which latter are again widely related by fibrous continuity with other tracts and centres. Both neuritis and ischæmia, then, result from the tendency to equalise disturbance—molecular disturbance in the first case, massive disturbance in the second. In many cases, indeed, the two conditions are coexistent. Simple progressive atrophy, too, may, no doubt, be caused by encephalic tumours, though I have no notes of a very early examination of the optic disks in cases where tumour was found after death. I have seen, however, many cases in which simple progressive atrophy was the first change in the disks, and in which tumour was on other grounds suspected. Simple white atrophy, indeed, is confidently asserted to be a common sign of tumour, but I have taught you not to rely upon the clean even-edged disk as a sure denial of foregone acute neuritis. I constantly see both acute and chronic neuritic changes preceding that even-edged white disk, which would be called the disk of simple progressive atrophy. For example, I have seen evidence of resistance to destruction even in the atrophy of "locomotor ataxy," when I have examined the eyes before the sight has failed. It has been made an objection to the value of ophthalmoscopic researches that the changes in the eye, if present, can tell us nothing of the nature of the cerebral tumour. Of course I admit that the discovery of cancer or of tubercle in the eye is of too rare occurrence to give any meaning either to their presence or their absence. But what does hemiplegia tell us of the nature of cerebral tumours? Nay, what does the stethoscope tell us of the nature of pulmonary changes? It gives us only an evidence of changed physical conditions, and every Physician knows how misleading this evidence may be if it is not weighed with all the other circumstances of each case. The occurrence of optic changes may not only be one symptom among many, but is often one very important symptom among a few. It has often been an invaluable symptom to me in such cases as railway accidents where the other signs may be few, and those few, perhaps, depending mainly upon testimony. A very large number of cases of encephalic tumour attended with affections of the optic nerves have been published, and I need not, therefore, delay you long at this part of my lecture. *Tumours of the base*, you know, readily implicate the optic and olfactory tracts if in the anterior fossa: often they invade the orbit itself. In the middle fossa, whether due to caries, to syphilitic growths, malignant growths, aneurisms, cysts, or other causes, they continually press upon the cavernous sinus, the chiasma, or the optic tracts. *Fractures of the base* rarely affect the disks directly or indirectly, though such cases are far from unknown. I remember that a case is

(a) These lectures form part of a course delivered at the Leeds School by Mr. Teale and myself to Practitioners and senior students. I have been very careful, therefore, to avoid many interesting questions both of ophthalmic and of cerebral change which might in some places seem naturally to arise. I hope I have not erred on the side of narrowness, and I may also hope on some future occasion to be able to take up in detail some points which are now passed by.

(b) It is likely that Gräfe does not see hydrocephalic children until the mischief is old and the loss of sight obvious.

(c) This law of *kindred constitution* is a very wide one, and governs the propagation of change, whether towards evolution or degeneration, not in tissues only, but also in organisms as wholes. It needs, however, a chapter to itself. Its highest manifestations are seen in mental and social phenomena.

related, for example, in one of the early volumes of the *Med. Chir. Transactions* by Sir B. Brodie, in which fracture with displacement of bone at the base of the skull caused total blindness by pressure upon the optic nerves. Such cases, however, are not common, and the mirror will not help us in cases of fracture of the base where the other symptoms leave any doubt. *Tumours of the pituitary body*, of course, invade the chiasma. Morgagni and Bichat have related such cases, and M. Rayer gives five very interesting cases of this kind in the *Arch. Gén. de Méd.* 1823, iii. 350. Curiously enough, Wenzel detected disease, though not tumour, of the pituitary in almost all his cases of epilepsy, yet, as I have said, optic neuritis and ischæmia are unknown in "essential epilepsy." Tumours in the posterior fossa, upon the basilar process or the posterior face of the petrous bone, seldom interfere with the optic disks; at least, such is my own experience. If very large, of course they may compress the medulla, and through it the quadrigeminal bodies; or "irritation" may be propagated to these bodies by the cerebellar peduncles or otherwise. Such an event, however, has not occurred in four well-marked cases of tumour in this region, of which I have notes of the disks. One of these now attends as an out-patient under my care. He has a slow-growing tumour, which has gradually destroyed the left fifth and sixth nerves, and both the hard and the soft branches of the seventh, and which is now hinting at a palsy of the right arm. His optic disks, as yet at any rate, are quite normal. On the other hand, I am now seeing a case of syphilitic mischief in the posterior fossa which is destroying the fifth, seventh, eighth, and ninth nerves, the two latter especially. Voluntary swallowing is no longer performed, nor can the tongue be put out. This patient is also amaurotic, and has now atrophied disks.

Tumours in the brain may occur in the anterior lobes, and propagate irritation to the optic nerves, or may compress the cavernous sinus. In the middle lobe they also very often affect the optic nerves, frequently, no doubt, by setting up disturbance in the thalami, which, though not centres of vision, are closely allied with the tracts. I should think that, in almost all cases of tumour in these regions, there are optic signs sooner or later, but very few writers on cerebral disease have used the ophthalmoscope, and all statements about visual powers are useless. Tumour in the posterior lobes often produces optic change. I lately saw a case with Mr. Hancock and Mr. Teale, in which there had long been atrophy of both disks. The boy was epileptic, and had received a blow over the right posterior lobe two years before his death. We found a tumour at the point indicated, chiefly consisting of increased connective tissue, with a gelatinous material in its meshes. The brain tissue was all destroyed. The mass was as large as a small hen's egg. Such tumours may cause amaurosis by interference with the quadrigeminal bodies, and in such cases the mischief travels at varying rates down to the eye. The change may be neuritic, or, of course, it may be simple atrophy from disuse. If neuritic, congestion of the disk is the first sign of its appearance; if atrophic, there is whiteness of the outer margin, with lateral contraction of the field of vision. Tumours of the corpus striatum likewise affect sight indirectly, as do tumours of the thalami. Tumour of the thalami does not, however, produce amaurosis so certainly as one would expect from the close connexion of their hinder and upper parts with the tracts. Galezowski finds it in seventeen cases out of sixty-two which he has collected. That is to say, amaurosis or blindness is recorded. Probably a much larger number would have betrayed change to the mirror. M. Bouchut relates a case (vide *Jahresbericht Virchow*, 1867, II. i. 44) where a cyst occupied the corpus striatum and thalamus. He describes a thorough destruction of both retinas and atrophy of the optic nerves. There is a well-reported case of tumour of the thalamus with amaurosis in the thirteenth volume of the *Medical and Chirurgical Transactions*. Tumours about the geniculate and quadrigeminal bodies, of course, are soon betrayed to the ophthalmoscope. Tumours of the cerebral peduncles also cause loss of sight, or hemiopia, by pressure upon the optic tracts, geniculate or quadrigeminal bodies. I have seen several of these cases. I was lately consulted by the friends of a gentleman who had a good-sized clot in the right cerebral peduncle. He has left hemiplegia, paralysis of the right third nerve all through, and loss of the right half of each field of vision. There is now also a very similar case, probably of tumour, among my out-patients, and you may see the man sometimes at Mr. Teale's clinic. Tumours of the pons are said to cause loss of sight in a large proportion of cases. I have notes of the disks and of the autopsies in three cases, and in all three the disks were unaffected. In one case the medulla, too, was seriously implicated, and death occurred by dyspnœa. Two of these cases were presented at the Pathological Society on January 21, 1868. The superior cerebellar peduncles are of course closely related to the quadrigeminal bodies and to vision, and injury to them will pretty surely be followed by optic neuritis or atrophy of the disk, according to the nature of the interference with the nervous origins. *Disease of the cerebellum* has long been known to cause amaurosis. You will readily understand that the danger to vision in these cases consists in the nearness of the quadrigeminal bodies. Pressure, or the "transmission of irritation," soon reaches them. (d) I think it seems that pressure is more commonly the cause of the interference, but inflammatory changes in the cerebellum may act also after their kind. Galezowski, somewhat to my surprise, lays main stress upon this latter mode, which, indeed, is his favourite way of seeing things. But as in the great majority of my own cases, and of other recorded cases, so in the three illustrative cases given by Galezowski, tumours were found, and these of a quiescent kind—viz., "fibro-plastic" in case 34, "fibrous" in case 35, "fibro-plastic" in case 36—indeed, it is distinctly said in case 36 "il n'y a pas d'inflammation autour." . . . . "Elle est enveloppée d'un kyste mince et adhérent;" and yet he concludes, "when the amaurosis is of long standing, and due to a tumour of this (cerebellar) region, there is an optic neuritis which indicates the existence of the same morbid process in the tubercula quadrigemina, the optic tracts, and the chiasma." No doubt optic neuritis may be seen in these cases, and a very interesting question arises whether pressure alone on the corpora quadrigemina may "set up inflammation" in them and along the tracts and nerves. It is by watching the result of cerebellar tumours and their relations to the quadrigeminal bodies, by examining microscopically the state of tissue around the tumours, and in like manner of the peduncles, and of those bodies themselves, that we shall learn the origin of optic changes attending other intracranial tumours also. Many cases, on the other hand, are on record in which amaurosis has followed softening of the cerebellum. Dr. Dickenson, in his paper on the cerebellum, in the *Med.-Chir. Review*, October, 1865, mentions loss of vision in three out of thirteen cases of softening, and no doubt the mirror might have shown changes in more. M. Serres mentions a case of cerebellar apoplexy, in which the tubercula quadrigemina were "*phlogosés*," the processus cerebelli being of a wine-red. In such cases, probably, pressure has little to do with the propagation of mischief to the optic disks.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON THE

PATHOLOGY OF HYDROCEPHALUS.

By R. BEVERIDGE, M.B.,

Pathologist to the Royal Infirmary, Aberdeen.

The term hydrocephalus, as used to express a definite disease of the brain, has been a somewhat unfortunate one, and, being based on the existence of a condition which may depend on more than one cause, has given rise to no little confusion in description. Originally intended to imply a disease of which the one prominent lesion was supposed to be accumulation of serum in the brain, the term has for a long time been employed in two different senses: first, to express a disease of which the characteristic is the presence of a large quantity of fluid within the skull, causing its enlargement, but producing during life few other symptoms save those due to its mechanical action—in short, dropsy in the cranium—and, secondly, to express a disease where, although fluid is certainly present, it is so but in comparatively small quantity, and where a train of decided symptoms appear, often, it is true, insidious at the beginning, but becoming in the end well marked, and in the majority of cases proving fatal within a few days, or at the utmost a week or two. These two diseases are usually described as chronic and acute hydrocephalus, but this nomenclature is objectionable,

(d) Cerebellar meningitis does not produce optic neuritis. See, for instance, a case of Mr. Carter's, which I have already quoted.

as implying a relation between them which does not exist; for the two diseases are perfectly distinct from each other, and have nothing in common except the occurrence of fluid in the ventricles of the brain, and even that in very different quantity in the two. They have, in fact, no more relation to each other than pleuritis and hydrothorax, or peritonitis and ascites; and therefore the retention of the same name for both is apt to mislead, more especially as the so-called acute hydrocephalus may be either really acute, having its symptoms running high, and terminating in a few days, or really subacute, or almost chronic, having its symptoms but faintly marked, and extending over some weeks, but not the less certainly proving fatal, and presenting then the same post-mortem appearances as when really acute.

The so-called chronic hydrocephalus, being often a congenital affection, appears to be little else than dropsical effusion, sometimes into the sac of the arachnoid, more often into the ventricles, but without any evidence of local inflammation; and it seems to be only when it goes to a considerable extent that it is productive of mischief or induces symptoms during life, for it is common enough to find after death some quantity of serum in the ventricles, without any appreciable change in the surrounding parts, and without any symptoms having been observable during life. On the other hand, the so-called acute hydrocephalus is essentially an inflammatory disease, and, while it certainly produces effusion of serum into the ventricles, this effusion does not necessarily go to any great extent, and is accompanied by decided evidences of inflammation. So uniformly is this the case, that some recent observers have proposed to drop altogether the term hydrocephalus as applied to it, and to regard it as but a form of meningitis. This, I conceive, is running from one extreme into another. Admitting that the term hydrocephalus is inapplicable, that of "meningitis" is nearly equally so; for "meningitis" has already been applied to inflammation of the membranes of the surface of the brain, while acute hydrocephalus affects the lining membrane of the ventricles, and as the two diseases, although both certainly inflammatory, have thus different sites, produce different appearances, and are marked by different symptoms during life, they ought surely to be distinguished by different names. It is not easy, nor is it always expedient, to alter a nomenclature once fairly received, even when it is found to be faulty, but in this case it will probably be found necessary.

The post-mortem appearances indicative of inflammatory action, I have never found wanting in acute hydrocephalus, and it is to the details of these that I wish to draw attention. The precise appearances to be specified I have not found anywhere detailed, but I presume they are of the same general character as those mentioned by Rokitansky in the following terms:—"The effusion of a fluid which is thin or somewhat thick, of a greyish colour, or greyish-yellow tinged with green, and more or less turbid, in proportion to the quantity it contains of plastic matters capable of assuming some of the primary forms of organisation. It is very often found to have separated into two parts—one fluid, and the other of more consistence and deeper colour; it has, in fact, become clear from certain of its elements having fallen to the bottom as a sediment. These elements are usually found in the most dependent part of the lateral ventricle—viz., their posterior cornu. On minute examination of the effusion, its opacity is found to arise from the presence of the elements of a plastic exudation, nucleoli, nuclei, cells at various stages of development, and some pus cells." (Syd. Soc. Transl., vol. iii. p. 350.)

In all the cases I have had an opportunity of examining, the fluid in the ventricles has been clear, and a granular exudation layer covered the floor of the cavities, more abundant, however, towards the fore part, and presenting the following appearance. This layer, thin, soft, greyish, and easily overlooked on account of its resemblance to the parts which it rests on, is composed of granules, exudation corpuscles, and imperfectly formed cells; it is seen covering the optic thalamus and corpus striatum, and is most abundant towards the fore part of the ventricle, where, in the angle between the rounded anterior end of the corpus striatum and the crura of the fornix, it accumulates to the greatest extent, so as sometimes almost to fill it. At or opposite the foramen of Monro it produces a very peculiar appearance, always present as far as I have seen; there the exudation, so far from closing the opening, prolongs it on either side into the ventricle, converting it into a sort of short canal, which opens by oval apertures with sharply defined borders, placed not vertically, but so obliquely as to be nearly horizontal, quite clear of the edge of the fornix, and visible at once on opening the ventricle from above; so that, instead of its being necessary to look underneath the apex of the fornix in order to see the foramen, the openings of it appear like two oval eyes between the fornix and the corpus striatum, and are in plain view without disturbing or touching the parts in any way. This appearance gives the impression as if a soft granular layer had settled down on the floor of the ventricle, filling up its angles and interstices, but prevented from covering the foramen of Monro by the steady set of a current through that opening. This peculiar appearance, easily recognisable when pointed out, I have never failed to observe in every case since my attention was first directed to it, and that altogether irrespective of the cause which may have induced the disease. The following brief abstract of a few cases widely different in their origin will show the uniformity with which this appearance presents itself.

Case 1 may be taken as a type of the ordinary acute disease in children. A. M., aged 4, presented well-marked symptoms of the usual type—moaning, starting with a scream from sleep, vomiting, strabismus, rolling of the head, turning from the light—these passed into stupor and coma, and she died after ten days' illness. Post-mortem appearances: Surface and substance of cerebrum healthy; lateral ventricles considerably distended with clear serum; the anterior part of the floor covered with a layer of exudation (as mentioned above); third ventricle, cerebellum, &c., healthy; weight of the whole 38 oz.; no tubercle in the brain or elsewhere.

Case 2 may be taken as an example of the disease in its subacute form where the symptoms are but faintly marked. J. S., aged 17, affected with emaciation and obscure head symptoms; vomiting frequent; dulness, listlessness, and occasional headache. The symptoms continued with gradual loss of strength for several weeks, and he finally sank into stupor and coma, and so died. Post-mortem appearances: Surface and substance of brain natural; lateral ventricles distended with a clear colourless albuminous fluid, the distension being greatest above and behind, as shown by the following measurements:—Whole length of cerebrum $6\frac{3}{8}$ in.; body of the lateral ventricle $2\frac{1}{2}$ in. long by $1\frac{1}{2}$ in. wide; the roof raised to $\frac{1}{4}$ in. above the level of the centre of the corpus callosum; posterior horn dilated so as to form a squarish cavity, nearly as broad as the body of the ventricle, and 2 in. long. Choroid plexus natural; fore part of floor of ventricle coated with a soft gelatinous layer composed chiefly of granules and exudation cells, filling up the space between the crura of the fornix and the corpora striata, and forming on each side a regularly defined opening, slightly oval in form, and three-eighths of an inch across, opposite to the foramen of Monro. Cerebellum, etc., natural; weight of whole 39 oz.

Case 3—following erysipelas in advanced life. In such cases it is usually meningitis that occurs from extension inwards of the disease, and this simultaneous with the erysipelas; but here the fatal mischief supervened after the erysipelas had subsided. J. B., aged 70, was affected with erysipelas of the face, from which she was recovering when brain symptoms appeared; she became stupid, slightly paralysed, and then comatose, and died rather suddenly. Post-mortem appearances: Effusion of serum under the arachnoid and into the sulci both of cerebrum and cerebellum, but no effusion of lymph. Lateral ventricles much distended with colourless serum; the fore part of the floor coated to some extent with a thin layer of exudation matter, hinder part free; foramen of Monro very distinctly bordered, wide and oval; choroid plexus, especially on the left side, with abundant cellules containing clear fluid. Substance of brain healthy; weight of whole 37 oz. Taking into consideration the age and small size of the brain, it is highly probable that a portion at least of the superficial serous effusion had been of old standing.

Case 4, from tubercle. T. P., aged 45, of dissipated habits, was admitted into Hospital with delirium tremens, from which he recovered. The strength, however, did not rally, and after some time vomiting, headache, and finally stupor came on, and he gradually sank. Post-mortem appearances: Surface and substance of brain natural, except fornix and septum lucidum, which were softer than usual. Lateral ventricles much distended with clear serum, so as to rise above the level of the corpus callosum; the posterior and inferior horns much opened up; a thin layer of exudation matter over the fore part of the floor, bordering the foramen of Monro. Cerebellum, etc., natural; weight of whole 44 oz. Lungs densely loaded with freshly deposited miliary tubercle, which was also present in the kidneys and suprarenal capsules.

The uniform occurrence of these appearances under circumstances so varied would seem to indicate that they are essential to the disease, and that the lining membrane of the floor of the ventricles, especially that portion covering the corpus striatum and optic thalamus, is the primary seat of the disease. In this view we have also an explanation of its excessive predominance in early life. This preponderance may be shown in figures thus:—Out of 9185 cases recorded by the Registrar-General in the principal towns of Scotland during eleven years, 8093 were in children under 5 years of age; 1036 were in young persons from 5 to 20; 52 in adults from 20 to 60; and 4 in old persons. This includes both acute and chronic hydrocephalus, but, even making ample allowance for the latter, it shows an immense preponderance of the former in early life. The probable cause of this may be ascribed to the varying activity and consequently varying vascularity of different parts of the brain at different periods of life. In early life, the most active parts of the brain are those connected with motion, while those connected with the mental faculties are comparatively in abeyance, a condition which is reversed in adult life. Hence, in the cerebrum, the corpora striata and optic thalami are in proportion much more active than the cerebral hemispheres in early life, and therefore their free surfaces towards the ventricles are, at that period, more liable to inflammatory attacks.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MEDICAL CHARITIES OF MANCHESTER.

THE ROYAL INFIRMARY.

Manchester is well supplied with Medical charities, for, besides the noble-looking building constituting the Royal Infirmary, there are St. Mary's Hospital for Diseases of Women, two Hospitals for Diseases of Children, an Eye Infirmary, a Lock Hospital, etc. In the meantime, however, we shall confine our remarks to the chief of these—the Royal Infirmary. This fine building occupies undoubtedly the best site in Manchester, in the immediate vicinity of the great warehouses and huge hotels for which Manchester is celebrated. To be in the heart of a great city, the space on which the Hospital is built is open, and constitutes a kind of great square, having the Hospital in the centre, and being surrounded and marked off by the principal streets in the city. The building itself consists of a main block and two wings, the central block being parallel to Market-street, the most important thoroughfare in Manchester. Of the two wings which project backwards from this, one is, in a great measure, due to the charity of that kindest-hearted of vocalists, Madame Jenny Lind, who devoted to it the proceeds of a great concert given in Manchester a good many years ago now. In this wing are the entrance used, for the main doorway giving into Market-street is kept constantly closed, the out-patient's rooms, the room into which injured people are brought to have their wounds dressed, etc. All the rest of the ground floor is occupied with offices, and the rooms necessary for a somewhat large resident staff, including six house pupils. The wards are situated on the first and second floors, and include thirty-two beds devoted to fever patients, who are shut off from other parts of the house, and have a special entrance and staircase of their own. Altogether, sixty-six beds are devoted to Medical cases, each of six Physicians having five male and six female beds at his disposal. Three of these Physicians, however, Drs. Roberts, Simpson, and Morgan, undertake the whole care of the clinical teaching both of the resident pupils and of those belonging to the Medical school. The school is not attached to the Hospital, but occupies a building in an adjacent street. Its museum contains many specimens of interest, but until recently these were not readily available, owing to faulty disposition. Much care has, however, been bestowed on this matter, and the museum will now vie with, if not surpass, anything of the kind in the provinces. Many of the out-patients are attended at their own homes, and in this work some of the resident staff are constantly employed. One peculiarity connected with the institution is that there should be no obstetrical department, or one for diseases of women; as a consequence, the house pupils have to make arrangements with men outside that they may be enabled to see sufficient midwifery practice to enable them to present themselves for examination. We confess we should be glad to see this altered. There is no want of eminent obstetricians in Manchester, and the appointment of one of these to the charge of a special department in the Infirmary would only be in accordance with the generally recognised practice in metropolitan institutions. One small ward is as much as possible devoted to the diseases special to women, but this is not enough.

From a glance at the books of the Royal Infirmary we might conclude that the principal diseases prevalent in Manchester were rheumatism, extremely common, as at Leeds; gout, also frequent; Bright's disease, common, as is disease of the mitral valves; typhus fever is exceedingly common, always lurking about some spot or other, whilst typhoid is, on the other hand, rare. These facts, however, may not be exactly true of Manchester, as the Hospital receives patients from all parts of the important manufacturing districts round about it, such a large and wealthy place as Oldham even, being entirely destitute of Hospital accommodation. This should not be, and we would advise the inhabitants of the district to try what the Village-Hospital system would do for them. It is no slight matter that a mangled body should have to be conveyed many miles before permanent relief is obtained.

We have already alluded to the curious prevalence of rheumatism in these northern cities and districts. This is, however, probably better shown by a careful analysis of the in-patients made for us by Mr. Cullingworth, Resident-Physician's Assistant. From October 1, 1867, to March 31, 1868, there entered in all into the Medical wards 462 individuals labouring under various diseases; of these 23 were suffering from acute rheumatism, 21 from chronic articular rheumatism, 35 from valvular disease of the heart, and 13 from chorea connected with rheumatism. These, of course, are exclusive of those seen in the out-patient rooms, and in no instance is the same case reckoned twice over. Again, in the fever wards there were received during the same period 78 cases of typhus with rash, 30 of typhoid, 14 of scarlatina, and 2 of measles. Among the other patients were to be found 28 cases of phthisis, 9 of pneumonia, 6 of pleuro-pneumonia, 19 of chronic bronchitis and emphysema, with 4 of acute and 13 of chronic albuminuria.

In several of these forms of disease there has been a marked tendency of late to asthenic symptoms; in two male patients under the care of Dr. Wilkinson purpuric spots were observed, and in another of pneumonia the same phenomenon was noticed. Four of these cases of pneumonia were sufficiently important to deserve transcription; they occurred in strong young men between 20 and 30, and were especially noticeable for a restless talkative delirium, followed in a few days by great prostration, the pulse becoming exceedingly small and weak and very compressible, varying from 115 to 130, the respirations being as frequent as 25 to 45 per minute.

Case 1.—J. B., aged 23, single, a stoutly-built, ruddy-complexioned porter, residing at 149, Red Bank, Manchester, was admitted into the Royal Infirmary, Manchester, April 13. He was suffering from pneumonic consolidation of the lower lobes of both lungs, with catching pain on both sides. Tubular breathing and increased vocal resonance very distinct.

Ordered mist. ammon. acetatis ʒj. quartis horis, with mustard and linseed poultices.

April 16.—Ordered brandy ʒvj. daily.

17th.—Adde misturæ liq. opii sed. (Battley) ♏ xv.

21st.—Prostration extreme; pulse thready, easily compressible, and intermitting.

Ordered an ounce of brandy every three hours, and an ounce of the following mixture every three hours:—℞ Ol. terebinth. ʒij.; sp. æther. sulph. ʒiij.; mucilaginis ʒij.; ol. anisi ♏ xij.; aq. ad ʒxij. Misce.

April 24.—Pulse regained its regularity, but still small, weak, and compressible.

Ordered an ounce of brandy every two hours.

26th.—The daily amount of brandy reduced to one half.

27th.—Ordered fowl dinner, and mist. cinchon. muriatis ʒj. t. d.

28th.—All morbid sounds disappeared with the dulness from the chest.

Ordered chop dinner, with a pint of porter, and to discontinue the brandy.

May 4.—Discharged cured.

Table of Number of Pulse and Respirations daily recorded at 10 a.m.

1868.	P.	R.	1868.	P.	R.
April 15	75	34	April 24	90	28
„ 20	76	40	„ 25	80	24
„ 21	77	38	„ 26	78	26
„ 22	95	31	„ 27	80	26
„ 23	92	32			

Case 2.—F. M., aged 39, married, an umbrella-frame maker, residing at 28, Coppa-street, Rochdale-road, admitted April 15, 1868. He was a thin spare man of temperate habits, and he did not recollect having had any previous illness.

On April 12 he had been seized with rigors and a catching pain in his right side.

On admission there was rust-coloured expectoration and loud tubular breathing, with increased vocal resonance, and tactile vibration at the lower parts of both lungs posteriorly. He was exceedingly prostrate, with most readily compressible pulse, thready and fluttering; he was very excitable and delirious, so that he was constantly getting out of bed, and on the third day after admission he walked downstairs in his nightshirt, while the nurse happened to be out of the ward.

April 16.—Ordered brandy, ʒvj.

17th.—Ordered brandy, ʒxij.

19th.—His delirium has left him, and to-day he is very weak, and apparently sinking. Ordered an ounce of brandy every hour, and an ounce of the terebinthinate mixture, as detailed in the last case, every two hours.

25th.—He is now able to sit up in bed without help. There is normal respiration over the whole chest, except at the extreme bases, where crepitation is now heard. Ordered an ounce of brandy every two hours, and an ounce of quinine mixture three times a day.

26th.—No dulness or morbid sound, save a little rhonchus at right base.

Ordered an ounce of brandy every three hours, and two eggs daily.

May 2nd.—The tongue still keeps dry, red, and glazed, though in other respects the patient improves daily. Ordered —Bismuthi trisn. ʒij.; potass. bicarb. ʒij.; ac. hydrocyan. (Scheele's) ɱxx.; pulv. tragac. co. ʒiij.; aq cinnamomi ʒxij.; ʒj. t. d.

3rd.—Tongue perfectly clean and natural. Ordered fish or fowl diet; two eggs and four ounces of wine daily, instead of brandy, and to sit up for half an hour.

5th.—Ordered generous diet, with a pint of porter daily, instead of wine.

6th.—To walk out a little.

8th.—Sent to the Convalescent Hospital at Cheadle, near Stockport.

Table of Number of Pulse and Respirations daily recorded at 9.30 a.m.

Date.	P.	R.	Date.	P.	R.
April 16	132	22	April 24	116	27
„ 18	116	18	„ 25	120	30
„ 19	130	36	„ 26	100	24
„ 20	116	28	„ 27	108	24
„ 21	108	28	„ 28	102	27
„ 22	106	30	„ 29	100	26
„ 23	106	26	May 4	100	18

Case 3.—J. W., aged 26, married, a blacksmith, residing at Acton-street, London-road, admitted April 16, into the fever wards of the Manchester Royal Infirmary. He has been pale and delicate from infancy. When a baby his mother says that his bowels were habitually irregular, and that his abdomen was large. About the age of 6 years he was run over by a coach, and lay in the Infirmary with fracture of the skull. He has been paid weekly according to the quantity of work done, and had worked hard at the same employment since he was 14 years old. During the last fifteen months he has been growing perceptibly thinner and weaker, and has worked harder than his strength warranted him in doing, although, at the same time, his circumstances did not allow of his obtaining proper food and clothing. He has never had a cough, and has never been laid up since his marriage. Always a steady man, he kept early hours, although not a strict teetotaller. He began to be chilly and ill on April 12, 1868.

He is a small, pale, thin man of light complexion, with prominent malar eminences and sunken eyes. He complains of a short cough and catching or stabbing pain under the right breast and at the right base posteriorly. Dulness and tubular breathing heard over the lower half of the right lung posteriorly; expectoration scanty and of a prune-juice character. He lies on his right side, and complains only of pain in his right side on taking his breath. Large moist râles audible over the whole of both lungs. He is somewhat delirious and continually chattering; no headache, a brownish-white furred moist tongue, and a very small weak compressible pulse.

Ordered mustard poultice to back of right side of chest, mist. salin. ʒj. 4tis hor., and milk and beef-tea diet.

April 17.—The mustard, though only applied half an hour, has blistered the whole surface. Pulse 100; respirations 25.

18th.—Scattered purple spots of irregular shape and size, and not fading under pressure, have appeared on the epigastrium and below the blistered surface posteriorly.

Ordered wine ʒvj. daily.

20th.—Purple spots constant; pulse weaker and more compressible, 119; respirations 41.

Ordered an ounce of turpentine mixture every four hours, along with brandy ʒviij. daily, instead of wine.

21st.—He has to-day been very greatly purged, with stools at first dark and scanty and afterwards of a very light yellow colour. On no occasion could any membranous shreds, mucus, or blood be discovered. He has no tenderness or gurgling in the iliac regions. Purple spots spreading; pulse 118; respirations 44.

Ordered brandy ʒss. every hour day and night.

22nd.—There is much flatulent distension of the abdomen, and the purging continues with light-coloured watery stools. Pulse 124; respirations 51.

Ordered brandy ʒj. hourly, day and night, and hydr. c. cretâ gr. ij., pulv. Doveri gr. iv.; ft. pulv. j. qq. 4tâ horâ.

23rd.—Distension increased; purging diminished; still lies on his right side. Seldom ceases chattering articulately, though irrationally. Pulse 130; respirations 42.

Ordered starch and opium enema, and the long tube to be kept for some time in the bowel to facilitate the passage of flatus.

24th.—Died at 3 a.m.

Section.—The body well formed, but wasted; short of stature and pale; purpuric spots on back, chest, and sides; rigor mortis inconsiderable; lips livid and not swollen; no œdema of surface; about three ounces of fluid in the pericardium, without any sign of active inflammation; the heart contained dark clots of blood in both ventricles; valves healthy; pulmonary artery contained a large decolorised clot; heart's size natural. Recent and easily-torn adhesions of the pleural surfaces existed over the whole posterior and lateral aspects of both lungs. There was some serous effusion in the left pleural cavity. Over the whole of the visceral and parietal pleura, except that part covering the uppermost three inches of the apex of the left lung, was spread a thin and recent layer of lymph, which could be raised from the pleura and torn away by the handle of the scalpel. The whole of the right and of the left lung, except that part which lies above a line drawn transversely three inches below the apex of the left lung, was more bulky and heavier than natural, and when cut, bloody purulent fluid was poured out, unmixed with air on the right side, and mixed with very little air on the left side. The lung structure was exceedingly friable, except at the left apex, where was still some resiliency, along with smaller bulk and lighter texture. The appearance of the cut surface of the diseased lung was that of red hepatisation, with abundant oozing of dirty red-looking purulent matter. No tubercles, and no breaking down of lung tissue into cavities. No fluid in the peritoneum. The whole upper and anterior surface of the liver adherent to the diaphragm. Beyond this there was no sign of peritonitis. Stomach, kidneys, and pancreas natural; spleen soft and readily lacerable. The whole of the interior aspect of the small intestine was laid bare, and not a trace of ulceration could be discovered.

Case 4.—R. H., 57, single, a stamp-maker, residing at 35, Birmingham-street, London-road; brought in a cab to the Infirmary with an in-patient's recommendation on May 11, 1868. He dropped down faint in a few minutes after stepping from the cab, and died almost immediately. It appeared that he had had two ribs broken six or seven weeks ago, and that he had complained of more or less pain in his side from that time, although he had been well enough to resume his work, until he took cold a fortnight ago. At the inquest a witness said that on taking cold the pain again flew to his side.

Sectio Cadaveris twenty-eight hours after Death.—No rigor mortis; body well formed and well nourished. No

marks of violence; no eruption visible, and no œdema. Skin pale over whole body. About four ounces of fluid in the pericardium. No sign of pericarditis or of lesion of the heart. A decolorised clot was found in the right ventricle and in the pulmonary artery. In the left ventricle was a small quantity of dark clotted blood. No pleuritic effusion. The whole pleura covering the left lower lobes adherent, and a thin dry-looking layer of lymph covered the pleural surfaces; and the lung-tissue of the lower lobe was consolidated, more bulky and heavier than natural, friable, non-elastic, and exuded, on pressing its cut surface, some bloody serum unmixed with air. Right side: The pleura of the lowest lobe and lower part of the middle lobe was in the same condition. Lung-tissue beneath firm, red, congested, natural in bulk, deficient in elasticity, and exuded on pressure frothy serum, mixed with a good deal of blood. There was a considerable quantity of cretaceous material of the consistence of paint at both apices, but no surrounding consolidation or cavity. Organs of abdomen congested. Some tubercles discovered beneath the brain-membranes at the base, in the fissures of Sylvius, on the upper surface of the cerebellum, and along the upper and inner border of the hemispheres. In the last situation the tubercles were in one or two places surrounded by a little patch of lymph. Sixth and seventh ribs on left side bore marks of having been fractured in front of the angle. The injury had been perfectly repaired, and no sign of wound of lung or pleura could be detected. The displacement of the united fragments was inconsiderable.

(To be continued.)

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Medical Times and Gazette.

SATURDAY, JULY 18, 1868.

GENERAL MEDICAL COUNCIL.

The Committee on Observations by the Licensing Bodies and on the Reports of Visitations of Examinations presented to the Council, on the last day of the session, a lengthy and very important report. Two sets of documents had been referred to them, viz.—

1. Observations of the licensing bodies upon the report of the Committee of the Medical Council on the Visitations of Examinations, which was laid before the Council in June, 1867.

2. The reports of visitations of examinations which have been made since the last session of the Council. These visitations extended only to Scotland and Ireland, the Branch Council for England having considered that, as the visitations of the several English licensing bodies had been fully reported on during two successive years, and that important changes are still in progress in several of these bodies, it was not necessary yet to repeat the visitations.

These documents contained a large amount of information, to the careful consideration of which the Committee evidently devoted no little time and labour.

And here we would remark, by the way, that the reports of Committees such as this one, and the Committee on Preliminary Education, form most valuable guides and instructions for the deliberations and recommendations of the Council, and are the results of a very considerable amount of hard work, though, as the Committees do their work outside the Council, their labours, and the many hours occupied in them, are too often passed over or forgotten when it is asked, "What have the Council done?"

The first thing that strikes us in glancing at the observations of the licensing bodies is the general anxiety shown to claim nearly all improvements in their examinations as the results of spontaneous action, and to avoid giving any credit to the Council. They all sing much the same tune, and if we pick out one to illustrate this it is because it is at the same time the most perfect and the most justifiable. If "brevity is the soul of wit," the "Observations of the Apothecaries' Society of London" are very witty, and, what is much more, they are, we think, fully countenanced by "the inexorable logic of facts;" the pith and gist of them is contained in the following extract:—"The Court would remark in general terms that very many of the suggestions made by the Council have long ago been anticipated by the Court of Examiners, who, under very great difficulties, proposed and carried out, before the year 1858, many of those improvements in the conduct of examinations on which the Medical Council now so strongly and so justly insist." This is, at the same time, a courteous pat on the head for the Council and an historical record of the good example set them and the licensing bodies by the Society of Apothecaries. The Medical Council very wisely ignore this tone of self-satisfaction adopted by the licensing bodies, and content themselves with recording their own gratification with the good effected. Their remark on these observations of the Apothecaries' Society is simply that they "have great satisfaction in observing that the Court of Examiners have introduced the system of clinical Medical examinations, and that the suggestions of last year's committee as to practical examinations in the various subjects 'have been already carried out to a considerable extent,' and that 'the Court are now devising means for making the practical examinations still more efficient.'"

The pleasing result is that both parties are "satisfied," and the general good is attained.

The Royal College of Surgeons of England sent in its "Observations" in the most pretentious form, transmitting to the Council an "interleaved copy of the report of the Committee," with "the resolutions of the Council of the College expressive of their opinion on the suggestions of the Committee placed opposite to the suggestions to which they respectively relate." But these resolutions are neither numerous nor very important. The Council state "that the Surgical practical examination already embraces the points suggested in the report of the Committee," and that the suggestions in relation to operations on the dead body and clinical Surgical examinations "are under the consideration of the Council, with a view, if possible, to carry them into effect." On the subject of the combination of licensing bodies, the Council state that they "are desirous, and have recently been endeavouring, to carry out, as far as the charters of the College will permit, the combination here advocated." And on the subject of questions to be answered in writing the College is of opinion that the example quoted by the Committee is not applicable to the examinations at the College. The Medical Faculty of the University of Aberdeen record, of course, their satisfaction with themselves; they are much pleased to see that the visitors from the Medical Council report that their examinations are "well carried out and highly practical," and they inform the Council that these examinations, "thus commended, have in all essential respects been conducted as now for a period of more than a quarter of a century," and so on. With respect to the exemption of certain candidates from an oral examination on account of the excellence of their written answers, and which exemption is

objected to by the Medical Council, the Faculty defend the system as a sound one, productive of very good results; but have the grace to abandon it, and to openly state that they do so "out of deference to the expressed opinion of the General Council."

The "Observations" of the licensing bodies on the subject of the combination of examinations are very various, but not on the whole exactly encouraging. Some slight advance has been made in this direction, as by the Colleges of Physicians and of Surgeons in England, but we do not see any real prospect at present of anything more being done. The University of London offers no opinion on the general principle of the combination of licensing bodies, but "cannot hold out any expectation that they will be willing to accept the examinations of any other licensing board in substitution for their own." Some of the answers are rather more gracious. The Committee of the Council of the University of Oxford express a hearty desire that the University should co-operate with the Government in promoting any national plan for insuring "a simple, comprehensive, and reasonably uniform mode of educating and examining the generality of young men destined for the Profession of Medicine. But they have no doubt that the University would wish to reserve to itself the right of legislation as to the nature of its own higher or Honour standards;" and the Medical Faculty of the University of Glasgow state that they "would gladly receive *ad eundem* all recognised University examinations except the final one." Some of the observations on the subject are delightfully guarded and cautious. Thus the University of St. Andrews "defers expressing any opinion on the subject of combination of licensing bodies till a definite plan has been submitted for consideration;" and the Apothecaries' Hall of Ireland are in favour of a combination, "provided due regard be had to local wants and wishes, and to the maintenance of the rights of the respective bodies."

On the numerical system proposed by the Committee as a basis of comparison between the examinations of different bodies, the "Observations" are as discouraging as possible. Seven of the licensing bodies either pass the subject over in silence, or decline to make any remarks on it. Several condemn the plan as complicated and unworkable, or as inferior to plans in use. One body approves the plan, as like its own, and will try it. One has tried it, and found it easy and unobjectionable, but doubts its applicability as a standard of the relative efficiency of examinations. Three bodies neither approve nor disapprove of it for individual examinations, but distrust it as a standard of comparison. On considering all these "Observations," the Committee see that "the time has not come for the proper settlement of this question," and, while backing up their own former opinions about it, wisely recommend the Council "to let the matter rest at present."

The reports of the Visitors of Examinations of the Scottish Universities and licensing bodies appear to be on the whole highly satisfactory. Here and there we find no mention of clinical examinations, or a defect in practical examination is noticed, but in the great majority of the reports the visitors are very laudatory; the examinations are "very satisfactory," "thorough and complete," "in every respect highly creditable," "a thorough and fair test," and so on. We may perhaps, however, be permitted to remark that the visitors were Scotchmen.

The Irish Universities and licensing bodies do not come out so well. The visitor to the University of Dublin last year "referred to the Surgical clinical examinations as excellent. At the visitation now reported there seems to have been no clinical examination either in Surgery or Medicine." The visitor to the Royal College of Surgeons (Ireland) states that for the preliminary examination there were forty-two candidates, eight of whom, he was informed, were rejected. "One of the candidates admitted that he was only 14 years old, and two that they were only 15; four or five others appeared about the same age." Of the examinations for licence to practise Surgery it is stated that they are generally defective. "The defects which were noticed last year remain uncorrected. There is neither practical nor clinical examination." And the visitor to the King's and Queen's College of Physicians states that at this visitation "seven gentlemen presented themselves as candidates, all of whom were Licentiates of the Royal College of Surgeons of Ireland, and were therefore relieved from examination in anatomy, physiology, practical anatomy, chemistry, and practical chemistry, and interrogated solely in the senior or more practical portion of the Medical curriculum." There was no examiner in Medical jurisprudence. All the candidates seem to have been present together, "the questions being proposed in turn to them, and when missed by one passed to the next, and so on in succession." The oral examination lasted an hour and a half; the written, one hour. In case of a difference of opinion among the examiners, the admission or rejection of a candidate would be determined by a majority of the voters, not of the examiners, but "of all the Fellows present who might choose to exercise a voice in the matter," who, as the Committee understand, "may or may not have been present at the entire examinations, and may never have seen the written answers." At a second visitation the reporter "was informed that there were no written questions, and that such were only proposed at the quarterly examinations."

The impression left is that any candidates wishing for "facilities" had better betake themselves to these two licensing bodies.

The report on the Queen's University is much more satisfactory.

The visitor of the Apothecaries' Hall (Ireland) says: "The examinations in chemistry, inorganic and organic, in botany, general and Medical, Materia Medica, and general and practical pharmacy, embraced a great number of questions, which were admirably put, and must be considered as a searching test of the knowledge of the candidates in these departments. Those in anatomy and physiology, on the other hand, were of the most elementary description."

We have given, we fear, a tediously long and detailed notice on these subjects, but we have done it to show, in some measure, the difficulties and obstacles the Council have to overcome; and when it is recollected that they use only "moral suasion," the slowness with which they make way can be easily understood, while the degree of improvement which has been effected may be a matter of congratulation. The standard of education has been considerably raised, in the "preliminary education" especially; the examinations have been greatly improved; and the Profession has been "unified" in the three parts of the kingdom to a degree utterly unknown to other learned professions.

Whether or not the Council have done their best in thus relying on moral influence and recommendation, or ought rather to have applied to the Privy Council to help them to enforce their recommendations, or to have gone to Parliament for an increase of power, are questions which will be differently answered by different minds and temperaments; but, at any rate, it is very doubtful whether the Privy Council would have supported them, and it is, we opine, more than doubtful whether Parliament would have listened to them. For it must be remembered that no attempt at direct rule would have had the recommendation of the whole Council. It is a very heterogeneous body, composed chiefly of the nominees of the very universities and licensing bodies from which come its chief difficulties and impediments; and its number makes it by no means an easy body to keep in good working order, a large number for one man to govern easily, and yet too small for the sort of internal control seen in such an assembly as the House of Commons; and, *pace* Dr. Andrew Wood and the

British Medical Association, we do not think that its defects would be remedied by the addition of a few members elected by the general voice of the Profession. Looking at its constitution, it has done much good work, and not a little of the credit gained by it of late years has been, in great measure, due to the admirable qualities of its President. Dr. Burrows possesses, indeed, in rare perfection the qualifications necessary to enable a man to lead and guide such a body as the Medical Council. A good man of business, with a clear and calm but ready judgment, he is ever courteous and conciliatory in manner, and yet firm and dignified, never forgetting the position the Council ought to hold with regard to the Profession and the public, and the position which he holds in relation to the Council. He seems to know as by instinct how far he can control the Council, as they feel the line beyond which they do not like to test his forbearance. As we have before said, they have done most wisely and well in re-electing him to the office of President.

One of the points at which the Council is most open to attack is undoubtedly its cost in pounds, shillings, and pence. A very common way of stating the matter is to say that the Council sits on an average ten days a year, and costs close upon £5000. This is, we need not say, a very unjust way of putting it, as the sum stated includes the expenses of the Branch Councils and all the annual machinery of the Council, while the annual session costs probably about two-thirds of the whole. Still the broad fact remains that the total expenses of the General Medical Council amount to very nearly £5000 a year, and at present they increase rather than diminish. No one will believe that the sittings of the Council are increased for a single hour for the sake of the fees. The five guineas a day honorarium must entail a loss on the vast majority of, if not on all, the members; but so long as this expense continues it will happen that some will criticise in a captious and somewhat narrow spirit the proceedings of a body which costs so much. As matters get settled the Council will, no doubt, work less expensively, but it would be well that they should show rather more jealousy of their costs at present, and not the less because their expenditure runs their income so closely. Last year it slightly exceeded it, and the estimate for the present year allows only a balance of £75 in favour of income.

MEDICAL EDUCATION IN GERMANY.—II.

In Germany, if parents intend to bring up their sons to any profession, it is necessary that the commencement should be made at a very early period, generally at about the age of 9 or 10 years, when the boy has acquired in one of the public schools a sufficient preliminary education to enable him to enter a college or gymnasium. The system of teaching pursued in these colleges is uniform, and is regulated and superintended by Government. A youth, therefore, on leaving the college must have received the minimum of education which is recognised by the State, and may obtain, on passing an examination, a certificate of maturity (Maturitäts-Zeugnisz). This minimum consists of a thorough mastery over his native language and its literature, the general history of the world, and the special history of the states of Europe. He must be able to read and write Latin fluently and correctly, and must be prepared to read any Greek author without the aid of a lexicon, and to translate a passage from Latin or German into Greek; the same is required in respect to French. English is now very generally taught in these schools, but is not compulsory, and Hebrew is only required of those who intend to study divinity. In mathematics he must be acquainted with geometry (both plane and spherical), trigonometry, and algebra (as far as equations of the third degree). In natural science a general knowledge only is required of chemistry and experimental philosophy, and of the three kingdoms of nature. For the acquirement of these subjects a term of about nine years is required, supposing the youth to pass through all the stages. The cost of this education is, however, very trifling, amounting to about twelve shillings for the session of six months, and consequently the sons of the highest aristocracy and ministers of state may be found in each class side by side with the sons of humble parents, the latter not unfrequently taking the higher position of the two. At the age of about 17 or 18 the youth leaves the college, after having passed a very difficult examination conducted under the superintendence of a Government inspector (Schulrath).

For those who are to be engaged in after life in commercial or technical pursuits, other schools (Realschulen) are established, in which more attention is directed to natural science, mathematics, and modern languages, than to classics. The youths on leaving are required to pass an examination and obtain a certificate of maturity. Having obtained such a certificate, a young man has the privilege of serving as a volunteer for one year instead of serving as a common soldier for the ordinary period of three years, and may select the branch of military service he may prefer, and the regiment which happens to be quartered in the town in which he resides.

The certificate of maturity obtained from a gymnasium entitles the student to admission into a University, and may, therefore, be considered equivalent to our matriculation. It must be remembered that German Universities are the real schools for the pursuit of special study, and not mere examining boards for testing knowledge obtained elsewhere. Each University consists of four faculties—viz., Divinity, Law, Medicine, and Philosophy. At the head of each faculty stands the dean, and at the head of the University is the rector. These officers are annually elected from the general body of the professors; the deans being appointed by the members of their respective faculties, the rector by the faculties collectively. Before proceeding to describe the details of Medical education as pursued in the University, we will briefly explain the machinery of these institutions as regards professors and lecturers. The body of teachers consists of the ordinary professors (ordentliche Professoren), extraordinary professors, lecturers (Privatdocenten), and lectors. Every student who has completed his regular course of study, and has graduated by examination in one of the faculties, may become a "Privatdocent" of one of the subjects included in the curriculum of that faculty, provided that he has given proofs to the Professors of having distinguished himself in any way, and has received the consent of the Senate of the University, consisting of the Rector, Deans, and University Judge (Universitäts-Richter). He then announces the subject on which he desires to lecture, and is required to give a public discourse to show his ability. His future depends upon himself, whether he be successful in attracting a large number of pupils or not; if the former be the case, he will before long be nominated to a professorship in his own university, or be "called" to fill a chair elsewhere. The body of the "Privatdocenten," composed of men honourably vying with each other to make their names renowned, and to attract students by the excellence of their teaching, is, therefore, the real yeast, so to speak, of the universities. The extraordinary professorships are usually given to distinguished "Privatdocenten," whose services the university authorities desire to retain and recognise, but for whom no chairs are vacant. Lectors are men, either graduated or not graduated, lecturing upon subjects which do not come within the university curriculum, and for which no chairs exist. The appointment of the ordinary professors is vested in the members of the faculty, but subject to confirmation by the Government. They are always certain of a moderate competency by virtue of the endowment belonging to the chair; but they also receive the fees paid by the students, and this may in some cases amount to a very considerable sum. Professors of the more theoretical branches of Medical study

—such as anatomy, physiology, etc. — are not expected to undertake private practice. When a man has announced his career as a teacher of any special department of science, he generally makes this the subject of his life's work, and does not, as is too often the case in this country, serve his apprenticeship by teaching botany, pass through the various grades of lecturer on pathology, forensic medicine, materia medica, and end his career by teaching Medicine and becoming Physician to the Hospital.

We shall now consider the progress of the student through the University.

(To be continued.)

THE WEEK.

TOPICS OF THE DAY.

A MEETING of the Fellows of the Royal College of Physicians, commonly known as the *Comitia Majora*, will, it is understood, take place on the 21st of the present month. In our last number we expressed what we believed to be the universal opinion outside the College as to the list of names which has lately been circulated as that to be recommended by the Council to the Fellows. It is but fair to the College to state that no authorised information has reached us on the subject, and we are therefore still free to hope that the authorities have the matter under consideration, and are willing to consult in some degree justice and impartiality in the adjudication of the claims of the Members to the honour of the Fellowship. There is a report that the election of new Fellows will not take place at the forthcoming meeting. We hear, however, that the terms on which "registered Practitioners" are to be admitted to the College licence, with or without examination, are likely to be again discussed. We can assure the Fellows that any plan for the free admission of general Practitioners will utterly fail to bring the College either popularity or prosperity whilst deep and well-founded discontent is allowed to exist amongst the large body of Physicians who, in the expectation of fair treatment and recognition, have affiliated themselves to it.

An important meeting of the St. Andrews Medical Graduates' Association for the consideration of the claims of the various candidates for the representation of the Universities of Edinburgh and St. Andrews is to take place on Monday next, at the Freemasons' Tavern, at four o'clock. As the index of the feeling of a large and compact body of the electors, this meeting will have no small significance, but it has special interest from the fact that it will determine whether or not Dr. Richardson will offer himself to the united Universities as a Medical candidate. We are authorised to state that Dr. Richardson will be entirely guided by the resolutions at which the St. Andrews Medical Graduates' Association on that occasion may arrive. Advocating on principle, as we have done, the introduction of Medical men, influential by talent and scientific success, into Parliament, we look forward to the result of this meeting with no small interest. We are aware that Dr. Richardson has already received promises of large support, and that a Committee of about two hundred of the Medical graduates of both Universities is now formed in his behalf. But he is, wisely, we must allow, holding back until he has ascertained the decision of the Association of which he is President. Should he obtain the support of the bulk of the Medical graduates of his own University—on whom, indeed, he has conferred the franchise—we believe that his return would be safe, and for the first time in the history of this country would an English Physician, by virtue of his scientific standing and Professional success, represent his Medical brethren in the British Parliament. We know that a large number of electors are waiting for the result of Monday's meeting before they declare their final intention. We hope that in the Universities of Edinburgh and St. Andrews, at least, the opportunity which political fortune has given to the Medical Profession will not be thrown away.

It must not be supposed, however, that the St. Andrews Medical Graduates' Association exists for political purposes alone. The first volume of its *Transactions*, which we have just seen, shows that physic and politics are not incompatible. To the young Association which has produced it, and to its editor, Dr. Leonard Sedgwick, the volume is most creditable. It contains Medical papers by Drs. Richardson, Hughlings Jackson, George Buchanan, of Glasgow, Wynn Williams, Day, of Stafford, and many others, and a full report by Dr. Sedgwick on the various steps of the struggle and victory which, in spite of Northern exclusiveness and influence, gave the St. Andrews graduates the right to vote for their own University.

The Chair of Chemistry at St. Mary's Hospital is vacant by the retirement of Dr. Matthiessen, who proceeds, we believe, to share with Professor Odling the larger platform of St. Bartholomew's. There are four candidates already in the field—Dr. Thomas Wood, formerly Lecturer on Chemistry at the Grosvenor-place School of Medicine; Mr. Russell, Professor of Chemistry at the Ladies' College, Bedford-square; Dr. Divers, Lecturer on Natural Philosophy at Charing-cross; and Dr. Paul. All these gentlemen we believe to be good chemists, and well qualified for the post. St. Mary's must be in the position of Captain Macheath—"Oh! how happy could I be with either!"

We are very glad to see that Dr. Watson and Dr. Young, of H.M.S. *Challenger* and *Galatea*, have, in consideration of their services, been promoted to the rank of Staff Surgeon in her Majesty's Fleet, under an order in Council of July 6. This public recognition, although the least that their personal services on the occasion of the wound of H.R.H. the Duke of Edinburgh demanded, is speedy and opportune. We should be glad to see it followed by some measures calculated to diminish the discontent which has so long smouldered in the Naval Medical Service, and has lately been blown into a flame by the treatment which the Admiralty have thought fit to mete out to Dr. Stirling.

The talent for debate which has marked the career of Sir Dominic Corrigan in the narrow and confined arena of the General Medical Council is, we hear, likely to seek a more extended and congenial field in St. Stephen's. We see it announced that Sir Dominic proposes to offer himself to the electors of Dublin at the coming election. Sir Dominic's undoubted oratorical powers, his intrepidity, and dash would be sure to win him attention in the House of Commons. Should he be successful in obtaining a seat, his high position in the Profession in Ireland, and his European reputation as a Physician, together with his great public talents, would bring a large accession of strength to the cause of Medicine in the new House of Commons. We heartily wish him success.

The Canadian papers give an account of a case of amputation which was performed under the influence of nitrous oxide. The *Journal de Québec* states that the operation was performed in the Hôpital de la Marine by M. le Dr. Landry, assisted by Dr. Catellier. Dr. Pourtier superintended the administration of the gas. Amputation was necessitated by severe gangrene of the foot, the result of frost-bite. Chopart's operation was performed. The case is said to have presented many difficulties, and the operation was necessarily a lengthy one. The patient, whose eyes were open, seemed to be conscious of what was passing, but gave no sign of pain. Several times during the operation symptoms of venous congestion were visible, but they immediately disappeared on permitting the free access of air. No depression was left by the administration of the gas. Immediately after the operation the patient is said to have been able to sit and converse with a strong voice, and "*en quelque sorte gaiment.*"

L'Evènement, another Quebec paper, records a case in which scirrhus of the breast was removed by Dr. J. B. Blanchet, the patient being under the influence of the same anæsthetic. The case was one of recurring cancer in a woman aged 45 years. She had been operated on before, when chloroform had been administered, and been followed by persistent vomiting, which had lasted three days. In the second operation, the removal of some glands deeply seated in the axilla prolonged the proceeding to twenty-five minutes, during which time the patient is said to have been kept under the influence of the gas. No vomiting or depression of the heart's action followed; the breathing was easy during the administration, although a little quickened. On the following day the patient was perfectly well, and was able to take solid nourishment. It is clear that we must not decide against the use of this gas on theoretical grounds. Before it is generally adopted, we require a number of experiments, such as those which are now being conducted by Mr. Cattlin. For short operations the evidence is very strongly in its favour, and, if the above accounts be confirmed, it would appear that patients may be kept without injury even for a considerable time under its influence.

It is stated that a petition asking for the admission of the members of the "Female Medical Society" to the practice of the Farringdon General Dispensary and Lying-in Charity has been rejected by a considerable majority of the Committee of that Institution.

CHOLERA IN INDIA.

We learn from a correspondent that some cases of cholera made their appearance among the British troops in the Bengal Presidency during March and April of the present year. The first appearance of the disease was on March 3 in a detachment of the 2nd battalion 25th regiment at Berhampore, and another on the 10th in the person of a soldier of a wing of the 58th regiment at Benares. Since that time a few cases had occurred among other troops, the attacks numbering in all eighteen, with nine deaths, including that of an officer. We are glad, however, to learn that no fresh attacks had taken place since April 26 last.

THE VACANT CHAIRS IN THE UNIVERSITY OF GLASGOW.

At the present moment there are vacant two chairs in this University, the one that of Midwifery, through the death of Dr. Pagan, the other that of Botany, through the death of Dr. Walker Arnot. The former of these was but little known out of his own immediate district; but the name of Dr. Arnot is well known to all students of botany in connexion with the often used volume, Hooker and Arnot's "British Flora."

As successors to Dr. Pagan there are in the field three candidates whose testimonials we have perused. Dr. Paterson we may at once dismiss with the remark that, in his address to the Home Secretary (the chair being in the gift of the Crown), he takes the trouble of spelling that honourable gentleman's name wrongly, and further adopts the somewhat unusual course of referring the Government authorities to certain gentlemen as vouchers for his teaching powers. Dr. Leishman's name is well known to us as a highly meritorious Glasgow Practitioner and teacher, and as the author of an admirable work on the mechanism of parturition. In Dr. Alexander Simpson we have one who, as his uncle Sir J. Y. Simpson's assistant for many years, has had unusual opportunities for studying this branch of our Profession. His long study on the Continent and his consequent knowledge of French and German authorities are also great points in his favour. A good choice will, at the present time, do much for a university which of late years has been rising immensely in popular estimation.

Of the names mentioned as candidates for the Chair of Botany, we can at once select two as those of men skilled both in botany and in the mode of teaching it. These are Professor Dickson, of Dublin, and Dr. R. Beveridge, of Aberdeen. Although not long appointed to the Chair of Botany in Dublin, Professor Dickson has had ample opportunities before that appointment for making himself master of the art of communicating that knowledge with which he himself is so abundantly stored, and his researches on embryology have given him no mean name among botanists. Dr. Beveridge is also a remarkably skilful teacher, having for many years prior to the union of the two Universities of King's College and Marischal College, Aberdeen, conducted the class of botany in the latter institution with much satisfaction to all. Since the time of that union he has been engaged as a teacher of botany in the Aberdeen School of Science. It might be said that botanists are plentiful, but teachers are rare. The teacher, like the poet, is born, not made; and what Glasgow wants most just now is men who will give an upward impulse to the teaching in her schools. We may add, for the envy of the less fortunate teachers of London, that almost all the Scotch chairs are endowed, and that besides this the fees are paid in full to the occupants of the chairs, nothing being deducted for the working expenses.

PURIFICATION OF THE RIVER LIFFEY.

Having on a former occasion in these columns directed attention to the insanitary condition into which the river Liffey has been gradually allowed to fall in that part of its course in which it traverses the city of Dublin from west to east, and in which, with the blind disregard of all sanitary requirements which has been by no means peculiar to Dublin or Ireland, it has for many years past been made the receptacle of the sewage of the population of 300,000 living on its banks, we are glad to observe that remedial measures are at last likely to be adopted. Surgeon-Major Baxter, of the 12th Lancers, having brought to the notice of the military authorities the injurious influences which the noisome emanations from the river at low water have been observed to exert on the health of the regiments quartered in the Royal and Island Bridge Barracks, the matter has been urged upon the attention of the Municipal Council with such good effect that a special meeting of that body has been held, at which it was decided that an address be presented to the Lord Lieutenant, praying him to order the Board of Works to consider and report upon the various plans and estimates which may be submitted for the purification of the river.

FROM ABROAD.— THE PARIS PRESS AND PAPERS AT THE ACADEMY—AN INVITATION TO LYONS—TOBACCO-SMOKING BY BOYS.

The Paris journals, having been put to great inconvenience in reporting the memoirs read at the Academy of Medicine, have come to the resolution not to give more than the title of any memoir the author of which does not furnish them with an analysis of its contents. This has been stigmatised as rather arbitrary, but M. de Ranse, of the *Gazette Médicale*, shows it to be a fair procedure. At present, it seems, the essay is left on the table after the meeting of the Academy in order that the reporters of the journals may make their own analyses. But as there are four or five journals which report, and the MS. is usually written in the villanous handwriting characteristic of Doctors, this is no easy matter. For his own interest, therefore, the author ought to be glad to have the opportunity of insuring exactitude in the expression of his views. Moreover, he owes much more to the press than it does to him. When he reads his communication, it is never listened to, and perhaps he may have to wait a couple of years for a report upon it, if one is ever made at all; but by aid of the journals his views are immediately scattered far and wide; and it is quite certain that if such publicity did not exist no

one would care to read a paper. As for the press it does not always find these communications of benefit to it. Coming from the honest and laborious worker intent on enriching the field of science, they are welcome and of value, but those which are only produced for the sake of the publicity they gain are of little use to any but their authors. Surely these last need not be exempted from the trouble of condensing their lucubrations. The analyses supplied are required for the purposes of exactitude, furnishing a basis for editorial comments and appreciation; but the journals do not pledge themselves to their insertion without further abridgment if they deem it necessary. For our own part, after perusing page after page of the prolonged, tedious, and unprofitable academical discussion on tubercle which the French journals have published during the last few months, we hail any measure which holds out hopes of future curtailment as a boon much to be desired.

We thought that the world had become quite tired of international exhibitions, and that we had seen the last of them for some time to come. It seems, however, that the great capitals having exhausted their attractions, the secondary cities are going to have a turn, and the metropolis of silk is to hold one in 1869. M. Diday proposes that advantage should be taken of this by holding a second Lyons Medical Congress, five years having elapsed since the former. There, he says, is the place for the syphilitic prophylaxis committee to come to with some chance of profit, as there, at the Antiquaille Hospital, to which he is attached, "they will see nature following with docility the almost definitive laws which the Lyonese school has dictated to the most proteiform as also to the most hideous of diseases." There the international committee may do what they never yet have done—make each other's acquaintance, and come to some understanding on the points at issue. At the Hôtel-Dieu, too, besides spacious clinical wards, where every foreign professor may, if he wishes, propound his ideas to a numerous and sympathetic audience, "another attraction awaits visitors—the realisation in flesh and bone (in allusion, we presume, to M. Ollier's researches on osteoplastics) of the grand idea which has rendered our contemporary Lyonese Surgery so illustrious, the results of which are daily blessed by humanity and honoured by academies outvying each other." Here is a strong breath, not to say puff, of the sunny south, which would seem to augur at least a warm reception. Then we shall also have an exhibition of all the ingenious instruments that have been invented by the Lyons Surgeons. Mr. Matthew Arnold may find in such effusions that "provincialism" is not confined to England.

M. Decaisne (*Gaz. des Hôp.* June 30) had for several years met with examples of chloroanæmia among lads employed in manufactures, and which he attributed to their feeble constitutions, the bad hygienic conditions in which they lived, and the unhealthy condition of their occupation. Latterly he has been struck with the great number of boys between the ages of 9 and 15 who smoked tobacco, and he resolved to investigate whether this practice had anything to do with the production of the chloroanæmic condition referred to. In order to prevent his confounding this with the other causes referred to, he collected several cases of smoking lads of the easy class of society residing either in Paris or the country. Of 38 of these lads, he found notable effects to be present in 27, 11 having smoked only since six months, and 16 for more than two years, 8 of the boys being from 9 to 12 years of age, and 19 from 12 to 15. In 22 there were various disorders of the circulation, with *bruit de soûffle*, palpitations, difficult digestion, etc.; in 3 there was intermittent pulse, in 12 the blood exhibited a deficiency of globules, and in 12 there was frequent epistaxis. His general conclusions are:—1. Even a limited employment of tobacco frequently induces in boys a changed condition of the blood, attended with the principal symptoms of chloroanæmia. 2. The ordinary treatment of chloroanemia is generally of no avail while the practice is persisted in. 3. Such boys usually exhibit a degree of hebetude of the intellect, and a more or less marked taste for strong drinks. 4. In those boys who cease smoking, and have not become the subjects of any organic lesion, these disorders of the economy frequently disappear very promptly, almost always without leaving any trace.

PARLIAMENTARY.—ARTISANS' AND LABOURERS' DWELLINGS BILL—SANITARY ACT AMENDMENT BILL—UNIVERSITY ELECTIONS BILL—IRISH WORKHOUSE DIETARIES—VACCINATION (IRELAND) BILL—SALE OF POISONS AND PHARMACY ACT AMENDMENT BILL—SCOTTISH REFORM BILL—EXTENSION OF THE CONTAGIOUS DISEASES ACT—THE PUBLIC HEALTH DEPARTMENT OF THE PRIVY COUNCIL.

On Thursday, July 9, in the House of Lords, the Artisans' and Labourers' Dwellings Bill passed through committee.

In the House of Commons the Sanitary Act Amendment Bill was read a second time.

On Friday the University Elections (Voting Papers) Bill, the purport of which is to prevent an inconsistency in the practice at the elections for the several Universities, in reference to the provisions relating to voting papers, was read a second time.

Lord Chelmsford explained the amendments made by the Select Committee in the Artisans' and Labourers' Dwellings Bill, which he thought substantially improved by them, as did also Lords Portman and Shaftesbury. One of the principal amendments made by the Committee is on the subject of the appointment of the Medical officer. The Committee have resolved that the appointment and removal of the Medical officer, who is to carry out the provisions of the Bill by inspecting and reporting on dwellings, should rest with the Poor-law Board and not with the Metropolitan Board of Works and the local boards.

In the House of Commons Mr. Blake drew atttention to what he considered the insufficiency of Irish workhouse dietaries. He said that the *minimum* of food deemed essential for the support of prisoners was 196 ounces per week, whereas in Irish unions only 170 ounces of food were given to paupers in the week, so that there was a difference of 26 ounces a week in favour of prisoners. Again, in English workhouses paupers received 2½ lb. of meat per week, whilst Irish paupers never got meat at all.

The Earl of Mayo defended the workhouse dietaries of Ireland as being nutritious and suitable. The rate of mortality in Irish workhouses was very low.

The Vaccination (Ireland) Bill was read a second time.

On the motion that the House should go into committee on the Sale of Poisons and Pharmacy Act Amendment Bill,

Mr. Lowe hoped his right hon. friend who had charge of it would not proceed with the Bill. He had a great deal to say against it, and if the right hon. gentleman meant to persevere with it, he hoped he would bring it on at a more convenient hour.

Mr. Headlam said, if the right hon. gentleman chose to take on himself the responsibility of rejecting the Bill, he might do so, but he felt bound to go on with it.

The House went into committee.

On the first clause,

Mr. Lowe proposed an amendment to make registration under the Bill, which was now optional, compulsory.

Mr. Headlam thought the amendment would amount to a defeat of the Bill.

The amendment was agreed to.

Mr. Lowe then moved the omission of the remainder of the clause.

Mr. Headlam opposed the amendment, which was negatived without a division.

Mr. Lowe moved the omission of words so as to leave it with the Privy Council, and not with the Pharmaceutical Society, to decide on certain matters of detail in carrying out the provisions of the Act.

The Committee divided, with the following result:—

For the amendment	25
Against it	49
Majority	24

The clause was agreed to.

On Clause 2,

Mr. Lowe moved the omission of a part of the clause with a view to the insertion of the following words:—

"It shall be lawful for the Privy Council, from time to time, as it may see fit, to order that other articles (being drugs or compounds of drugs which may be dangerous to life) shall be poisons within the meaning of this Act, and every such Order of the Privy Council shall be published."

Mr. Headlam trusted that the amendment would not be pressed, as it was virtually the same as that which had been just decided.

After a short discussion, the amendment was negatived without a division.

Mr. Paull moved that the Chairman report progress, it being now about five minutes to two, but the motion was rejected without a division.

The clause was then agreed to.

On Clause 3,

Colonel Fane moved the adjournment of the debate, it being now 2 o'clock; and

The Committee divided, with the following result:—

Ayes	33
Noes	39
Majority against reporting progress . .	6

Sundry verbal amendments were then made in the clause, but its adoption was objected to by several hon. members.

Sir H. Edwards, after remarking that the Bill was evidently one with respect to which there was a great conflict of opinion, said it was hopeless to attempt to proceed with the measure at that hour (ten minutes past two). Indeed, for some time past one-third of the members of the Committee had been fast asleep—(laughter)—and he therefore moved that the Chairman report progress.

Mr. Davenport-Bromley had detected the hon. and gallant gentleman himself in a profound slumber. (Laughter.)

Sir H. Edwards said his hon. friend was mistaken.

Clause 3 was agreed to, and the Chairman was ordered to report progress.

On Monday, July 13, in the House of Lords, the Royal Assent was given, by commission, to the Representation of the People (Scotland) Bill.

In the Commons, in Committee of Supply, the House voted £64,824 for naval Medical establishments at home and abroad.

On the vote of £78,614 for medicines, etc.,

Mr. Childers suggested that during the recess a Commission, partly composed of Medical men, should be appointed, with a view to the extension of the operation of the Contagious Diseases Act, which thus far had been found to work most satisfactorily.

Mr. Hardy said it was the intention of the Government to appoint a Commission to inquire into the public health, and he thought this subject to which his hon. friend had called attention might very well form part of the inquiry.

The vote was then agreed to.

The Vaccination (Ireland) Bill passed through Committee.

On Tuesday, in the House of Lords, the Poor-law Medical Inspectors (Ireland) Bill was read a second time. The University Elections Voting Papers Bill passed through Committee.

In the House of Commons, Sir J. C. Jervoise moved that it was expedient that the departments of Public Health, Cattle Plague, and Quarantine should cease to exist as establishments, due regard being had to all personal interests and to all individual claims.

The Chancellor of the Exchequer said that for some time the Treasury had been considering the question whether there might not be a further reduction in the veterinary department of the Privy Council. He believed that if the Bill for regulating the Metropolitan Cattle-market should be carried such a reduction could be made.

The Poor Relief Bill was considered in Committee and progress reported.

On Wednesday, July 15, the House went into committee on the Sale of Poisons and Pharmacy Act Amendment Bill.

Clauses 4 and 5 were omitted, and the following clauses to clause 15 inclusive were agreed to, with amendments.

In Clause 16,

Mr. Lowe moved, after the word "dealing," in line 6, to leave out "nor with the retailing of arsenic, oxalic acid, cyanide of potassium, or corrosive sublimate for use in manufactures."

After some conversation the Committee divided, when the numbers were:—

Ayes	30
Noes	57
Majority for Mr. Lowe's amendment .	27

Lord R. Montagu proposed at the end of the clause to add, "provided always that registration under this Act shall not entitle any person so registered to practise Medicine or Surgery, or any branch of Medicine or Surgery."

The proviso was agreed to, and the clause as amended ordered to stand part of the Bill.

On Clause 17,

Lord Elcho proposed that it should be struck out.

Mr. Lowe proposed that the clause should be amended. There were two amendments, in fact, before the Committee. The noble lord proposed to substitute a new clause, and he (Mr. Lowe) would amend the present clause. The Committee would have to decide which was the preferable alternative. He admitted that the clause proposed by the noble lord was a considerable improvement on the present state of things; but there were a good many objections to it. The noble lord proposed that poisons should be divided into two classes, but both were to remain in one schedule, and to be distinguished only by asterisks. Now, that was a most inconvenient way of dealing with the subject. The noble lord proposed:—"It shall be unlawful to sell any poison whatsoever to a person unknown to the seller, unless he gives evidence that he requires it for a legitimate purpose, and is aware of the uses, danger, and proper dose, as the case may be, of such poison." What chance was there that these requirements, if of any value, would be complied with by the little shopkeepers throughout the country? It was to be unlawful to sell poison to any person unknown to the seller unless he gave evidence that he required it for a legitimate purpose, and was aware of the uses, danger, and proper dose, as the case might be, of such poison. How was the "evidence" that the person "required it for a legitimate purpose" to be given? He might want it "for a legitimate purpose," but he was not to have it unless he was well read up in public and judicial Medicine. And, then, who was to be the judge of all this? Perhaps some old woman. (A laugh.) This seemed to him a very inadequate way of dealing with the subject. What he proposed was this:—They had already the precedent of the Arsenic Act, which, although it dealt with only one poison, was a most salutary Act, and it seemed to him that the proper course would be to place all ordinary poisons under the same restriction. With this view he proposed in clause 17, line 18, before "It," to insert "Of poisons which are not articles in the British Pharmacopœia, none shall be sold except under such conditions as are prescribed in regard of arsenic by sections first and second of the Act 14 and 15 Victoria, chapter 13, entitled 'An Act to regulate the Sale of Arsenic,' which sections for this purpose shall be read as if the word 'poison' were throughout substituted in them for the word 'arsenic;' and of poisons which are articles in the said Pharmacopœia, none shall be sold otherwise than under the same conditions as aforesaid, or else under the written order of a legally qualified Medical Practitioner, unless it be prepared as an ointment or liniment or otherwise for external use, or, if for internal use, be in quantity not exceeding one ordinary medicinal dose of the article; and"—and line 22, after "any" leave out "seller of any poison not so distinctly labelled," and insert "person selling poison otherwise than as herein provided."

Lord Elcho objected to the proposed amendment.

Lord R. Montagu wished to know how a chemist was to ascertain the truth of a customer's assertion that he required the poison for destroying rats.

Mr. M. Chambers said the clause would compel the homœopathist to put the word "poison" upon all his bottles.

Mr. Lowe said the answer to the hon. and learned member's observation was that a whole bottle of homœopathic medicine would not amount to a dangerous dose. The difference between his clause and that of his noble friend was that by his clause the buyer of poison must be introduced to the seller, whereas by his noble friend's clause the buyer might be a person unknown to the seller.

Lord Elcho said that his clause required that the buyer

should satisfy the seller that he required the poison for a legitimate purpose.

Mr. Lowe said that would leave the decision to the conscience of the seller, who had an interest in selling.

The amendment was negatived without a division.

The clause as amended was agreed to.

On Clause 18,

Mr. T. Cave remarked that chemists and druggists ought to be excused from the jury list.

The clause was omitted.

The remaining clauses in the Bill were agreed to as amended.

Lord Elcho moved a new clause in place of Clause 4, by which any person who at the time of the passing of the Act shall be of full age, and shall produce to the Registrar on or before the 31st day of December, 1868, certificates according to Schedule E, that he had been actually engaged and employed in the dispensing and compounding of prescriptions as an assistant to a pharmaceutical chemist, or to a chemist and druggist, shall, on passing such a modified examination as the Council of the Pharmaceutical Society, with the consent of the Privy Council, may declare to be sufficient evidence of his skill and competency to conduct the business of a chemist and druggist, be registered as a chemist and druggist under this Act.

Mr. Lowe objected to the clause.

Lord Elcho was willing to modify his clause to the extent suggested by the hon. member for Barnstaple—namely, that the assistants must have been actually engaged in the dispensing of medicines for four years.

Lord R. Montagu assented to the clause on the understanding that the assistants affected by it should have been engaged in the dispensing of medicines for four years, and should be registered assistants under the Pharmacy Act.

Mr. Alderman Lusk suggested that the term should be reduced to three years.

Lord Elcho was willing to adopt the suggestion of the hon. member, and to reduce the period of service required to three years.

The clause as amended was added to the Bill.

Mr. Lowe proposed a new clause in place of Clause 5, under which chemists and druggists should be entitled to be registered under the Act without paying any fee.

The clause was added to the Bill.

Lord Elcho moved a new clause in place of clause 17, by which certain poisons were not permitted to be sold to persons unknown.

This clause, after being amended on the motions of Mr. Lowe and Mr. Bruce, was agreed to.

Mr. Lowe moved a clause for extending the provisions of the Act for preventing the adulterations of food or drink to the sale of medicines, and after a short discussion it was agreed to.

Lord Elcho proposed that the schedule be divided into two parts, in order that a distinction should be drawn between poisons used for household purposes and those of a more subtle character.

After a brief conversation it was resolved to postpone the matter until the bringing up of the report; the schedule, with some verbal amendments, was agreed to, the Bill passed through Committee, and was ordered to be reported on Friday.

The House having resumed, the Bill as amended was ordered to be printed.

MR. LE GROS CLARK'S FOURTH LECTURE

AT THE

ROYAL COLLEGE OF SURGEONS,

ON THE PRINCIPLES OF SURGICAL DIAGNOSIS, ESPECIALLY IN REFERENCE TO SHOCK AND VISCERAL LESIONS.

JUNE 8, 1868.

LESIONS of the encephalic nerve-centre formed the subject of Mr. Clark's fourth lecture. The indications of a head injury are both objective and subjective—the signs of fracture and the symptoms of functional derangement. The occurrence of one of these does not, however, necessarily involve the existence of the other. Fracture is itself of little importance apart from brain symptoms, and where these are absent interference with a fracture is rarely justified or required. Sometimes, however, brain symptoms may be absent from a fracture with considerable depression, either from the absence of compression or from the duality of the cerebral hemispheres. A case was cited in which a circular saw had cloven a man's skull parallel to the longitudinal sinus from the forehead to the occiput, ploughing up and scattering portions of the brain, some of which escaped from the nostril; yet this man recovered consciousness, lived for ten days partially hemiplegic, and then died suddenly from hæmorrhage into the brain. In cases of depressed fracture, then, with compression, trephining may be resorted to. A penetrating wound, even though its nature suggests the probable extensive fracturing of the inner table, scarcely justifies an operation if symptoms of compression are absent.

But though the use of the trephine is fraught with danger, no doubt it is proper to use it to afford a chance of relief in intracranial suppuration. The unsuccessful result of these operations is probably due to mischief from violence to the brain substance. For this reason, the operation performed for disease would have a greater chance of success than when performed for injury. In a case under the lecturer's care, in which trephining was performed to relieve impending coma in a case of necrosis of the frontal bone causing intracranial suppuration, the patient did well, though a portion of the dura mater sloughed away.

In children there exists some mutual accommodating property between the skull and the brain, admitting of considerable depression without symptoms of compression. A child, when six months old, fell out of a person's arms to the ground, the left side of his head coming in contact with a stone, which produced a depression, oval in form, about three-quarters of an inch deep in the centre, but presenting no sharp edge. How long it lasted is uncertain, but it gradually rose to its former level, and, ten years after, the only indication remaining was that that side of the head was a little flatter than the opposite one. Memory and intellect were unaffected.

In fracture of the base the objective signs are indirect and equivocal. Of these the pharyngeal extravasation is the most reliable, but is infrequent. Ecchymosis and abscess may occur about the mastoid region without necessarily indicating fracture. Ecchymosis of the eyelids is, under certain circumstances, pathognomonic of fracture of the base, when the ecchymosis does not make its appearance immediately after the injury, and is first apparent on the ocular conjunctiva, and subsequently spreads to the eyelids. Persistent bleeding or serous discharge from the nose is a suspicious circumstance. Much importance has been attached to the oozing of fluid from one or both ears as indicative of fracture across the petrous bone. A little serum or sanious fluid may be derived from the labyrinth, but a large quantity of serous fluid must come from the subarachnoid space. In the presence of other signs, blood may strongly corroborate the existence of fracture of the petrous bone, and this is especially the case if the bleeding be arterial and recurrent.

Paralysis of the facial and auditory nerves is significant of fracture of the base only in conjunction with other signs, since it may be due to the pressure of hæmorrhage, or may supervene slowly some days after an injury, and is then caused by inflammation. The two latter conditions, it is to be remembered, do not exclude fracture, though they may exist independently of it. Actual laceration of the seventh nerve is exceedingly rare. Probably persistent loss of function is more frequently due to displacement of bone and consequent pressure on the nerve.

The doctrine of fracture by *contre-coup*—*i.e.*, fracture of a part remote from that struck—has been generally taught without, perhaps, any satisfactory proof of its actual occurrence, or a sufficient consideration of the mechanical force by which it is supposed to be produced. It is questionable whether the term *contre-coup* is admissible in physics—certainly its conventional meaning is a very loose one. It is employed to describe the mode in which fracture of the base is produced by a fall on the head, yet in this case the application of the force is as direct as if part of the skull were driven in with a sledge-hammer; the plunge of the body is suddenly arrested by the vertex coming in contact with the ground, and the superincumbent weight and momentum are concentrated upon the condyles of the occipital bone, and thus the central compartment of the base of the skull is broken across. This is surely not *contre-coup*, or, if called so, the word should be used in no other sense. But it has been affirmed that a blow on one side will cause fracture on the other. This is conceivable if forced against an unyielding surface, but that

fracture may result without that condition is opposite to sound reasoning applied on mechanical principles. It is not conceivable that in the skin-clad skull, made up of many segments varying in density, vibrations should be transmitted with sufficient regularity to permit of their concentration into a focus on the opposite side, as some have said; nor, again, that fracture can occur as a consequence of the transmission of vibrations through the soft and inelastic brain. In all the cases that have fallen under Mr. Clark's notice, fracture not immediately connected with the seat of injury, in all cases in which its mode of production was known, could be explained by the relative strength of the different bones subjected to pressure—an explanation which agrees also with the results of experiments on the dead body. Blood may be extravasated into or on the surface of the brain, at a distance from the part where the blow was received; but this is, no doubt, owing to the vibrations transmitted across and through the substance of the brain being suddenly arrested by the rigid skull, the adjacent part of the brain is subjected to sudden pressure, and the vessels give way. This is the cause, also, of the numerous small extravasations found within the brain in a case of fatal concussion. Rupture of the meningeal artery is probably caused by the vibrations of the skull, for its texture is thin, and easily yields to pressure.

The occurrence of recovery after fracture of the base, though it rarely admits of demonstration, is probably by no means infrequent. The most common simple fracture across the centre of the base is but little liable to disturbance, and there is not much obstacle to the union of the broken surfaces. A specimen was exhibited of a skull which showed unequivocal traces of extensive fracture of the base which had completely united.

WORKHOUSES.

The Poor-law Board have just issued memoranda specifying the "Points to be attended to in the Construction of Workhouses," and "Points to be attended to as regards Fittings and Medical Appliances." The former are more particularly intended for the guidance of architects when getting out plans and specifications for the erection of new workhouses, or the alteration of existing buildings to suit modern ideas on pauper comfort. The point upon which principal stress is laid in the memorandum on construction is "classification." The Board state that—

"Accommodation, including separate dormitories, day-rooms, and yards, should be provided for the following classes:—The aged of each sex; the able-bodied do.; the children do.; the sick do.

"Provision should also be made, so far as practicable, for the subdivision of the able-bodied women into two or three classes, with reference to moral character or behaviour, the previous habits of the inmates, or such other grounds as may seem expedient.

"The sick should occupy a separate building, and in the larger workhouses be divided into the following classes:—Ordinary sick of both sexes; lying-in women, with a separate labour-room adjoining the lying-in ward; itch cases of both sexes; dirty and offensive cases of both sexes; venereal cases of both sexes; fever and small-pox cases of both sexes; children.

"The accommodation for imbeciles, if they are retained in the workhouse, should be in general accordance with the regulations of the Commissioners in Lunacy.

"A detached building should be provided, with separate rooms, for fever and small-pox cases of both sexes.

"The infectious wards should not be inconveniently distant from the paid nurse's apartments, and there should be bells communicating from one to the other.

"A detached wash-house should, under ordinary circumstances, be provided for washing infected linen, etc."

The next point is "space," which is thus treated:—

"The length of wards should be calculated according to the following minimum wall space for each bed:—For dormitories only, 4 feet; for ordinary sick wards, 6 feet; for lying-in, fever, and small-pox wards, 7 to 8 feet.

"Day rooms for the sick should afford accommodation for at least one-half of those who occupy the day and night rooms, and those for the inmates in health should be large enough to receive nearly the whole number of their respective classes. 15 to 20 feet as a minimum floor space should be allowed to each person in the day rooms. Day rooms, both for children and adults, should be upon the ground floor, unless in the case of aged inmates another arrangement be deemed desirable. On the other hand, it may sometimes be desirable to provide sleeping accommodation on the ground floor for inmates who are too infirm to go up and down stairs."

The memorandum also contains useful suggestions as to the distribution of water, hot and cold; ventilation; drainage and the disposal of sewage; water supply; receiving wards and vagrant wards; disinfection, etc.

The second memorandum will be equally useful, whether a new building be erected or an old sick ward improved. The points which it enforces are so worthy the attention of governors and Medical officers of workhouses, that we give it in full:—

"Points to be attended to as regards Fittings and Medical Appliances.

"*A. For the ordinary Dormitories.*—The bedsteads are to be 2 feet 6 inches wide, and made of iron with flexible laths. A piece of cocoa-fibre matting or other material, or a mattress, is to be placed between the bedsteads and the bed to protect the tick from rust. Beds of cocoa-fibre, cut straw, chaff, or flock are to be kept full, and in good condition, such beds to be of the full length of the bedstead. Two sheets, a sufficient number of blankets, according to the time of year, a counterpane, and pillow, are to be supplied to each bed. A pottery urinal to each bed. Night-stools, unless where (as is the better course) a water-closet is easily accessible. Chairs to be placed between the beds upon which to place the inmates' clothes. Bells. Gas where practicable.

"*B. Lavatories and Baths.*—Lavatories with fixed metal or pottery basins with plug, tap, and waste-pipe ending in a properly trapped drain. Roller towels on rollers should be supplied at least twice a week, and in the proportion of not less than one to six inmates. The towels should be dried after the morning's use, and the lavatory kept dry and clean. The baths should be 5 feet 6 inches long, and not less than 2 feet wide at the top.

"*C. Day Rooms.*—An open fireplace. Benches; those for the aged and infirm should have backs, and be of sufficient width for reasonable comfort. A proportion of chairs for the aged and infirm. Cupboards or open shelves (which are better) for the utensils. Tables. Gas, where practicable. Combs and hair-brushes for all classes.

D. Dining-room.—Benches. Tables. Knife, fork, and spoon for each inmate. Saltcellars in sufficient numbers. Plates, mugs, and basins: those made of pottery are to be preferred. Correct balances. Gas where practicable. An open fireplace if possible.

"*E. Sick Wards.*—The fittings should be such as are usually provided in the wards of general Hospitals, and amongst them the following:—The bedsteads should be of iron, with iron laths, of modern make and in good order. The length should be 6 feet 2 inches, and the width 2 feet 8 inches, except for the bedridden, the lying-in cases, and women with children, for whom the width should be 3 to 4 feet. A palliasse of straw or other material, or a layer of cocoa-fibre matting, to lie upon the laths. The beds, whether of feathers, carded flock, cut straw or chaff, to be properly made, kept in good order, and sufficiently full. In some unions, however, hair or wool mattresses are found to be better. Two sheets, two or three blankets, and a cheerful-looking rug. One half the number of bedsteads to have a raising rack. Separate bed rests. Spittoons. A pottery urinal to each bed and special pottery urinary bottles for the use of bed-ridden men. Medicine glasses and feeding bottles. Stone or metallic feet and chest warmers. Air or water beds. Mackintosh sheeting to be used to all lying-in beds. The same with funnels for dirty cases. Square and round mackintosh cushions with depression in the centre to prevent bedsores. Mackintosh urinals to be worn by men who pass their urine involuntarily. A locker with shelves for the use of two inmates, or a bed-table similar to that recommended by Dr. Acland, of Oxford, an example of which may be seen at the office of the Poor-law Board. Arm and other chairs for two-thirds of the number of sick. Short benches with backs and (for special cases) cushions. Rocking-chairs for the lying-in wards. Little armchairs and rocking-chairs for children's sick wards. Tables. Pottery washhand basins for those who are washed in bed. Fixed lavatory basins for others, or washstands with fittings. A sufficient number of roller towels, and one small towel to each person who is usually washed in bed. A proper supply of both combs and hair-brushes, to be kept clean and in good order, in each ward. Sealed night-stools. Gas, where prac-

ticable, to remain lit during the night. Bells to the nurse's room. Jackets with long sleeves, for lunatics. It may be desirable that an inventory of the furniture, fittings, and Medical appliances supplied should be fixed in some conspicuous place in each ward."

REVIEWS.

On Diseases of the Chest. By Dr. Waters. London: John Churchill and Sons. Liverpool: Holden. 1868. Pp. 418. Post 8vo.

This is not a systematic treatise on thoracic diseases, but rather a collection of clinical observations and lectures, introduced and illustrated by the author's views on the physiological and pathological anatomy of the lungs and heart. On some points these views will be found to differ from those of many writers, and have been already submitted to public criticism in Dr. Waters's Fothergillian prize essay, in his monograph on emphysema, and elsewhere. We will take notice of them here only so far as they may affect our conceptions of disease in the living body and its treatment.

The first instance in which we come across a modern interference of minute anatomy with pathology is in the localisation of the morbid process of pneumonia. Systematic writers, if they do not adopt, at all events mention without repudiation, the doctrine that it is seated in the "interstitial tissue," "parenchyma," "intercellular spaces," "areolar tissue," or whatever other name may be applied to a supposed substance in which the air-cells are imbedded. Dr. Waters brings to bear upon Medicine the observation, made by many physiologists, that the true pulmonary tissue consists of the walls of the air-cells themselves, and that the interstitial tissue between the air-cells cannot be the seat of pneumonia, because it does not exist. Not quite such a strong reason, but still a general deduction from his injections and microscopic examination, induces Dr. Waters to challenge also M. Grisolle's assignment of *pneumonia* to the bronchial arteries, except as regards the bronchitis which may or may not accompany it. The causation of the morbid process by these vessels would imply such a vast sudden development of new capillaries about the air-sacs, that one is willing to adopt a theory less exigent of unproved data. The pulmonary plexus, forming the bulk of the walls of the air-cells, remains; and the localisation of the disease here is certainly consistent not only with what our microscopes show us of its ravages after death, but with that clinical observation which, as Dr. Waters points out, connects pneumonia, more strikingly than any other inflammation, with blood diseases. We should expect from what we witness during life that its seat was a tissue which is a swelling mass of venous blood, as the pulmonary plexus may be described, rather than the spare, rare, and contracted bronchial nutrients.

Again, we find the author's special views on the anatomy of the healthy lung affecting his pathology in the sketch he gives of the early stage of pneumonia. It is well known that in his diagrammatic projection (to use a geographical term) of the air-cells in section he makes more account than most anatomists do of the sharp-edged border formed by the reflected pulmonary membrane at each circular orifice of communication between the bronchial passages and the air-cells. To the vibrations caused in the aerial current by this edge he attributes the inspiratory murmurs, strong in youth, when the structure is sharply marked; weak in age, when it is blunted and worn smooth. Well, the harsher respiration which some acute observers have been lucky enough to detect in the prodrome of pneumonia, Dr. Waters assigns to a tumefaction, or morbid erection into a puerile condition, of the vibratory border.

Several chapters are given up by Dr. Waters to *emphysema* of the lungs, in which he adopts, rightly, we think, the doctrine that the most important feature in the disease is the atrophic diathesis which leads to the local lesion—most important, because leading to the selection of the *processus integer* of the treatment in all cases, irrespective of the peculiar stage of tissue change which may be witnessed by the microscope post mortem under various circumstances. He is right, too, we think, in holding that the immediate determining force which ruptures the pulmonary membrane is more that of expiration than inspiration. But he does not, among the arguments by which he supports this opinion, cite the two strongest of all—one, namely, derived from the observation of Mr. Hutchinson, which shows that of the two muscular efforts expiration is much the more powerful; (a) and another from a due consideration of the whole pulmonary motion, the lungs not being inflated by air being blown into them, but by the expansion of their walls drawing air into them—in fact, by the atmospheric pressure on the interior being lessened through the action of the diaphragm and other respiratory muscles. If the leathern sides of an old-fashioned pair of bellows were to get rotten, they would rupture during the blowing of the fire, not during the drawing in of the air.

Œdema of the lungs has been very commonly described in systematic works as an infiltration with serum of the interstitial textures. Of course, Dr. Waters's challenge to their existence modifies, for that reason, his view of the anatomy of the condition. According to him, the seat of the fluid is the air-sacs. This accounts for the fine crepitation heard, undistinguishable from that of pneumonia.

Pulmonary apoplexy also receives a somewhat different interpretation, in consequence of the author's already-mentioned views of the absence of areolar intervesicular tissue (into which the blood has been sometimes supposed to be effused), and of the peculiar distribution to the air-cells of the pulmonary plexus (from which vessels, rather than from the bronchial arteries, Dr. Waters traces the hæmorrhage in the vast majority of cases).

Having acquitted the bronchial arteries of what he considers false accusations in the cases of pneumonia and hæmorrhage, the author holds it but fair to add a clinical lecture, in which he lays to their charge the sin of *pleurisy*. Though it is true that in the human subject the pleura does not usually become injected through the bronchial arteries, yet it is so in many animals, as a rule.

In a lecture on the *sounds of the heart*, the author gives in his adhesion to those who consider both of them, not, as described by Dr. Markham, "as the resultant of many acts," but the product of one act—the tension of the valves, the auriculo-ventricular at the time of the first, the vascular at the time of the second. To support this, he analyses very well the points made by the most recent observers, and adds the testimony of personal repetition of their experiments in some instances. On this ground he teaches, without hesitation, the usual drill by which we lead our pupils to flesh their maiden stethoscopes, in dissecting morbid murmurs, and assigning them to special valves. He does not think it worth while to reckon the modifications possibly made by the condition of the muscle, the force of the impulse, etc.

The use of fixing upon the particular valves diseased, Dr. Waters properly points out, is to aid in our prognosis. But the data of that prognostication, he goes on to show, are sadly imperfect, and it is in a great measure with a view of encouraging the collection of statistics bearing on this subject that he dwells so long upon it. For instance, it would be most important to many a cardiac patient to know whether aortic or mitral lesion, and whether obstruction or regurgitation, imports the more risk of sudden death. Dr. Stokes's opinion fixes on mitral, Dr. Walshe on aortic regurgitation as the most dangerous. Dr. Waters's own cases would lead him to rank them on an equality, while theoretical considerations would lead him to agree with Dr. Stokes. The question seems eminently suited for statistical investigation, as also the further question whether lesion of both valves together increases this special risk of fatal syncope.

Another point important to be made out, often for ordinary, still oftener for insurance purposes, is the general probability of life in valvular disease. Dr. Waters believes that the balance is in favour of aortic lesion. We venture to differ, on the ground that both anatomical and statistical considerations lead to the opinion of aortic lesions having a bad pre-eminence above mitral in the causation of dilatation. The further on in the journey of the circulation the impediment is, the more area of the circulating engine is exposed to injury. A stoppage at the mouth of a river damages a greater mileage of banks than one in midcourse. And this theoretical argument is confirmed by statistics, which we borrow from a volume published a few years ago:—

"Comparing the different valvular lesions of the left heart, with regard to the injury they inflict, and the consequent proportionate goodness or badness of the prognosis to be formed, I find that the worst cases—that is, the most liable to have serious consequences—are those in which both the aortic

(a) If a man can draw the air in through his nose with sufficient force to raise a column of mercury (say) two inches, he can, by expelling it steadily, raise the level two and a half inches, and so on in proportion.—Hutchinson, *Med: Chir. Trans.* vol. xxix.

and mitral valves are simultaneously imperfect; the next worst are those in which the aortic have suffered; and the most favourable are those where the mitral alone are inefficient.

"Thus I find that in 115 cases recorded in the 'post-mortem book' at St. George's Hospital from 1840 to 1850, where disease of one set of valves was accompanied by alteration in the cardiac walls, the aortic valves alone were diseased in 64, the mitral valves alone in 51. And in the former case also the alteration had assumed a more marked character; for in cases where the aortic valves alone were diseased, the size of the cavities was disproportionally large in comparison with the enlarged walls in 36; whereas, when the mitral valves alone were diseased, the disproportionate enlargement occurred in only 18.

"Now, this diseased state of the heart's walls is so very much the most important, and so very much the most frequent of the evil consequences of disorganised valves, that, practically speaking, it may be taken to represent the whole of those consequences. All our calculations of prognosis in cases of valvular injury need have reference to it alone."(b)

As might have been expected of a physiologist, and a physiologist who looks upon his science not only as an ornament, but as a guide, Dr. Waters is, in his practice, eminently restorative. He objects to mercury in inflammations of the serous membranes; he makes full use of the action of temperature (*e.g.*, poultices and "blanketing" in rheumatic pericarditis); he enjoins iron and oil in emphysema of the lungs; he directs attention to the digestive rather than to the pulmonary viscera in phthisis, and to the true objects to be aimed at in the selection of a suitable climate; in the treatment of apnœa, both in the drowned and still-born, he clearly sees that the main point is to replace by artificial means the special function wanted; and that as the circumstances of defective vitality are different, so a different treatment is applicable to each case.

In thoracic aneurism, undeterred by that frequent failure which inevitably attends all our efforts, he perseveres in advising unexciting, but nutritious diet, iron, and complete rest, because such treatment affords the only rational hope of renewing the arterial tissue. We cannot but think that one very powerful cause of the want of success is the unfavourable social condition of these Hospital patients whose histories we publish. This is especially the case with an instance published by Dr. Waters in the *British Medical Journal* for December, 1865, as a provisional cure. His subsequent death is here recorded.

In a chapter on stimulants, the author gives in his adhesion to the modern doctrine of alcohol being a means of restraining the abnormally excited tissue changes in inflammation.

GENERAL CORRESPONDENCE.

THE MEDICAL COUNCIL AND THE PHARMACY BILL.

LETTER FROM DR. SEPTIMUS GIBBON.

[To the Editor of the Medical Times and Gazette.]

SIR,—The General Medical Council has proved to its own satisfaction that it neither taxes, governs, nor represents the Profession, but that its sole function is to supervise the examinations and register the diplomas of the licensing bodies—a function which I think would be better discharged by the Medical Department of the Privy Council at a cost of 5s., instead of £5, to each registered Practitioner. An ounce of fact, however, outweighs a ton of theory, and the proceedings (acts, not words) of the Council in reference to the above Bill unfortunately contradict this elaborately and eloquently defended theory of the Council's function. I say unfortunately not so much for the Council's consistency as for the disastrous effects their acts in this particular instance are likely to have upon the public, the Profession, and, as I believe, upon the pharmaceutical trade itself.

Sir Dominic Corrigan no doubt is right in endeavouring to break up the apothecaries' monopoly which is said to exist in Ireland, but it is to be regretted that he has not been more circumspect and more happy as to the means he has chosen to effect his purpose. By the great energy and Parliamentary influence he has brought to assist in carrying this Bill, he and his associates on the Medical Council will certainly have diluted, not destroyed, the drug monopoly in Ireland, but will have established a formidable one in England. Personally, I am glad the General Medical Council have refrained from seeking to exercise any supervision over the examinations, etc., of chemists and druggists, as it will tend to discourage their entering further upon Medical practice than they do at present.

I will not occupy your space in discussing the amendments the Council have suggested; in practice I believe they will be found inoperative, mere *bruta fulmina*. Surely there were privileged titles enough conferred by the Bill for the exclusive use of the trade—viz., "chemist and druggist," "pharmaceutical and compounding chemist," "pharmaceutist," "licensed dealer in poisons"—without the Council adding "pharmacist." (*Quære:* Is not "pharmacopolist" the more correct synonym for the old and comprehensive title "apothecary?")

Chemists and druggists ought to know their own interests better than other people, but I cannot believe this Bill will benefit them. It is sure to cause considerable disturbance in the trade. It will, I believe, sever the wholesale from the retail trade, and it will divide the retailers into "poison dealers" and vendors of "simples," or "herbalists," and "art chemists." Now, as caprice and fashion largely influence the consumption of drugs, the question arises whether the Act will enable the "poison dealers" to do a better trade than the "innocuous medicine vendors." I trow not.

Their aspiration of ultimately depriving the registered Medical Practitioner of his right to dispense his own medicine—in other words, to deprive a man from working with his own tools—seems to me quite visionary. However, it is done by some paternal governments on the Continent. Although I quite think the Pharmaceutical Society ought to be recognised, assisted, and subsidised, if need be, by Government, I fear they have done a foolish thing in asking for a monopoly for retailing poison and compulsory powers for giving a qualification. Other art societies, such as the Institution of Civil Engineers, British Architects, Society of Arts, etc., manage to flourish and advance their respective arts without any legal constraint and compulsion, which, for some reason or other, do not seem to answer in this free country.

In conclusion, I beg my pharmaceutical friends to believe that it is not from any wish to depress their prosperity and social status, but the very reverse, that I advise them in future to pray the Government and Parliament to leave them alone. I enclose you copies of letters I have addressed to the Home Secretary and Vice-President of the Council on this subject. I am, &c. SEPTIMUS GIBBON.

Parliamentary Committee of the Brit. Med. Assoc.,
39, Oxford-terrace, Hyde-park, W., July 13.

(Copy.)

The Right Hon. Gathorne Hardy, M.P., etc.

Sir,—You kindly promised on Thursday evening that, as you had not time to receive a deputation from this Committee, you would consider any suggestions we had to make in reference to the "Sale of Poisons and the Pharmacy Act Amendment Bill." As to pharmacy in England, we object to the measure—

1. Because no necessity for legislation has been shown to exist. The pharmacy of this country, thanks to the stimulus of competition, is superior and making more rapid progress than that of most other countries.

2. Because the monopoly proposed to be given to the members of one Society will not increase the care and intelligence with which the art is at present practised. In Ireland, where the Apothecaries' Company has a monopoly, the case is different, and, strange to say, the General Medical Council, led by Sir Dominic Corrigan, support this Bill with a view to get it extended to Ireland. In other words, Sir Dominic would saddle England with a monopoly in the drug trade on the chance of thereby mitigating the effects of that which unfortunately exists in Ireland.

As to the sale of poisons, we object to the provisions of the Bill—

1. Because entrusting the sale to privileged traders will, *ipso facto*, encourage carelessness.

2. Because the publication in the *Gazettes* and elsewhere of the names of poisons and the shops where they are to be purchased does not seem to us a wise and practical way of discouraging criminal and suicidal poisoning. We believe the publicity given to cases and trials of poisoning in the news-

(b) "Chambers's Lectures, chiefly Clinical," lecture xxiii. page 302, fourth edition.

papers is frequently an exciting cause of similar crimes. It is for this reason that the judges often request Medical witnesses not to allude by name to active poisons.

Notwithstanding the stringency of any Privy Council regulations, the licensing of shops to sell poisons will encourage crime, just in the same way as the licensing of houses for prostitution on the Continent is said to encourage immorality.

If any embargo is to be put upon poisons, had it not better be placed upon the substance itself, as is done with "arsenic," than by delegating the sale as a monopoly to certain traders? The avowed object of the promoters of the Bill is to improve the education of chemists and druggists by granting a monopoly of the trade to such persons as pass the educational test of the Pharmaceutical Society. We admit the importance of encouraging technical education, and for that very reason should regret to see, as it were, its mainspring—competition—removed or lessened in this important art. The promoters of the Bill complain that little country grocers and drapers are allowed to sell dangerous drugs and to compound medicines. If the wants of small villages are to be supplied, such "general" shops must be tolerated, and, according to my experience, the danger from them to the public health and safety is very small—certainly less than that which accrues from the medicine-chests that are kept in the great houses or the parsonage of the village, and most assuredly less than that which arises from the poisonous herbs that grow in every field and hedgerow.

Another object is, I am told, eventually to separate pharmacy entirely from the practice of Medicine, but this is scarcely practicable in England, seeing that pharmacy is an essential though subordinate part of the healing art. I need not trouble you with the objections we entertain to the details of the Bill, which, on Sir James Fergusson's suggestion, I have sent to the Vice-President of the Council. But I trust I have said enough against its principle to claim further consideration before it is placed on the statute book.

In conclusion, I would assure you that the opposition of this Committee is not dictated by any feeling of hostility to, jealousy of, or want of respect for, the Pharmaceutical Society, which, we thankfully admit, has done a great deal to improve pharmacy. If we desire it to remain a flourishing scientific and art society, instead of becoming an inferior Medical corporation or trades-union society controlled by Government, it is because we wish it to retain its freedom, its influence, and its great usefulness. I beg to forward herewith a copy of the *Medical Times and Gazette*, which gives the views of the General Medical Council, and which also contains a copy of a petition we have presented against the Bill. Thanking you for your kind and courteous attention,

I am, Sir, with much respect,
Your most obedient servant,
SEPTIMUS GIBBON, Hon. Sec.

(Copy.)

The Right Hon. Lord Robert Montagu.

My Lord,—As you decline receiving a deputation from this Committee, I beg respectfully to submit for your consideration the amendments they wish to see introduced into the Sale of Poisons and Pharmacy Act Amendment Bill.

1. They suggest that the schedule of poisons and the examination of chemists and druggists should be placed under the supervision of the General Medical Council rather than under that of the Privy Council.

2. Although thanking your Lordship for the intention of your amendment in Clause 16, prohibitory of Medical practice, they would represent that practically it is no prohibition at all. Any one can practise Medicine and Surgery; the Medical Act merely prohibits unqualified persons from using the title of "Doctor" and "Surgeon." So that, notwithstanding your Lordship's amendment, chemists and druggists can, and will, act as Medical Practitioners to any extent. To make the prohibition effective, we ask your Lordship to adopt some such amendment as this:—

"And it shall not be lawful for any person registered under this Act to prescribe for any patient, or undertake the treatment of disease, or in any way assume to act as a Medical Practitioner, and every chemist and druggist so offending shall, upon a summary conviction, forfeit or pay a sum not exceeding 5*l*."

Your Lordship's proposed substitution of the word Apothecary for Medical Practitioner at the beginning of this 16th clause is objectionable, because it will compel many Surgeons and Licentiates of the College of Physicians who at present compound medicines to become Licentiates of the Apothecaries' Company or of the Pharmaceutical Society. This is unjust, as the obvious intention of the clause is to observe the rights of such men.

3. We think it desirable that some check should be placed upon the sale of patent, quack, and other secret remedies, and have prepared the following clause to replace the 18th, which you propose striking out:—"No patent, quack, or other medicine shall be sold unless a sworn certificate of its composition be lodged with the Registrar appointed under this Act, and a copy thereof be open for inspection in the shop or place in which such medicine is sold, and any person or proprietor of a shop selling any secret remedy shall, on summary conviction, for each such offence, be liable to a penalty not exceeding £20." I enclose a printed copy of a petition on the subject of these two amendments that we presented to the House of Commons in 1865. In conclusion, I would remind your Lordship that this Committee is chosen to directly represent 4000 Medical Practitioners whose interests will be seriously affected if this measure passes in its present shape.

I am, my Lord Robert,
Your most obedient servant,
July 10, 1868. SEPTIMUS GIBBON, Hon. Sec.

BISULPHIDE OF CARBON AS A CURE FOR HEADACHE.

LETTER FROM THE LATE DR. GEORGE KENNION.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am desirous of bringing before the notice of the Profession a very simple and, at the same time, a very remarkable cure for many kinds of headache.

I have not the least claim to the discovery of this remedy, nor, indeed, am I at all aware of who was its originator, but I believe that it is unknown to the Profession generally, and, having used it in a large number of cases during the last twelve months, and very rarely without affording immediate relief, I am desirous of making it more generally known.

I heard of it first from a gentleman whom I was attending last year, and who told me that he thought it was used by a French Physician. If this letter should come under his notice, I hope that it may be the means of inducing him to throw off his incognito, so that he may receive the thanks of many to whom he has hitherto been an unknown benefactor.

The remedy, as I have already observed, is simple; it is the bisulphide of carbon. Its mode of application is no less simple. A small quantity of the fluid (about ʒij.) is poured upon cotton-wool, with which a small, wide-mouthed, glass-stoppered bottle is half filled. This, of course, absorbs the fluid, and when the remedy has to be used the mouth of the bottle is to be applied closely (so that none of the volatile vapour may escape) to the temple, or behind the ear, or as near as possible to the seat of pain; and so held for from three to five or six minutes. After it has been applied for a minute or two, a sensation is felt, as if several leeches were biting the part, and after the lapse of two, three, or four minutes more, the smarting and pain become rather severe, but subside almost immediately after the removal of the bottle. It is very seldom that any redness of the skin is produced. The effect of this application, as I have said, is generally immediate; it may be reapplied, if necessary, three or four times in the day.

The class of headaches in which this remedy is chiefly useful is that which may be grouped under the wide term of "nervous." Thus, neuralgic headache, periodic headache, hysterical headache, and even many kinds of dyspeptic headache, are almost invariably relieved by it; and, although the relief of a symptom is, of course, a very different affair from the removal of its cause, yet no one who has witnessed (and who of us has not seen?) the agony and distress occasioned by severe and repeated headache, but must rejoice in having the power of affording relief in so prompt and simple a manner.

As regards the *modus operandi* of this remedy, it is difficult, perhaps, to form a decided opinion; but I am disposed to attribute it to the sedative effect of the vapour of the sulphide absorbed though the skin, and acting upon the superficial nerves of the part to which it is applied. The remarks of M. Delpech (*Annales d'Hygiène*, January, 1863) point out very clearly the remarkable prostration of the whole nervous system produced in workmen who, in certain manufactures, are exposed to the vapour arising from the bisulphide of carbon; and we can readily understand that a somewhat similar

effect upon a small scale may be produced by the application of this vapour to a limited portion of the surface.

I am, &c.

George Kennion, M.D., F.R.C.P. Lond.

Oak Lea, Harrogate, June 4.

P.S.—I have omitted to mention that I always procure the bisulphide of carbon from Mr. Morson, the eminent chemist, in Southampton-row, Bloomsbury, who will also furnish the bottle with which the vapour should be applied, and a wooden case—a very necessary adjunct, on account of the offensive smell of the bisulphide.

NITROUS OXIDE AS AN ANÆSTHETIC.

Letter from Mr. W. A. N. Cattlin.

[To the Editor of the Medical Times and Gazette.]

Sir,—Repeated experiments upon the lower animals have strengthened my conviction that nitrous oxide is not so dangerous an agent as many have supposed it to be. Even with our present limited knowledge of its action, it will be found to possess some advantages over other anæsthetics for short Surgical operations, and (if given under the conditions published in your journal for June 6, page 618) I shall be surprised if it does not ultimately prove less dangerous to life and health than chloroform, although I do not expect it will supersede chloroform or other anæsthetics for very protracted operations. I have seen it administered twice and thrice to the same patient, during very painful cases of tooth extraction, with the best possible effect.

In my last letter I promised to make known the ultimate result of former experiments, and I desire to redeem that promise. The pointer bitch, which was made so profoundly insensible that some Medical friends thought she would not recover, has lately brought forth ten healthy living puppies, and "is doing as well as can be expected." The two pigs both died (the one a fortnight, the other three days, after taking nitrous oxide) under the following circumstances:—Upwards of six months ago three pigs, which had been fed in the usual way became ill, rubbed their noses against hard substances for a few hours, then turned round and round for a short time, and died one after the other. The two pigs which took nitrous oxide inhabited the same sty; they died with exactly the same symptoms, and in the same manner, as the three pigs had died which had not been experimented upon. By post-mortem examination their brains and spinal cords were found to be healthy, free from hydatids or serous effusion; there were no worms in the frontal sinuses; their livers were greatly enlarged and congested; their stomachs each had large dark blood-red patches near the pyloric end; their intestines were greatly congested and adherent, but no fresh lymph or serous effusion was found in the cavity of the peritoneum. Arsenical poisoning was suspected, but not detected.

I have made inquiry of a Veterinary Surgeon and of persons who keep large numbers of pigs, and the general opinion is that the symptoms I have narrated were caused by some poisonous substance which was taken with the food. There are hedges of yew in my garden, and it is just possible that some cuttings of yew or a poisonous vegetable may have occasioned the death of the pigs. All the other animals (which have taken nitrous oxide several times) are now perfectly well.

Nitrous oxide (as your readers are aware) may be solidified. It has lately been exhibited by Dr. Evans, of Paris, in the liquid form in a bottle composed of aluminium bronze, but the intense degree of cold which is created when this fluid passes from the denser into the rarer state, coupled with other chemical disadvantages, leads me to think the gaseous form will always be most convenient for anæsthetic purposes.

Pure nitrous oxide may now be obtained (of Mr. Barth, 26, Duke-street, Bloomsbury-square) in small wrought-iron bottles containing fifteen gallons of compressed gas, which can be drawn off in any quantity for immediate use; therefore, the advantages of supply and portability have already been gained. It may easily be administered from an india-rubber bag with an elastic tube, which can be attached to the ordinary mouthpiece connected with the late Dr. Snow's chloroform-inhaler, or, what is better, through the very delicate bivalved mouthpiece invented and now used by Mr. Clover. For Hospital and Dispensary practice Mr. Alfred Coleman has invented a very ingenious instrument by which nitrous oxide may be deprived of carbonic acid when the same gas is inhaled by many patients. Thus far nitrous oxide has a fair start in the race which various anæsthetic agents are running, and it remains to be seen whether the researches which a committee of the Odontological Society are making to ascertain its properties will confirm or contradict the reports of individuals.

If this anæsthetic comes into general use (and I think it will be most valuable to dentists), it will probably be administered to patients in every imaginable condition. Latterly I have been endeavouring to ascertain the effect of nitrous oxide manufactured by persons unskilled in chemical science, and with this view I directed my female servant and gardener each to make some of the gas, while my son and myself also prepared some. Every sample was made from nitrate of ammonia, obtained from Messrs. Bell and Co., of Oxford-street, and in each case the gas was passed through solutions of protosulphate of iron and caustic potash. To test the action of the different samples, a glass jar capable of holding about four gallons of water was filled with nitrous oxide which had been made by my servant—it had been in a cylinder gasometer eight days, and in india-rubber bags one day. A guinea-pig was made to float under the jar upon a large bung which had been fitted to the size of the jar. It was very gradually affected, and fell down at the end of three minutes; at the expiration of five minutes it was removed, apparently dead and incapable of feeling. It recovered very slowly, and breathed with great difficulty for half an hour. A rabbit was then placed under the same jar, filled with fresh gas, which had only just been made under my own superintendence. It was more slowly influenced than the guinea-pig, fell down on the cork in five minutes, and was removed at the end of seven minutes. It recovered more slowly, but in the same manner as the guinea-pig had done. A fresh guinea-pig was now placed in some gas which had been made twenty-four hours before by my son. The animal was immediately affected, fell down in half a minute, rallied a little, then became insensible, and was removed from the jar at the end of five minutes. It recovered sensibility at the end of eight minutes, but breathed heavily for about half an hour. Some more of the same sample of gas was added, and a little air passed into the jar, when a rabbit was placed under it. The rabbit at once began to breathe with difficulty, fell in one minute, was removed in five minutes, and made the same kind of recovery as the former one. For the next experiment the jar was nearly filled with two samples of the gas, and some air passed in, when a strong cat was put under it. The cat gradually became stupefied, fell down at the end of three minutes, and was removed at the expiration of five minutes. In about five minutes afterwards it staggered into the house, ran into the cellar, and soon recovered.

A fresh rabbit was introduced into the same jar containing only atmospheric air. At the expiration of half an hour it seemed almost as lively as ever, and, our patience being exhausted, the animal was released. It will be seen by reference to my former experiments (*Medical Times and Gazette*, June 6) that various kinds of animals were affected more rapidly and recovered quickly when nitrous oxide obtained from Messrs. Bell and Co., of Oxford-street, was administered with inhalers made upon Snow's principle. I have merely detailed the facts as they occurred, and leave your readers to form their own conclusions. I am, &c. Wm. A. N. Cattlin.

Westfield Lodge, Brighton, July, 1868.

DR. CRISP ON HIS LETTER TO THE MEDICAL COUNCIL.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the report of the proceedings of the Medical Council in your present number June 13, it is stated that my letter on the recent illegal adjudication of the Carmichael Prize was received with "derisive cheers," and that one councillor (why conceal his name?) suggested that "it should be referred to the Lunacy Committee." Your readers will scarcely believe me to have been so "daft" as to have expected that this matter would have been investigated by this corporate Council; but I think it would have been more becoming on the part of Mr. Hargrave, the representative of the Dublin College, if he had courted inquiry instead of suppressing it. As you have reported this anonymous suggestion, perhaps you will insert the concluding sentence of my letter, which has an important bearing upon the future adjudications of this prize. If one councillor can legally compete, all may.

"I again ask you, as a Council of Medical Education, and, to use the appellations of your President, as a 'commonwealth of Medicine,' to investigate this important matter, so that future candidates for these prizes may know the amount of money they have to contend for, and the amount of corporate interest they have to contend against."

I am, &c. EDWARDS CRISP.

Beaufort-street, Chelsea, July 11.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 9, 1868.

SAMUEL SOLLY, F.R.S., President, in the Chair.

A PAPER, by Mr. JOHN BIRKETT, was read, being

A CONTRIBUTION TO THE SURGICAL PATHOLOGY OF SERO-SANGUINEOUS CYSTS IN THE NECK AND AXILLA; WITH ILLUSTRATIONS AND PREPARATIONS.

The cases belong to the class of cystic tumours, and are otherwise described as hygromata. Brief references are made to published cases, and to the monograph of Dr. Gurlt, of Berlin. *Case* 1.—A healthy man, aged 28, had been the subject of a cystic tumour in the right axilla between five and six years, when the author cut it out. The wound quickly healed without the slightest inconvenience. The tumour consisted of a central cavity with bulging walls containing serum, and was composed of a fibrous texture. *Case* 2.—A boy, aged 7, had had a cystic tumour in the right axillary and subscapular regions for about six years, when the writer first saw him, and from which serum had been abstracted upon two occasions. The author, having removed the serum with a trocar and canula, felt a solid tumour deeper seated than the cyst. He proposed to excise the growth, in preference to exciting inflammation in the structure, but the plan was not immediately adopted. After some delay, however, that operation was performed, and with most successful results. The tumour consisted of a principal fibrous cyst and a congeries of cystiform cavities. Several lymphatic glands and vessels were also removed. The disease has never reappeared, although between five and six years have elapsed since the operation. *Case* 3.—A tolerably healthy-looking man, aged 20, was admitted into Guy's Hospital, under the author's care, on account of a large tumour situated in the right cervical and axillary regions. The swelling was first observed in the neck soon after birth. When the child was three years old, about nine ounces of yellow, clear, coagulable serum were removed. This operation was followed by rather severe constitutional effects. No treatment whatever had been pursued since that time. A large collection of fluid existing in the regions above described, a trocar and canula were inserted, but only bloody fluid escaped. This operation was repeated at intervals until more than a gallon of fluid had been removed. After each operation the fluid soon reformed. The characters and constitution of the fluid are described. The abstraction of so much blood was unattended by immediate effects, although, at last, he was somewhat reduced by it. He left the Hospital uncured. The author briefly invites the attention of the Fellows, first, to the true nature of the growth in the first and second cases, and states his reasons—which are based on their structure—why he does not regard these cystiform growths to be "transformations of vascular tumours." He considers them to belong to a peculiar and individual class, although he would not deny that nævi may undergo cystiform degeneration. Secondly, to the treatment of these cases in the adult and youth, objecting to the use of stimulating injections. He advocates excision. Lastly, to the third case, which was clearly one like those described by authors as congenital sero-cyst, which contained at three years of age the serum characteristic of those cysts, but which seventeen years later contained serum with a very large admixture of blood. This case the author believes to be unique in regard to the associated peculiarities it presented.

Mr. DE MÉRIC recollected that when talking with Mr. Birkett twenty years since respecting these sero-sanguineous cysts, he did not refer to the prognosis of these cases. Were any of them malignant? In a case that had come under his (Mr. De Méric's) care the patient was 50 years of age, and had gone through severe bodily hardships and privations, but was still in tolerable health. The cyst was situated at the nape of the neck, was as large as the fist, and exhibited the characters mentioned by Mr. Birkett. It was punctured, and serum was evacuated; the opening was kept patent by means of a tent; the fluid soon became dark-bloody and grumous, which persisted in spite of the use of injections and other remedies. The patient eventually died of what was found to be malignant disease, the glands having become enlarged. Perhaps the hardships that the man had endured from having been six years in prison for a political offence might have worn the health away, and engendered the malignant disease.

Dr. WEBSTER referred to a plan of treating tumours pursued by M. Cisti in Paris, by means of the application of a fluid which soaks into the growth, destroys its texture, and it falls off.

Mr. BIRKETT said that M. Cisti probably used the chloride of zinc. Mr. De Méric's case was different from those mentioned in the paper before the Society. Surgeons did not sufficiently determine the difference between those cysts which supervened on cancerous growths, and those which were innocent and independent of any such malignant contraction. Such were the cases he (Mr. Birkett) had brought before the Society; they were all genuine serous cysts, and all occurred in early life—that is, under 40 years of age. Mr. De Méric's patient was 50 years old, an age at which cancer was more likely to be developed. He regretted that there was so little discussion on the cases before the Society, because the paper contains some debateable points, more particularly as to the assumed connexion between these cysts and vari.

Mr. THOMAS BRYANT read a paper on

THE TORSION OF ARTERIES AS A MEANS OF ARRESTING HÆMORRHAGE; WITH EXPERIMENTS.

The author commenced his communication by alluding to M. Amussat's original investigations on torsion made in 1829, and by giving some brief outline of the history of the subject. He noticed the earliest introduction of the practice into England by Mr. Costello in 1834, and expressed his belief that the practice had not been generally accepted because it was introduced before its time—that is, before the introduction of chloroform. He recognised the fact that within the last few years Surgeons have become clearly dissatisfied with the application of the ligature to divided vessels, and enumerated the objections which have been brought forward against the practice. He gave full credit to Sir J. Simpson for having prominently brought forward the subject before the Profession, and for having suggested his plan of acupressure, which is now under trial by the Profession. He stated also that it was from Professor Syme's letter to the *Lancet* of January 4 that he had been induced to inquire into the subject of torsion and to make his experiments. The two methods by which torsion may be practised were then described—the "free" and the "limited." In "free" torsion, the end of the artery should be fixed by a pair of clasp forceps, and twisted freely. In "limited" torsion, the artery, having been drawn out of its sheath, should be fixed transversely about three-quarters of an inch from its divided extremity by a pair of clasp forceps, and held steadily; whilst with a second pair of forceps the free end of the vessel should be twisted freely, as in the former kind. The object of the first pair of forceps being to fix a limit to the twisting of the vessel, and prevent the artery being separated for any distance from its vascular attachments. Three or four complete revolutions of the forceps are enough for small arteries, six or eight for large. The author then passed on to relate his experiments on animals. The first six were upon the carotid and femoral arteries of the dog. In all free torsion had been employed to both ends of the divided vessel, and in all with success. The seventh and eighth experiments were upon the carotid artery of the horse. In these limited torsion was used, and in both with success. In all these instances the animals were subsequently destroyed, and their vessels carefully examined. Special notice was then drawn to the particulars of a case in which the author had applied torsion to the brachial artery, in its upper third, of an old woman aged 68. The torsion proved quite successful, but the patient died from thoracic complications, and this allowed an opportunity of observing the changes the artery had undergone. The physiological conditions of the arteries which had been subjected to torsion then received attention; the results of every experiment were carefully described, and the different points

illustrated by drawings and preparations. The results of numerous experiments upon the arteries of the dead subject, both healthy and diseased, were then given, and these went to confirm in every respect the observations obtained from the experiments made upon the living. A careful *résumé* of the physiological effects of torsion was then made. Some remarks upon the experiments then followed, and a comparison was drawn between the effects of torsion on the vessels, and the ligature, and acupressure. Some practical points connected with the application of torsion were then made, and the necessity of employing right instruments enforced. A general summary of the whole subject was then made, and the following conclusions read:—1. That hæmorrhage may with certainty be arrested by torsion from even the largest vessels. 2. That it is a safe and judicious practice in all cases in which the vessels are small or of moderate calibre; and that, as far as experiments and practice yet prove, it is equally so in arteries of the first magnitude. 3. That torsion may be "free" or "limited," the free method being applicable to vessels of moderate size, and even to the largest of the extremities, limited torsion being more adapted for the large and loosely connected vessels. 4. That in torsion, as in the ligature, the permanent hæmostatic processes are alike due to the sealing of the divided inner and middle tunics; but that in the ligature there is only an irregular division of these tunics, whilst in torsion there is a complete division, separation, retraction, and valvular incurvation. 5. That in torsion the twisted cellular coat forms, with the retracted and incurved middle coat, the direct mechanical obstacle to the flow of arterial blood, in the same way as the compressed cellular coat does in the ligature, but that in torsion the twisted cellular coat and incurved middle coat become subsequently a permanent means of occluding the end of the artery, whilst the ligature of necessity becomes subsequently a source of irritation, and too often a means of undoing what has been done by nature's own hæmostatic processes. 6. That in torsion the twist in the cellular coat of an artery, the division and subsequent retraction, incurvation, and adhesion of the middle coat, and the coagulation of the blood in the vessel down to the first branch, are the three points upon which its temporary as well as permanent safety depends, whilst the permanent safety of acupressure rests only upon the last point alone, and its temporary effects upon the pressure produced by the needle. 7. That there is every reason to believe that when torsion has been successful on its first application, the fear of subsequent hæmorrhage is altogether groundless, for there is nothing, as there is in the ligature, to interfere with the physiological processes set up by nature to occlude the divided vessel, and, unlike acupressure, the temporary obstacle to the flow of blood becomes a permanent one. 8. That upon physiological grounds torsion has decided advantages over the ligature and the acupressure-needle, and that if subsequent experience confirms what has been hitherto observed in the experiments on animals and the application of the practice in the human subject, we shall have gained a point of no mean importance, and simplified Surgery in no slight degree. The paper was concluded by the author stating his belief that the practice was a safe and valuable one in many cases, if not in all; that it was not a crude idea, based upon a theory spun out of a fertile imagination, for it had its origin in observation of nature's own processes; that it was based on the well recognised physiological principles of natural hæmostatics; and that it was artificial only so far as the Surgeon's art was employed in rendering these processes most available. Models, drawings, and preparations were freely used to illustrate the subject.

Mr. Christopher Heath thought it incumbent on those who had practised torsion to give their experience. He had amputated a young woman's thigh on the previous Wednesday, and had twisted the arteries, the large ones with two pairs of forceps, and the smaller with one. A tourniquet had been put on loosely as a precautionary measure, and, a little bleeding occurring four hours after the operation, it was screwed up for half an hour, and the bleeding did not return. Mr. Heath had in this case twisted off the ends of all the vessels, as he understood that practice was followed in the North.

Mr. Hulke said that Mr. Syme was in the habit of twisting off the ends of the vessels. He (Mr. Hulke) had tried the plan in cases of small vessels with success.

Mr. John Wood had in a case of amputation used torsion for the smaller vessels with little or no bleeding. He had applied a ligature to the larger one. Torsion, however, required to be used with very great care, and delayed the operation considerably. He thought that we should not come to a conclusion too quickly with respect to the effect of torsion on the arteries of animals, which were very seldom diseased. In cases of diseased arteries in the human subject, which was not uncommon, he should not trust to torsion.

Mr. Smith said that Professor Humphry considered that twisting off the ends of arteries was a *sine qua non* in torsion to arrest hæmorrhage.

Mr. Spencer Wells said that, so far from it being necessary to twist off the end of a divided artery, it was not even necessary to twist at all if the vessel was not of large size. If a small artery was firmly compressed by strong forceps for the extent of about half an inch, the coats of the vessel coalesced, or were mechanically agglutinated together, bleeding being effectually stopped with less injury to the vessel than by torsion. For large vessels compression alone was less trustworthy than torsion; but it might be advantageously combined with torsion, holding the vessel about an inch above the divided end with one pair of forceps, seizing the end with another pair, and twisting the vessel up to the point of compression. In this way the danger of separating an artery from its sheath for some inches above the divided end—a danger almost necessarily incurred if a vessel be twisted six times or more without protection—is avoided. The effect of a very temporary ligature is often sufficient to stop bleeding from small arteries. It is not necessary even to tie the knot. The silk is passed around the vessel as if to tie it, and by merely tightening the loop firmly the inner and middle coats of the vessel may be so divided and introflexed that bleeding is completely arrested, and immediate removal of the silk is safe.

Mr. Croft preferred ligature to acupressure or torsion, as being safer.

Mr. Bruce inquired why it was that French Surgeons had abandoned a mode of proceeding which had promised so fairly. Had not a committee reported against it? Had not Dupuytryen found it produce suppuration extending along the sheath of the artery?

Mr. Bryant, in reply, said that twisting off the ends of an artery was calculated to prevent the arrest of hæmorrhage, as it interfered with the process of incurvation. He had employed torsion lately to the femoral artery of a boy with good effect. One advantage of torsion was that there was no fear of secondary hæmorrhage, or if so at the commencement it was immediately under the eye of the Surgeon. In answer to Mr. Bruce, he said he had been unable to find any facts to show that torsion had been followed by bad effects.

THE CLINICAL SOCIETY.

Friday, May 8.

Sir Thomas Watson, Bart., President, in the Chair.

The following gentlemen were elected members:—Mr. W. Adams, Mr. A. G. Brown, Mr. J. L. Levy, Dr. J. E. Pollock, Dr. F. Oppert, Dr. J. C. Thorogood, and Dr. E. H. Viner.

Mr. Henry Lee related a case illustrating the use of

CALOMEL VAPOUR-BATHS IN THE TREATMENT OF CHRONIC SYPHILITIC ALBUMINURIA.

The patient had been under different kinds of treatment for two years, and recovered completely after using the baths for six months. After referring to the doubt which had been raised as to the absorption of the mercurial vapour by the skin, Mr. Lee dwelt upon the necessity for acting upon the skin at the same time by the addition of the vapour of water, and recommended the mercurial bath in the early stage of syphilis, and especially advised its use in cases of extreme debility, in which mercury could not be employed in any other form.

Mr. Maunder, the President, and Dr. Wilks put some questions to Mr. Lee, which led that gentleman to refer to the difficulty which existed in determining how much in these cases was due to syphilitic, how much to other, diseases of the kidneys. He usually in such cases had employed the bath after other remedies had failed.

Dr. Baümler related a case somewhat similar to that referred to by Mr. Lee, which recovered under the influence of large doses of iodide of potassium.

Mr. Hulke remarked that the influence of the nitro-muriatic acid should be borne in mind, as it was one of the remedies employed in Mr. Lee's case.

After some remarks by Dr. Drysdale and Dr. Wiltshire,

Mr. Durham read the history of a

COMMINUTED AND SECONDARILY COMPOUND FRACTURE OF THE LOWER END OF THE FEMUR

extending into the knee-joint. The patient, who was present, recovered perfectly, and whilst, considering his youth, it was probable he might have recovered from the serious injury he had sustained, Mr. Durham doubted if he would have recovered so rapidly as he did but for the treatment of the wound with carbolic acid. He had extensively and fairly tried the carbolic acid treatment in compound fractures and other cases, but he had not met with such brilliant success as Professor Luster; but he thought this result was in some measure due to the more or less depraved health of the patients dealt with in the London Hospitals.

Mr. De Morgan read a paper on the use of

CHLORIDE OF ZINC SOLUTION IN THE TREATMENT OF ABSCESS CONNECTED WITH DISEASED JOINTS,

insisting upon the utility of antiseptics in general, which he considered a great boon in the treatment of Hospital patients. At the Middlesex there had been a remarkable diminution in the number of cases of pyæmia and of erysipelas occurring in the wards since these remedies had been generally used. The chloride of zinc seems to form a coagulum over the wound, and this is incapable of decomposition, and fluids in the wound are thus kept free from taint. After some remarks respecting the causes of putrefactive decomposition, he mentioned several cases in which abscess was treated with the chloride under the most unfavourable circumstances; their cure had been as rapid as could be the case in abscess of the same extent in the most healthy persons placed under the most favourable conditions. The cases related were taken simply because they all happened to be in the Hospital at the same time.

After some remarks by Mr. Arnott,

Mr. Hulke bore testimony to the good results which followed the use of chloride of zinc.

Dr. Wilks, after referring to the use of somewhat similar remedies in times past, spoke of the superiority of those now commonly employed.

Mr. Henry Lee noticed the difficulty of using these remedies in cases of osteo-myelitis—cases which are so often followed by pyæmia.

Mr. Croft had found the liquor carbonis detergens a very useful antiseptic.

After remarks by Mr. Maunder and Dr. Hillier,

Mr. De Morgan referred to the older remedies; but such, he observed, were not remedies for destroying decompositions in wounds, nor were they used as injections into the cavities of abscesses, but were rather employed as coverings for crushed and lacerated tissues.

OBITUARY.

FRANCIS HENRY RAMSBOTHAM, M.D.

On July 7 this eminent Physician departed this life, at the residence of his son, Woodend, Perthshire, in the 68th year of his age. The son of an eminent Physician-Accoucheur in the City, he succeeded his father, and for many years was largely employed in consulting practice. In an evil hour, he desired to add the ornament of fashion to the solid rewards of practice, and removed from New Broad-street to Portman-square. The change is not believed to have been in any sense a fortunate one.

Dr. F. H. Ramsbotham held, and will continue to hold, a conspicuous place in the history of Obstetric Medicine. His physical endowments were remarkable; his mind was vigorous and well cultivated. He had been trained as few men have been trained to their work. He may be said to have been born to it. His father was immersed in the most active obstetric practice, consulted in difficult cases by a large circle of Practitioners, and holding the office of Physician to the largest obstetric charity in the country—the Royal Maternity Charity. Early in life, "Dr. Frank," as he was familiarly called in the teeming East, took up a busy share of this work; and it is not unjust to the eminent merits of the father to say that he was fairly eclipsed by the greater merits of his son. As a lecturer, his natural power, a commanding presence perhaps, and the consciousness of unexampled experience, made him dogmatic; but his teaching was sound and effective. As a writer there is the testimony of his great work to show that literary merit was not wanting to spread his teaching and extend his fame beyond the circle of his immediate disciples. As a Practitioner, it may fairly be said that in his day he had no rival, except it was the late Professor Davis. These two men long sustained the chief honour of representing English midwifery abroad. Probably no man's opinions on points of practice are quoted more often, and with more respect, than are Dr. F. H. Ramsbotham's. As an operator it is difficult to give adequate expression to the feelings of admiration which he excited in those who saw him conducting a difficult instrumental labour. Probably no man ever handled the forceps with equal skill. He had been schooled in difficulties, it is true; but only sterling natural abilities and great power of reflection could have enabled him to elaborate such admirable skill out of his opportunities. In this respect he resembled Smellie, who may be justly regarded as the greatest of English obstetric Practitioners. At a time when the short forceps, for most men in this town, marked the limit of conservative midwifery, Dr. F. H. Ramsbotham was using a long double-curved instrument, and displacing craniotomy to an extent that few of his contemporaries believed to be possible. It is worthy of remark that, like almost all men who have to contend with frequent emergencies, in applying the forceps he came to abandon the old-fashioned rule of passing the anterior or pubic blade first. Like Professor Davis, whose work contains a beautiful illustration of the mode of introducing the forceps, he passed the posterior blade first, and introduced the anterior or upper blade crossing the shank of the first.

Such is the man we have lost. Many who through his skill now live will mourn him; many will sympathise with the trials he endured; his faults will be forgotten; his fame will live as one of the glories of English Medicine.

Both as lecturer at the London Hospital Medical School and as an author, Dr. Ramsbotham's success was great, being based on the solid foundation of great personal experience. Our own columns have contained many a valuable series of cases from his pen; but his *opus magnum* was the "Principles and Practice of Obstetric Medicine and Surgery." This was one of the first Medical works brought out with all the pomp of expensive illustrations, and was, although necessarily expensive, so remarkably successful that the publisher presented the author with a piece of plate, value 100 guineas, on the issue of the second edition. This was in the zenith of Dr. Ramsbotham's success, when he was in the enjoyment of health, activity, and renown, and whilst his genial kindness of heart gained him the affection as well as the confidence of his Professional brethren.

DR. KENNION, OF HARROGATE.

It is with much regret we announce the death of Dr. Kennion, of Harrogate, who has passed away from among us, snatched from his sphere of usefulness at the comparatively early age of 54. Dr. Kennion, who graduated M.D. at Edinburgh in 1837, has been engaged in practice in Harrogate for upwards of thirty years. Although not one of the great writers of our Profession, his only important contribution to its literature being a small work on the "Mineral Waters of Harrogate," Dr. Kennion was widely known as a wise and skilful Physician. He was pre-eminently a practical man, always seeking to benefit his patients by every device at his command; this, indeed, will be seen by a short—alas! the last—communication from his pen, which we publish in another column, which treats of bisulphide of carbon as a remedy for headache. It was this practical tendency, as well as his high Professional character, which rendered him so much esteemed in Harrogate and its neighbourhood. This widely-spread Professional reputation in its turn secured his election to the Fellowship of the College of Physicians, which took place in 1865. He was for a time Physician to the Harrogate Bath Hospital, but had latterly retired from the duty of that post.

Few men have been more regretted than Dr. Kennion. His gentleness, his patience, and his forethought for others during his painful illness, had won the intense sympathy of those about him, and the unexpected shock of his death was most painfully felt beyond the circle of his own family. The news of it on the following day seemed to cast a gloom over the whole neighbourhood, where his courteous manners, his frank and genial character, and his great personal usefulness had long been known and will long be remembered.

We believe that the following particulars of the illness and sudden death of Dr. Kennion, for which we are indebted to Dr. Clifford Allbutt (of Leeds), Dr. Beaumont (of Knares-

borough), and Mr. Bainbridge, his Medical attendants, will not be without interest to the Profession.

With the exception of two severe attacks of gout in the toe, and again of wandering gouty pains for a few weeks before his last illness, Dr. Kennion was a vigorous and healthy man, and laboriously engaged in practice. On June 19 last, when in attendance upon a patient at the Prospect Hotel, he was seized by a sudden and intense pain in the region of the gall-duct, "as though," he said, "some one had thrust a red-hot poker through the body, turned it round, and as quickly withdrawn it." This continued, though gradually diminishing, for five hours; and after the hypodermic injection of morphia he passed a tolerable night.(a) Dr. Kennion continued to go about the next day, yet there remained, or rather recurred, a pain in the right hypochondrium, with uneasiness. On Saturday, June 20, he became really ill; he was feverish and nauseated, and he complained of a good deal of pain in the right hypochondrium. He was now compelled to keep his bed, and was seen by Mr. F. Bainbridge, and afterwards (on the Monday) by Dr. Beaumont, of Knaresborough. On Sunday morning, as the symptoms were not relieved, Dr. Clifford Allbutt, of Leeds, was telegraphed for. A careful examination was then made, and a small patch of pleuro-pneumonia—fine sounds, a circumscribed rub, and dulness—was found quite at the base of the right lung. The skin and conjunctivæ were slightly jaundiced, the tongue coated, the stomach uneasy, the pulse 110, and the temperature 100°. He had himself taken a full dose of calomel two days before; so the bowels were kept quiet, and morphia injected at intervals. In a couple of days the pneumonia was nearly gone; but there seemed still to be inflammation of the peritoneal coat of the liver, with tenderness, slight jaundice, etc. Symptoms, however, of worse import than this had gained ground. On Monday the sickness had become incessant, and the abdomen was slightly tympanitic. There had been no movement of the bowels. It was resolved to give a large and stimulating injection; and during that night, and Tuesday also, Dr. Beaumont, who watched with devoted care over his friend's sick bed both day and night, repeated it several times. On Tuesday about two pints of fœtid, pultaceous, fæcal matter came away, and great relief followed. The pulse, which in the morning was 120 and fluttering, came down to 96, and grew firmer. On Wednesday, at Dr. Allbutt's visit, the patient appeared to be much improved, and a hopeful opinion was given. Towards the end of the day, however, and on Thursday, the symptoms returned. The pulse rose and became compressible, the body became again distended and painful, the vomiting most distressing, and a hiccough, which troubled him more or less from beginning to end, grew worse. At this time dulness and pain on deep pressure were noted over the ileo-cæcal region. The temperature, which had fallen with the cessation of the pleuro-pneumonia, did not rise again, but remained throughout at about 98°. His state was now so alarming that it was determined to seek the help of Sir William Jenner, who with kind promptitude arranged to come down at once. He saw Dr. Kennion on the evening of Thursday, June 25, and again on the Friday morning, with Dr. Allbutt, Dr. Beaumont, and Mr. Bainbridge. It was but too clear that the bowel was paralysed; but the cause was obscure. There was nothing to point distinctly to intussusception; the local signs seeming to indicate mischief in the ileo-cæcal region—perhaps ulceration of the appendix. On the other hand, the original pain had been higher up, and near the liver; but this might have been pleuritic in origin. Looking at the symptoms as they stood, Sir William Jenner supported Dr. Kennion's advisers in a somewhat hopeful prognosis. The abdominal distension was great, but not excessive; the vomiting had receded a very little, and was never really stercoraceous. Some sleep was obtainable, the pulse was of fair strength and never very rapid, and there was no marked pinching of the features, or symptoms of serious exhaustion. It was determined to carry on the method already pursued: rest to the bowels; injections of morphia; and administration, when possible, of some quantities of nutriment, however small. In accordance with these hopes, a decided amendment set in on Friday and Saturday. The vomiting gave way, and some food was well taken; the pulse recovered; the body softened; the dulness and pain disappeared from the cæcal region; wind was passed, also a few "scybala;" and the jaundiced tint faded. The improvement continued till Monday, when, after ten days of great anxiety, Dr. Kennion, to the joy of his family, seemed to be out of danger. On Monday, after a very comfortable day, he expressed in the evening a desire to pass a motion. As the impulse of the heart was feeble, it was agreed that he should not rise to the commode; but he passed upon a folded sheet a well-formed fæcal motion, together with a large quantity of a yellowish-brown bilious fluid. He expressed much relief, and congratulated himself upon once more passing a satisfactory motion. It is hard to describe, then, the shock to Dr. Beaumont when, about twenty minutes after this, he happened to look at his patient and saw him falling into collapse. The nose became cold, the features pinched, and the pulse sank. There was no pain. Dr. Beaumont, of course, did all that his skill and care could suggest; Mr. Bainbridge was summoned, and a message was despatched to Leeds for Dr. Allbutt. More than three hours elapsed before he could arrive, and it was then but too clear that all would soon be over. Hot applications, hot stimulant drinks, etc., had all been in vain; and although on Dr. Allbutt's arrival brandy was injected into the rectum and mustard poultices applied over the heart, yet no rally could be obtained. The extremities were deadly cold; and the pinched features, the gasping breath, and the semi-delirious tossing, only too surely pointed to the certain coming of death. In five or six hours from the first appearance of collapse the end was at hand.

The autopsy was made by Mr. Houseman, in the presence of Dr. Allbutt, Dr. Beaumont, Mr. Bainbridge, and Mr. Scaife. The abdomen only was opened. On laying back the walls the surface of the bowel was seen to be a good deal injected, and the right half of the omentum was so much injected as to seem as if stained with blood. There were no signs of peritonitis, however, beyond those to be described. After tying the rectum, the colon was drawn out cautiously and examined. It was quite healthy until that part of the transverse colon was reached which lies below the liver. This portion was so closely matted down by old and firm adhesions that no slight force could detach it. It was bound down to the posterior and right walls and to the under parts of the liver and gall-bladder by adhesions and bands that must have been a year or two at least in forming. There were a few new patches of adhesion, easily broken down, none of much extent, and their site of no importance. The parts, when laid bare as far as possible without much tearing, showed the following state of things:—Between the gall-bladder and the colon were several channels bounded by the old bands of adventitious tissue, and these channels communicated so as to form an anfractuous cavity. These channels were filled with a strongly bilious fluid, which appeared also to consist of serum and an unhealthy mucoid or blennorrhagic secretion. The cavity communicated by three openings with—1, the under surface of the gall-bladder; 2, the colon; 3, the peritoneal cavity. In the gall-bladder and in the peritoneum were a few drachms of the same bilious fluid, which also corresponded again with that passed in the last motion. The liver was healthy, with the exception of the adhesions and marks of recent inflammation on the under and posterior surfaces. The neighbouring diaphragm was injected, and showed traces of serous inflammation. The gall-ducts and all other abdominal organs were healthy, but the colon was much distended in the ascending portion and in the cæcum. No gall-stones were found. The inner edges of the opening into the gall-bladder were slightly thickened, and resembled a gastric ulcer. It would seem, then, that a slow ulcerative process had been going on in the gall-bladder for some time, probably for a year or two at least, and had slowly set up the conservative adhesions about the colon. Then at the time of the acute pain on June 19 there was perforation of the gall-bladder, and extravasation of its contents into the meshes of the adventitious cellular tissue. That when there they caused irritation, extending upwards to the diaphragm and to the base of the lung, giving rise to the pleuro-pneumonia, the hiccough, and more or less to the vomiting. That the irritation then extending upon the neighbouring colon, paralysed that part, and allowed accumulation in the cæcum. That the cæcum was subsequently partially emptied, with much relief; but that a few days afterwards (on the Monday) perforation into the gut took place, with passage of bilious fluid, slight consequent purgation, and passage of a natural and full fæcal motion. That very shortly after this a second perforation took place into the peritoneum, with more extravasation and immediate collapse. It is probable that the adhesions had not caused a strangulation of the gut, as they were nearly all old, and there was no history of any previous arrest of the bowels. The bowels had always been remarkably regular. Moreover, the

(a) A few hours after the onset of pain, Mr. Bainbridge administered a stimulating emetic, which brought away a great quantity of bile.

symptoms throughout rather resembled a paralysis than an unyielding obstruction of the colon.

The funeral took place on Thursday, July 2, when the whole of the shops were shut in Harrogate as a token of the public grief. Most of the persons of importance in and around Harrogate either attended the funeral or sent their carriages; and the body was accompanied from Oak Lea, the residence of the deceased, to its final resting-place at Christchurch by most of the Medical Practitioners of Harrogate. There were present Drs. Bennett, Myrtle, Deville, and Beaumont, with Messrs. Scaife, Short, Milner, Abraham, and Long, Consulting Surgeon to the Royal Infirmary, Liverpool. Dr. Kennion's death is felt and regretted in Harrogate as a great public loss.

THE OPENING OF THE ROYAL HANTS COUNTY HOSPITAL AT WINCHESTER.

The county of Hampshire has a new Hospital, and the city of Winchester, rich in memorials of the charity of a past age, has now, in addition to these, a worthy monument of the charity of the present.

The new Hospital is a handsome and imposing edifice, erected upon one of the most cheerful and commanding sites in the immediate neighbourhood of Winchester. This site is on the Westhill, at the commencement of the road leading from Winchester to Romsey. The building itself, so far as we have had opportunity for examining it, appears to be excellently planned and well adapted for the purposes it is destined to serve. It is built of red brick and Bath stone, chiefly in the Gothic style; modernisms have, however, been freely used wherever the requirements of such a building demanded them. The Hospital consists of a central block and two wings running out east and west from this. In the central building are the principal staircases, the rooms of the resident officials, a spacious and well-lit operating theatre on the upper story, and three small wards, one on each floor. The wings, in which are the principal wards, are connected by lofty corridors paved with stone, and communicating with the great staircase. In the west wing there are three large wards placed one over the over, each ward having its own bath-rooms, nurses' apartments, and ward offices. The eastern wing contains only two such wards, the upper story being occupied by a memorial chapel, built by special contribution to the honour of Almighty God and in grateful remembrance of Robert Speckoll Barter, B.C.L., Warden of Winchester College A.D. 1832—A.D. 1861, and Chairman of the County Hospital A.D. 1841—A.D. 1861.

The embodiment of a memorial chapel in the general Hospital building was, as one may readily imagine, by no means an easy task; but Mr. Butterfield, the architect, with his usual admirable taste and judgment, has got over the difficulty in the happiest manner. By placing the memorial chapel on the upper story of one of the wings, he has been able to give to it a thoroughly ecclesiastical character, and at the same time he has added an attractive feature to the exterior of the main building.

The wards themselves are admirable in every respect. In all the essential requirements of abundance of cubic space, ventilation, cheerfulness of aspect, light and convenient accessories and offices, they are perfect, and, so far as our knowledge of similar institutions extends, we should say unequalled. The baths and necessary offices are built in towers at the end angles of each large ward, and are approached from the ward by ventilated passages. By this perfect isolation and ventilation the inmates of the wards are secured against all annoyance from emanations which might arise from such portions of the building.

The new Hospital is capable of accommodating a hundred patients. Each of the five large wards will take eighteen beds, and in addition to these there are, as we have already mentioned, three small wards for the reception of such cases as it may be thought desirable, for any reason, to remove from the general wards. These small wards are the most cheerful and admirable apartments for the reception of Hospital patients we have ever seen. They are built in the southern aspect of the building, and provided with large bay windows, which command a magnificent prospect. We had almost forgotten to mention that large balconies are provided, for the use of the convalescents, at the ends of the large wards.

The two wards on the ground floor are to be devoted respectively to male Surgical and male Medical cases; the two on the first floor are for women, and there is a second male Surgical ward occupying the upper story of the western wing, and therefore on the same floor as the operating theatre.

Beneath the above floor is a spacious basement story. In the construction of this story the natural fall of the ground on the site has been taken advantage of, so that, while on the north side next the high road this basement is necessarily concealed by an area, it is entirely out of the ground and on a level with the gardens on the southern side. These gardens are now being laid out and planted, and have already a very neat and pleasant appearance.

The basement contains waiting-rooms and conveniences for out-patients, private apartments for the Medical officers, a *post-mortem* room (separated from the main building), dispensary, board-room, cellars, and furnace chambers at one end, and kitchens and domestic offices at the other.

The entrance to the Hospital is by a porch on the north side, and the grand staircase and out-patients' staircase are so situated in regard to it that those who use these staircases do not interfere with the privacy of the Hospital. Lifts for coal, food, etc., are provided from the bottom to the top of the building. In addition to the fireplaces, a system of heating by hot water is provided, and hot and cold water are laid on throughout the building. The floors of the wards and chapel are of polished oak, and are laid upon a system which avoids open joints, in which dust and infection might lurk. The walls are coated with a polished surface of Parian cement. The Hospital will be lit entirely with gas. A lodge, laundry, and shelter for carriages are provided close to the main building.

The Hospital was on Tuesday last formally opened by a dedicatory sermon in the Hospital chapel. This ceremony, although stated to be simply the opening of the memorial chapel, was virtually the opening of the Hospital; but it will be yet two or three weeks before patients will be received within its walls, the fittings and furniture of the Hospital being not yet completed. Nothing could exceed in simplicity and appropriateness the ceremony on this occasion. The ordinary church service, with sermon and holy communion, appeared to us a most fitting method of inaugurating such a work of charity. Dr. Moberly, the late head master of Winchester College, was the preacher, and there are few preachers who are better worth listening to. The Dean of Winchester, the Archdeacon of Winchester, the Warden of Winchester College, and most of the local clergy were present on this occasion, as were the members of the Medical and Surgical staff of the Hospital.

Sir Wm. Heathcote, Bart., the Chairman of the Hospital and of the Building Committee, has, in the most liberal manner, undertaken to defray the entire expense of the nursing department of the new Hospital for the next two years. The nurses have been selected from those trained by the Nightingale Committee at St. Thomas's Hospital. Six of these were present at the opening services. What is to become of the old Hospital in Parchment-street we have not heard. A considerable amount of interest naturally attaches itself to the old building. It was the first Hospital founded in the provinces—the first and oldest of the country Infirmaries. Dr. Alured Clarke, Dean of Exeter and Prebendary of the Cathedral of the Holy Trinity, established an Infirmary in Winchester in the year 1736; but it was not till 1759 that the old county Hospital was opened. During more than a century this admirable institution has been engaged in carrying out a work of practical benevolence, and, although it has long been far behind the requirements of modern science, and without those modern sanitary improvements which are, in the present day, considered essential in such an establishment, yet there are many who will view the demolition of its walls with something like a feeling of regret. The old Hospital has, however, done its work, and we have no manner of doubt that after the lapse of a few years the most vigorous opponents of the new building will come to regard it as a vast improvement, in every way, on its predecessor; and, with its present able staff of Physicians and Surgeons, we are satisfied that it will rapidly become a most popular institution.

M. Ricord's Last.—During the recent discussion at the Senate on liberty of teaching, when so much priestly intolerance was exhibited, M. Ricord observed—"This liberty is in a bad way; it has an affection of the heart." "How so?" "*Oui, elle succombera par suite d'une insuffisance mitrale!*" —*Courrier Medical.*

NEW BOOKS, WITH SHORT CRITIQUES.

What should we Drink? An Inquiry suggested by Mr. Beckwith's "Practical Notes on Wine." By JAMES L. DENMAN, Author of "The Vine and its Fruit," &c. &c. London: Longmans. 1868. Pp. 120.

*** Mr. Denman has produced a very readable little book, from which our readers may gather the elements of sound criticism on wine in general. What should we drink?—Pure wine. What is pure wine?—Grapejuice thoroughly fermented. What is *im*pure wine?—Wine not thoroughly fermented, or wine mixed with extraneous substances. What are these extraneous substances?—Chiefly strong spirit, which, being added at an early stage, checks fermentation of the grapejuice, and, instead of *wine*, gives us a *vin de liqueur* (as port and sherry)—*i.e.*, a spirituous liquid, sweetened with unfermented grape-juice, or with sugar in some other form. The strongest natural wines are those made from ripe grapes full of sugar, and fermented fully. If the grapes be dried, the ferment is damaged, and unfermented sugar remains; but then, such sweet wines are not strong by nature, for alcohol is the produce of fermented sugar, and if the sugar be not fermented, there will be less alcohol. A strong natural wine, then, will not be sweet, but, if new, it will (if a red wine) be very rough, from the tannin in skins and stalks which are fermented with the grape juice. That wine is white (or rather yellow) in which the juice is fermented without the skins and stalks; but in all red wine, save the very finest, the *stalks* are fermented with the skins, and both contain an exuberance of tannin. Hence red wine will be rough. All wine will be acid, from the abundance of acid tartrate of potass. The continued deposit of this matter from wine, red and white (in the form of crust and tartar), makes the wine mellower and softer as it grows older, whilst *im*pure wine is made to seem mellow and soft partly by substituting spirits which are not acid for wine that is, and partly by keeping some of the grape-juice from fermenting, so as to cover the natural acidity of natural wine. Mr. Denman does not enter at length into the question of ferment and of the changes alleged by Pasteur to be produced by various microphytes, but on the general question of the difference between pure and impure wines, he is unanswerable, and his arguments are well worth perusal by all who have to order diets for sick or sound. On one point we must criticise his conclusions. He has, as is well known, devoted himself to the popularisation of the wines of Greece. In the warmth of his argument in their behalf, he allows himself to do other pure wines something less than justice. He tells us of various tricks practised in the manufacture of some French wines, and hence draws a conclusion very unfavourable to all French wines—which is absurd. He passes over the wines of Hungary with very scant notice, and reserves all the warmth of his commendation for the wines of Greece. Now on this point he may fairly claim an indulgent hearing. If any country can produce good wine, it ought to be Greece, where the vine has flourished for thousands of years, and the climate and soil are well suited to it. There is not a name in the list of Greek wines which does not recall the classic days of yore. The island of Thera, or Santorin, which is now described by travellers as "an uninterrupted smiling vineyard," is said by Herodotus (book iv.) to have been formerly called Calliste. These wines, therefore, have a prestige, and deservedly so, but any one who tries them for the first time ought to be prepared what to expect. Take the St. Elie, which is the finest of the white wines. What it most resembles is Bucellas among the common wines, but in strength it is very nearly equal to a light sherry. But then it is much more vinous, and, by consequence, more acid than sherry, which contains a dose of alcohol and less real wine. This wine is very strong, very exciting, and should be drunk with water, to which it communicates abundance of flavour. It is not a wine to drink up, like a bottle of Sauterne—it is too strong for that—and instead of souring, it even improves for a day or two after the cork is drawn, and so is economical in the use as well as in the price. We have had some in the cellar for three years, and find it quite sound and unmistakably improved. The Greeks have good raw material. It is to be hoped that they employ the best manufacturing processes, and take all care against acetification. Like all others, their wines want moderate age; but if these conditions be secured, we do not doubt but that the use of their wines in England will be very large indeed. They will find their place, but need not disturb the grand wines of France and Hungary.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Court of Examiners on the 14th inst., and when eligible will be admitted to the pass examination:—

Aubrey, Richard, of Charing-cross Hospital.
Barraclough, George, of Guy's Hospital.
Dickinson, Alfred, of the Westminster Hospital.
Dodds, R. W., of Edinburgh.
Durant, Edmund, of Charing-cross Hospital.
Harris, J. A., of Edinburgh.
Howse, Frederick, of Charing-cross Hospital.
Hutchings, W. D., of Bristol.
Kavanaugh, M. T., of Guy's Hospital.
King, W. L., of University College.
King, W. M., of St. Bartholomew's Hospital.
Lidbetter, T. G., of Guy's Hospital.
Manley, A. R., of Guy's Hospital.
Murphy, Shirley, of Guy's Hospital.
Palmer, W. J., of University College.
Parsons, Sydney, of University College.
Phillips, J. W., of Guy's Hospital.
Power, J. J., of Dublin.
Price, C. W., of University College.
Roberts, W. L., of Glasgow.
Satchell, W. A., of St. Mary's Hospital.
Shaw, J. E., of Bristol.
Sherratt, J. S., of University College.
Smith, R. T., of University College.
Thornton, Philip, of Guy's Hospital.
Tweedy, John, of University College.
Verley, R. L., of University College.
Warburton, E. S., of Liverpool.
Wilson, George, of University College.
Wood, Richard, of Guy's Hospital.

The following gentlemen passed on the 15th inst.:—

Barringer, T. S. W., of St. Bartholomew's Hospital.
Chatterton, James, of Dublin.
Evans, Samuel, of University College.
Evans, W. H., of St. Bartholomew's Hospital.
Greaves, William, of Guy's Hospital.
Harle, Ezra, of St. Bartholomew's Hospital.
Hawkins, H. B., of St. George's Hospital.
Heygate, W. H., of University College.
Hull, G. A., of University College.
Hutton, R. J., of St. Bartholomew's Hospital.
Image, F. E., of Edinburgh.
Latham, W. H., of St. Bartholomew's Hospital.
Leigh, Richmond, of Liverpool.
Lyons, Isidore, of St. Bartholomew's Hospital.
Martyn, G. T., of Dublin.
Times, L. K., of University College.
Turner, Horace, of University College.
Varvill, R. E., of Leeds.
Young, Adam, of St. Bartholomew's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 9, 1868:—

Austen, Sydney Charles, Luton, Beds.
Bell, Alfred James, Preston.
Calthrop, Christopher Wm., 62, Margaret-street.
Cox, Edgar, Maiden Newton, Dorset.
Graves, Alfred Burgess, Birmingham.
Sleightholme, John Pennock, Whitby.

The following gentlemen also, on the same day, passed their First Examination:—

Laws, Frederick John, St. Mary's Hospital.
Preston, Theodore Julian, St. Mary's Hospital.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

COLES, Mr. OAKLEY—Honorary Surgeon-Dentist to the Throat Hospital, Golden-square, W.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY, July 7.—The undermentioned officers have this day been promoted to the rank of Staff Surgeon in her Majesty's Fleet in consideration of their services, under her Majesty's Order in Council of July 6, 1866, with seniority of the 4th inst.:—Alexander Watson, Esq., M.D., and James Young, Esq., M.D. William Labdon Powell, Esq., has this day been promoted to the rank of Surgeon in her Majesty's Fleet, with seniority of 4th inst.

ADMIRALTY, July 14.—To be Honorary Physician to her Majesty, Sir Edward Hilditch, M.D., Inspector-General of Hospitals and Fleets.

MEDICAL DEPARTMENT.—Assistant-Surgeon Hugh Kennedy Maclachlan, from the 74th Foot, to be Staff Assistant-Surgeon, *vice* Pierce George Power, M.D., appointed to the 74th Foot; Assistant-Surgeon Robert Davidson Kemp, M.B., from the 33rd Foot, to be Staff Assistant-Surgeon, *vice* George Forbes Adams, placed upon half-pay.

BREVET.—The undermentioned officer, who has retired upon full pay, to have a step of honorary rank as follows:—To be Deputy Inspector-General of Hospitals, Surgeon-Major Charles William Pickering, Madras Establishment.

BIRTHS.

ADAMS.—On July 9, at 37, Harrington-square, N.W., the wife of William Adams, F.R.C.S., of a daughter, prematurely, stillborn.

ADLEY.—On July 14, at 11, Maida-hill West, the wife of W. H. Adley, Surgeon, Bengal Medical Service, of a son.

BARNES.—On July 9, at Dorset House, Ewell, Surrey, the wife of G. R. Barnes, M.D., of a son.

BOGGE.—On July 7, at Trusthorpe, Lincolnshire, the wife of E. Beverley Bogge, M.D., R.N., prematurely of a son, stillborn.

HAVILAND.—On July 8, at St. Leonard's-on-Sea, the wife of H. J. Haviland, M.D., of a daughter, stillborn.

MAY.—On July 10, at Tottenham, the wife of Edward Hooper May, M.D., of a daughter.

STEELE.—On July 12, at Guy's Hospital, the wife of Dr. Steele, of a daughter.

MARRIAGES.

BELL—NOEL.—On July 8, at Holy Trinity, Upper Tooting, John Tebbut Bell, Esq., of Herne-hill, Surrey, to Anne Mary, second daughter of Dr. Noel, of Upper Tooting, Surrey. No cards.

FOX—WARRINGTON.—On July 14, at the parish church, Keynsham, Edwin Fydell Fox, son of the late Dr. Fox, of Brislington, to Ellen, youngest daughter of William Warrington, Esq., of London.

SUTCLIFF—LEVEY.—On July 9, at St. Giles's, Camberwell, Edward Sutcliff, M.D., of Wandsworth, Surrey, to Fanny Elizabeth, eldest surviving daughter of Mr. George Levey, of Camberwell-grove, and Great Newstreet, Fetter-lane. No cards.

TYDD—JONES.—On July 2, at Bodenham, Hereford, B. Tydd, M.D., Surgeon 23rd R. W. F., to Mary Elizabeth, eldest daughter of the Hon. Robert Jones, Montreal, Canada.

DEATHS.

ANDERSON, JESSIE MARGARET, the beloved child of H. S. Anderson, M.D., at Selkirk, N.B., on July 8, aged 16. Friends are particularly requested to accept of this intimation.

BOBART, W. M., Surgeon, at No. 3, Litchurch-terrace, Derby, on July 10, in the 29th year of his age. Friends will please accept this intimation.

DAVIES, JOHN, Surgeon-Major, Army Medical Department, at Cheltenham, after a long illness, on July 11, in his 51st year.

MYERS, MARY, the dearly beloved wife of H. Myers, M.R.C.S.L., after several months of severe suffering, at 33, Milton-street, Dorset-square, on July 9, aged 56.

PROTHEROE, W. F. SCHAW, eldest son of E. Schaw Protheroe, Surgeon-Major R.A., at Dolewilim, Carmarthenshire, on July 7, aged 8.

RAMSBOTHAM, FRANCIS HENRY, M.D., F.R.C.P., at his son's residence, Woodend, Perthshire, suddenly, after several years of suffering, on July 7, aged 67. Friends are requested to accept this intimation.

WEEKES, Dr. HENRY, at Mansion-row, Brompton, Kent, on July 13, aged 54.

YOUNG, SARAH LOUISA, relict of the late Thomas Young, M.D., of the Bombay Medical Service, at 10, Peel-road, Kilburn-park, on July 8, aged 45.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Barnstaple Union.—Mr. T. A. Roberts has resigned the Eleventh District; area 28,385; population 2413; salary £56 per annum.

Lichfield Union.—Mr. Henry Edwards has resigned the Alrewas District; area 12,811; population 2777; salary £35 per annum.

Maidstone Union.—Dr. Stokoe has resigned the Fifth District; salary £55 per annum. Also the Workhouse; salary £85 per annum.

Melksham Union.—Dr. Edward E. Meeres has resigned the Second District; area 4486; population 1451; salary £25 per annum.

APPOINTMENTS.

Bellingham Union.—John Mason, M.R.C.S. Edin., to the Second District.

Cardiff Union.—Sydney Fennell, L.F.P. and S. Glas., M.D. St. And., L.S.A., to the Llandaff District, the Industrial Schools, and the Workhouse.

Crediton Union.—Samuel Staniland, M.R.C.S.E., L.S.A., to the Bow, Colebrooke, and Coldridge Districts.

Daventry Union.—Benjamin C. Gowing, M.R.C.S.E., L.S.A., to the First District and the Workhouse.

Liverpool Parish.—William H. Kirkpatrick, M.B. Edin., M.C. Edin., as Assistant Medical Officer at the Workhouse.

Newport (Mon.) Union.—John C. Lindop, M.R.C.S.E., L.S.A., to the First District and the Workhouse.

Scarborough Union.—Joseph H. Moore, M.R.C.S.E., to the Sherburn District.

Thetford Union.—Edward Bousfield, L.R.C.P. Edin., M.R.C.S.E., to the Croxton District and the Workhouse.

Wellingborough Union.—Edward R. Bird, L.R.C.P. Edin., L.F.P. and S. Glas., to the Wollaston District.

COLLEGIATE EXAMINATIONS.—It is stated that out of the eighty candidates examined at the College of Surgeons during the present week in Anatomy and Physiology no less than twenty-five were referred to their studies for three months, including one student who, having been detected in seeking extraneous assistance, was referred for six months. The last examination for the diploma of Membership for the present session will take place this day, Saturday.

MR. HUTCHINSON has requested us to invite the attendance of any members of the Profession interested in cryptogamic diseases of the skin at two lectures to be delivered at the Skin Hospital, Blackfriars, on Friday and Saturday evenings of this week. The lectures begin at 8.30 each evening, and will be delivered by Mr. Tuffen West, F.L.S., on the cryptogams which attack plants and their analogies with those affecting the human integument. Those interested in the rare malady known as Addison's keloid, may like to know that several patients affected with it are expected to attend at this Hospital on Tuesday next at half-past three, when opportunity will be afforded for their examination. Mr. Hutchinson's proposition regarding them is that they show the disease to be primarily one of the nervous system.

A CURIOUS case was tried at Barnstaple the other day. A trainer was charged with having poisoned a mare entered to run in a race against the one he was training. The evidence was partly circumstantial, but the most important was that tendered by Dr. Bird Herapath as to the condition of the stomach and the detection in it of hydrochloric acid. A mixture of this acid with compound tincture of lavender was also found in the possession of the trainer. Without entertaining such an estimate of Dr. Herapath's powers as that given by the prosecuting attorney, who described him as the first analytical chemist of the day, we conceive that it would be no difficult matter to find hydrochloric acid in the stomach of a horse. The post-mortem appearances go for something, but we confess we should have been glad to have known the quantity found and its state of combination. The man got five years' penal servitude.

AT the opening of the new house of the Medical Club in Spring-gardens, on Thursday, the 9th inst., Sir William Fergusson in the chair, Sir Charles McGrigor and Sir Ranald Martin in the vice-chairs, the chairman, in proposing the toast of the evening, "Success to the Medical Club," remarked that it was not proposed to limit the membership of the Club to Doctors, but to admit gentlemen connected with science and literature generally. Although there are already several members who are not Medical men, it has always been felt that as the Club was established mainly for the convenience of members of our Profession, it ought to bear some distinctive name. After much careful consideration of the subject, it was ultimately resolved to call it the "Medical Club." As there are no more devoted cultivators of science to be found amongst any class of the community than Medical men, it may fairly be anticipated that the Medical Club may ultimately become a favourite resort of the scientific men in the metropolis. Since the first establishment of the Club the number of members has continued steadily to increase, and they now muster about 700 names on the roll of the Club. To carry out all the improvements still in contemplation, it has been decided next year to increase the amount of the annual subscription.

AT a meeting of the Council of the Metropolitan Poor-law Medical Officers' Association, held on the 7th inst., it was resolved to recommend at the annual meeting, to be held on the 31st inst., that the title of the Association be altered to "The Poor-law Medical Officers' Association," and that all past and present Medical Officers in England and Wales be eligible for membership. As this alteration, if approved—of which there can be no doubt—will necessitate considerable modification of the existing rules, the Council will be prepared to submit a new code of rules which will, it is believed, be entirely satisfactory to the great body of Medical Officers. The "object" of the Association will be extended; but, at the same time, restricted more than hitherto to matters directly affecting the welfare and interests of the members. And as it is desired to build the new Association on the widest basis, the annual subscription will be fixed at five shillings. The Council will be considerably enlarged, and will comprise an equal number of metropolitan and provincial members, chosen equally from workhouse and district Medical Officers. The formation of local branches will be recommended, and local honorary secretaries appointed to aid in the organisation of the Association. Several gentlemen have already tendered their services in this capacity. Gentlemen desirous of becoming members, and those especially who are willing to act as local honorary secretaries, are requested to communicate with Dr. Rogers, 33, Dean-street, Soho, London, W. The annual meeting will be held on Friday, the 31st inst., at the Freemasons' Tavern, Great Queen-street, Lincoln's-inn-fields, at 2 p.m.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Bridgewater.—Mr. Hurman's letter next week.

S. M.—Consult the Senior Consulting Physician to the nearest Hospital—say Guy's or St. Thomas's.

A. B. C.—Our correspondent should remember that if some people saved their breath to cool their porridge, they would not have so much porridge to cool.

CÆSAREAN OPERATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Was Jane Seymour, the third wife of King Henry VIII., subjected to this operation? It is said to be so asserted in Baker's "Chronicles."

I am, &c. IGNORAMUS.

WHICH ST. THOMAS?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—When we speak of St. Thomas's Hospital most people think the saint was he who on one memorable occasion was "suffered to doubt for the more confirmation of the faith." But I shrewdly suspect that the real patron of the Hospital is St. Thomas of Canterbury, the glorious mediæval martyr to the independence of the Church or the turbulent underminer of civil authority, whichever you please to think him. Anyhow, the widespread veneration for St. Thomas à Becket amongst our English forefathers is a phenomenon that fills one with wonder.

I am, &c. H.

MEDICAL REPRESENTATIVES FOR THE MEDICAL UNIVERSITIES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I imagine most Medical men must agree with your remarks concerning the choice of representatives for the newly enfranchised universities; yet the position taken up by the Medical candidates is, I fear, incompatible with success. They repudiate with indignation the proposal to Gladstonise their own universities in one direction, but propose to legislate offensively in another for the English and Irish places of education.

The constitution of the University of London may be perfect, but many prefer a denominational education, and consider that their prejudices should be respected. If every university in the three kingdoms is Gladstonised, an effort will be made to establish a new one. The proposal to improve Medical education and amalgamate the examining boards deserves our gratitude; but why should religion be interfered with?

The Conservative lawyers propose to allow each place of education to decide the nature of its constitution, and upon that ground are gaining promises of support. I am, &c.

AN M.A. OF A SOUTHERN AND AN M.D. OF A NORTHERN UNIVERSITY.

UNIVERSITY VERSUS KING'S.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the last number of your journal (July 11), a correspondent, in referring to King's College, very justly makes mention of certain distinguished names in connexion with the Medical department of that institution, but forgot to include the names of Dr. Francis Hawkins and Dr. Gilbert Burnett; Messrs. Hancock, Canton, Smee, and I think I am right in including Quekett and Tomes. Thirty or more years ago poor Toynbee was there. Your correspondent goes on to say, "Where shall we look for such a brilliant array of names as those we find amongt its past and present teachers and students?" I should like your correspondent to glance over the subjoined list of names in connexion with another of our London Colleges:—

Past and present Professors: Sir R. Carswell, Sir W. Jenner, Drs. Jones Quain, John Lindley, A. T. Thomson, D. D. Davis, C. J. B. Williams, W. H. Walshe, W. B. Carpenter, W. Sharpey, R. E. Grant, A. B. Garrod, Wilson Fox, R. Reynolds, G. Hewitt, Messrs. R. Liston, S. Cooper, T. Morton, R. Quain, J. E. Erichsen, John Marshall, Durancé George, G. V. Ellis, and, though last not least, Sir C. Bell. As regards former students, my memory supplies me with the following names:—Sir H. Thompson, Drs. Mouat, R. Quain, Stocks, E. Ballard, J. H. Davis, E. Parkes, C. J. Hare, J. C. Bucknill, E. Lankester, Humphrey Sandwith, Thomas Hillier, G. Harley, G. Buchanan, M. Foster, Roscoe, Gladstone, Messrs. E. Wilson, W. Cadge, Lister, W. H. Flower, S. Sibley, J. Maclise, T. Ashton, J. T. Clover, B. Hill, A. Bruce, Gamgee (brothers). I could swell out the list of "brilliant array" No 2, but will now apologise for having troubled you with these remarks. I am, &c. H. B. TUSON.

July 14.

THE "PER CASE" SYSTEM IN THE ROYSTON UNION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I hope you will correct as early as possible a statement which appeared in your impression of June 27. At the meeting of Poor-law Medical officers, at the Freemasons' Tavern, on June 24, I am reported to have stated that the "per case" system of payment for Medical relief was introduced in the Royston Union in consequence of a representation of the Medical officers, and that for casual orders a fee of 10s. 6d. was paid, this fee to include payment for attendance upon the wife and family. This is wholly incorrect. The "per case" system of payment has been in operation in the Royston Union since its formation upwards of thirty years ago, and was not introduced upon the representation of the Medical officers, though they all approve of the system. The fee of 10s. 6d. paid for the order includes attendance for one individual only. Every casualty is paid for at the rate of 10s. 6d., only those cases excepted which are ruled by the consolidated order of the Poor-law Board—fractures, midwifery, etc.

Royston, July 15. I am, &c. D. B. BALDING.

COMMUNICATIONS have been received from—

Dr. WILSON; Mr. T. HODGSON; S. M.; Dr. JOSEPH ROGERS; Dr. EDWARDS CRISP; Mr. WELCH; Dr. CHARLES DRY-DALE; Dr. SHERIDAN MUSPRATT; Mr. J. HURMAN; Dr. LORY MARSH; Dr. GIBBON; Mr. H. B. TUSON; Dr. RALPH RICHARDSON; Dr. CATTLIN; Mr. J. CHATTO; Dr. BARNES; Dr. SYMES THOMPSON; Mr. R. BEVERIDGE; Mr. D. B. BALDING; Mr. DONNELLY.

BOOKS RECEIVED—

Journal of the Scottish Meteorological Society, No. 18—Wanklyn and Chapman on Water Analysis—Trevelyan's British Army in 1868—The Lothian Medical Association, Second Annual Report, 1868—Pacific Medical and Surgical Journal, June, 1868—Twenty-second Report of the Commissioners in Lunacy—Canada Medical Journal, No. 12—Bemister's Levity and Gravity—Principles of Organic Life—Paine's Institutes of Medicine, eighth edition—St. Andrews Medical Graduates' Transactions—The York Star, vol. viii. No. 3.

NEWSPAPERS RECEIVED—

North Devon Journal—Indian Medical Gazette, vol. iii. No. 6—Medical Press and Circular—Harrogate Advertiser.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 11, 1868.

BIRTHS.

Births of Boys, 1111; Girls, 1032; Total, 2143.
Average of 10 corresponding weeks, 1858-67, 1858·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	774	731	1505
Average of the ten years 1858-67	661·9	592·1	1254·0
Average corrected to increased population	..	..	1379
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,888	1	2	6	4	2	10	48	4
North ..	618,210	3	9	11	2	8	15	71	2
Central	378,058	1	1	3	2	1	5	41	2
East ..	571,158	2	12	7	3	9	14	62	2
South ..	773,175	2	7	12	3	22	15	78	9
Total ..	2,803,989	9	31	39	14	42	59	300	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·949 in.
Mean temperature	65·7
Highest point of thermometer	85·0
Lowest point of thermometer	48·2
Mean dew-point temperature	53·3
General direction of wind	Variable.
Whole amount of rain in the week	0·13

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 11, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending July 11.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending July 11.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2143	1441	1505	85·0	48·2	67·7	0·13	13
Bristol (City)	167487	35·7	98	75	*74	..	..	..	..	..
Birmingham (Boro')	352296	45·0	272	171	178	79·8	49·4	63·4	0·00	0
Liverpool (Borough)	500676	98·0	361	290	260	80·9	53·0	63·1	0·02	2
Manchester (City)	366835	81·8	256	208	*252	82·0	48·5	62·0	0·04	4
Salford (Borough)	117162	22·7	69	59	61	80·0	46·8	61 0	0·04	4
Sheffield (Borough)	232362	10·2	160	122	127	76·0	46·0	60·9	0·07	7
Bradford (Borough)	108019	16 4	74	55	54	..	..	..	..	..
Leeds (Borough)	236746	11·0	114	120	134	78·5	47·5	61 8	0·27	27
Hull (Borough)	108269	30·4	88	50	57	83·0	43·0	59·5	0·01	1
Nwcstl-on-Tyne, do.	127701	23 9	91	68	67	72·0	46·0	57 5	0·18	18
Edinburgh (City)	177039	40·0	131	85	63	73·7	48·0	59·6	0·00	0
Glasgow (City)	449868	88·9	344	262	235	74·3	49·3	59·4	0·00	0
Dublin (City and some suburbs)	319985	32·8	153	157	101	77·5	44·4	61 9	0·73	74
Total of 14 large Towns	6391080	34·7	4354	3163	3168	85·0	43·0	61·5	0·12	12
					Week ending July 4.	Week ending July 4.				
Vienna (City)	(1863) 560000	..	..	..	..	..	..	..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·949 in. The barometrical reading, which was 30·03 in. by 9 a.m. on Friday, July 10, and was nearly constant till after 9 a.m. on Saturday, July 11, decreased to 29·96 in. at the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 61·6°.

APPOINTMENTS FOR THE WEEK.

July 18. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

20. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

21. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

22. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m. Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m. University College Hospital, 2 p.m.

24. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVI.

TURNING CONTINUED—IMITATION OR FACILITATION OF DELIVERY BY THE PROCESS OF SPONTANEOUS EVOLUTION — EVISCERATION — DECAPITATION — EXTRACTION OF A DETRUNCATED HEAD FROM THE UTERUS.

We have discussed the mode of dealing with those cases of difficult shoulder-presentation in which, the uterus having contracted closely upon the child, the shoulder is more or less firmly, but not immovably, fixed in the pelvic brim. In the majority of cases of this kind we are justified in attempting to turn, because there is still a prospect of the child being preserved.

But there are cases in which matters have proceeded a stage further, in which the shoulder and corresponding side of the chest are driven deeply into the pelvis—in which, consequently, the body is considerably bent upon itself. Now, this can only occur after protracted uterine action, such as is scarcely compatible with the life of the child. Either the child was already dead at an early stage of labour—a condition, especially if the child were also of small size, most favourable to the carrying out of this process of spontaneous evolution—or the child has been destroyed under the long-continued concentric compression of the uterus.

In the presence of such a case, the first question we have to consider is—Will Nature complete the task she has begun? Will the child be expelled spontaneously? A little observation will soon enable us to determine how far this desirable solution of the difficulty is probable, and when we ought to interpose. If the pelvis is roomy in proportion to the child; if the child is dead, small, and very flaccid; if we find the side of the chest making progress in descent under the influence of strong uterine action possessing an expulsive character, and if the patient's strength be good, we shall be justified in watching passively. But if we find no advance, or but very slow advance, of the side of the chest, the child being large and not very plastic; if the uterus has ceased to act expulsively, and the patient's strength is failing, we must aid delivery. Then comes the second question: In what manner? This must depend upon the circumstances of the case. If a little help *a fronte* to make up for deficient *vis a tergo* promise to be enough, we may imitate the proceeding of Peu, who, in a case in which spontaneous evolution was in progress, passed a cord round the body to pull upon and aid the doubling.

Or we may much facilitate the doubling and expulsion by *evisceration*. This operation consists in perforating the most bulging part of the chest, and picking out the thoracic and abdominal viscera. When this is done, traction upon the body by the crotchet or the craniotomy forceps, and dragging in the direction of Carus's curve, will commonly effect delivery without difficulty. This operation is represented in Fig. 77.

Sometimes perforation and evisceration are insufficient in themselves, and another step will be necessary in order to complete delivery. This ultimate step is *decapitation*, an operation of extreme importance, capable of bringing almost instant relief and safety to the mother. It is pointed out by Celsus, and was clearly described by Heister after Von Hoorn.

The recognition, or at least the application, of this proceeding is so inadequate, that I think it useful to state the arguments in favour of it with some fulness.

The late Professor Davis, in his great work ("Obstetric Medicine"), a work too much neglected by his successors, says:—"It may be considered a good general rule never to turn when the death of the child is known to have taken place." In cases of long impaction he recommends an operation to be performed *upon the child*—namely, *bisection of the child at the neck*." Again, he says: "It ought to be an established rule in practice to decapitate in arm-presentations not admitting of the safer performance of turning."

Fig. 77.



Fig. 77 represents extraction after perforation of the chest, and delivery in imitation of spontaneous evolution.

Dr. Ramsbotham also (*Medical Times and Gazette*, December, 1862) says:—"It appears to me better practice either to eviscerate or decapitate the fœtus than to endeavour to deliver by turning, in all cases where the uterus is so strongly contracted round the child's body as to cause apprehension of its being lacerated by the introduction of the hand; because if such a degree of pressure is exerted on it as to render the operation of turning very difficult, the child must have died, either from the compression on its own chest, or on the funis, or on the placenta itself."

Such men speak with an authority that commands respect. Their opinions are not the crude utterances of dogmatism presuming on a little reading and small experience, but conclusions drawn from repeated encounters with great emergencies. The justness of the rule thus distinctly expressed by Davis and Ramsbotham is attested by the practice of the most eminent Continental Practitioners. Decollation was practised in six cases by l'Asdrubali (1812), by Paletta ("D Parto per il Braccio," Bologna, 1808), by Braun of Vienna, by Lazzati of Milan ("Del Parto per la Spalla," 1867), and by many others.

Various instruments have been designed to effect decapitation. Ramsbotham's hook is perhaps best known in this country, and it has served as a model for several modifications made abroad. It is named after the first Ramsbotham. It was described and recommended by Professor Davis. It consists of a curved hook, having a cutting edge on the concave part, supported on a strong straight stem, mounted on a wooden handle. Professor Davis also used another instrument of his own contrivance—the guarded embryotomy knife. It consists of two blades working on a joint like the forceps. One blade is armed with a strong knife on the inner aspect. The other blade is simply a guard; it is opposed to the knife, and receives it when the neck is severed.

A plan sometimes resorted to is to carry a strong string round the neck, and then by a to-and-fro or sawing movement, effected by cross-bars of wood on the ends to serve as handles, to cut through the parts.

In a discussion on the subject at a recent meeting of the

Edinburgh Obstetrical Society, Dr. C. Bell suggested the use of an instrument like that for plugging the nares in epistaxis to carry a cord. Dr. Keiller mentioned an instrument designed by Dr. Ritchie, like an écraseur, with a perpetual screw and chain.

Strong scissors have been made for the purpose, which cut through the vertebræ. A good instrument of this kind has been designed by Dr. Mattéi, of Paris. I believe it is a very useful form, as it is sometimes easy to cut through the spine when it is difficult to pass a hook over the child's neck. It resembles the surgical bone-forceps.

It is important to remember that the spine may be divided by piercing the vertebræ with the common perforator, then separating the blades so as to rend or crush asunder the bones. What remains may then be divided by scissors. Failing special instruments, the spine may be divided by strong scissors, or even by a penknife or a Wharncliffe blade.

The favourite instrument in Germany and Italy is Braun's blunt hook or "decollator." I have not tried it, having hitherto used Ramsbotham's cutting hook; but I am inclined to think it is a better instrument than Ramsbotham's. Dr. Garthshore performed the operation with an ordinary blunt hook. It is certainly desirable to do away with the cutting edge, which is not without danger to the mother and the operator. Braun's instrument is twelve inches long, including the thickness of the handle; the greatest width of the hooked part is one inch; the greatest thickness of the stem is from four to five lines. Lazzati introduces a gentle curve into the stem near the hook.

The Operation of Decapitation.—It will be best described as consisting of *three stages*. The first stage is the application of the decapitator and the bisection of the neck; the second is the extraction of the trunk; the third the extraction of the head.

The First Stage.—The patient may lie on her left side. Take Ramsbotham's hook or Braun's decollator. As the instrument should be passed up over the back of the child's neck, it is, in the first place, necessary to ascertain whether the position be dorso-anterior or abdomino-anterior. It is also necessary to determine accurately whether the fœtus is still in great part above the brim lying transversely or obliquely, in which case the head and neck will be in one or other side; or whether, a great part of the chest having descended into the pelvis, the movement of rotation has taken place, in which case the head and neck will be found in front near the symphysis. The observation of the relations of the prolapsed arm and exploration with the hand internally will inform us as to these particulars. The next step is to get an assistant to pull upon the prolapsed arm, so as to bring down the shoulder and fix it well. This brings the neck nearer within reach. The operator then passes his left hand, or two or three fingers, if this be enough, into the vagina, over the anterior surface of the child's chest, until his fingers reach the fore part of the neck. With his right hand he then insinuates the hook, laying flat, as in the dotted outline in Fig. 78, between the wall of the vagina and pelvis and the child's back, until the beak has advanced far enough to be turned over the neck. The beak will be received, guided, and adjusted by the fingers of the left hand. The instrument being *in situ*, whilst cutting or breaking through the neck, it is still desirable to keep up traction on the prolapsed arm. In using Ramsbotham's hook, a sawing movement must be executed, carefully regulating your action by aid of the fingers applied to the beak. If Braun's decollator be used, the movement employed is rotatory, from right to left, and at the same time, of course, tractile. The instrument crushes or breaks through the vertebræ. When the vertebræ are cut through, some shreds of soft parts may remain. These may be divided by scissors, or be left to be torn in the *second stage* of the operation—*the extraction of the trunk*.

The wedge widening above the brim, that hitherto obstructed delivery, is now bisected, divided into two lesser masses, each of which separately can readily be brought through the pelvis. By continuing to pull upon the prolapsed arm the trunk will easily come through, the head being pushed on one side out of the way by the advancing body. (See Fig. 79.)

The Third Stage: The Extraction of the Head.—The problem how to get away a detruncated head left behind in the uterus is not always easy of solution. In the case before us, the child having probably been dead many hours, the bones and other structures have lost all resiliency, the connexions of the bones are broken down by decomposition, and the whole becomes a plastic mass, easily compressible. Such a head will sometimes be expelled spontaneously. I have taken away a head, under the circumstances under discussion, by seizing it with my fingers. On the other hand I have on several occasions been called in to extract a head which resisted ordinary means. There are three modes of action. The crotchet, the forceps, or the craniotomy forceps may be used. If the *crotchet* can be passed into an orbit, or into the cranial cavity, getting a good hold, this plan may answer. The objection to it is the difficulty of getting such a hold, and the risk of the point slipping and rending the soft parts of the mother. The head, being loose, rolls over in the uterus when an attempt is made to seize it. I therefore discard the crotchet.

Fig. 78.

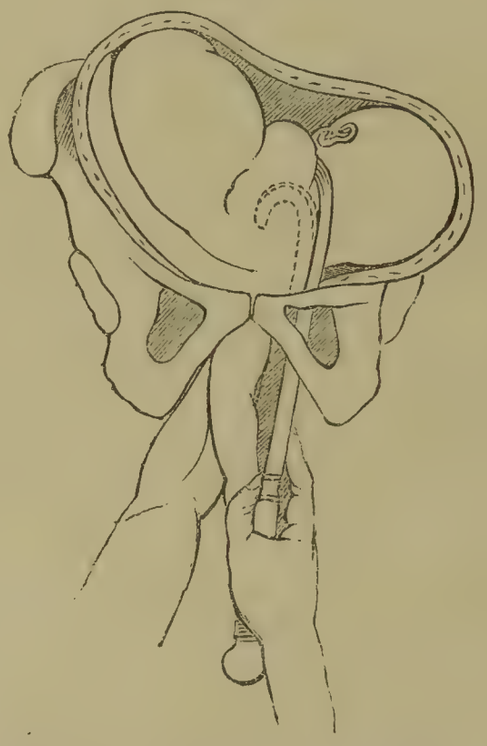


Fig. 78 represents the first stage of delivery by decapitation. The dotted outline shows how the hook (Ramsbotham's) is introduced, lying flat upon the back of the child's neck, the beak being then turned over the neck, and meeting the fingers of the left hand on the anterior aspect.

Fig. 79.



Fig. 79 represents the second stage of delivery after decapitation, or extraction of the trunk by pulling on the prolapsed arm. The head, no longer linked to the body, is pushed out of the way as the trunk descends.

The *forceps* is better adapted. If the head can be seized, which is not always easy, for it is apt to escape high above the brim, and roll about when touched by the blades, extraction is not difficult. Care must, moreover, be taken to seize the head in such a manner that the spicula resulting from the severance of the vertebræ shall not drag along or injure the mother's soft parts.

I prefer the *craniotomy-forceps* as being much the most certain and safe. In order to obtain a hold, it is generally necessary first to perforate. The free rolling of the head when pressed by the point of the perforator tends to throw this off at a tangent, missing the cranium, and endangering the soft parts of the mother. To obviate this difficulty, the head must be firmly fixed down upon the pelvic brim by an assistant, who grasps and presses the uterus and head down by both hands spread out upon them. The operator then, feeling for the occiput with two fingers of his left hand, and guided by them, carries up the perforator with his right hand taking care that the point shall strike the head as nearly perpendicularly as possible. He then, partly by a drilling, screwing, boring motion, partly by pushing, perforates the cranium. The drilling movement avoids the necessity of using much pushing force, and thus lessens the risk of the instrument slipping.(a) When a sufficient opening is made into the cranium, the craniotomy-forceps is applied, one blade inside, the other outside; the blades are adjusted and locked; and traction made in the orbit of Carus' curve commonly brings the head away without further difficulty. During extraction, the fingers of the left hand should be kept upon the skull at the point of grasp by the instrument, guarding the soft parts from injury by spicula, and regulating the force and direction of traction. In cases where there was difficulty in extracting the trunk, Dr. D. Davis used a double-guarded crotchet, the two blades of which, fixing themselves in the trunk, extracted like a forceps.

Fig. 80.

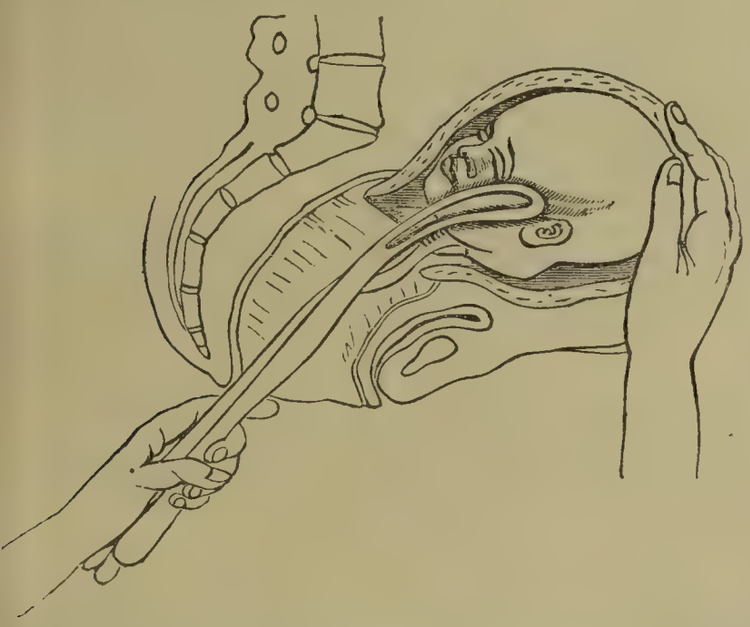


Fig. 80 represents the third or last stage of delivery after decapitation The head is seized by the craniotomy-forceps, and contraction is made in the direction of Carus' curve.

If there be any likelihood of difficulty in extraction, there is a last and an effectual resource in the cephalotribe. When the head is left behind after turning in contracted pelvis, the cephalotribe to crush down the head is invaluable.

At a meeting of the Council of the Royal College of Surgeons of England, held on the 9th inst., Mr. L. Jones Moseley was appointed to the office of Assistant in the Museum in the vacancy occasioned by the resignation of Dr. Pettigrew in January last.

(a) It is in perforating under such circumstances that the vice of perforators curved in the blades is most apparent. Such instruments can hardly strike in a true perpendicular, and the point is almost certain to glide off. The superiority of a straight powerful perforator like Oldham's will not be disputed by any one who has had to perforate under difficulties. The trephine-perforators are not applicable to the case under discussion, owing to the difficulty of fixing the head.

ORIGINAL COMMUNICATIONS.

ON THE SO-CALLED "AMYLOID" REACTION OF THE ALBUMINOID, WAXY, OR LARDACEOUS DEGENERATION.

By J. WICKHAM LEGG, M.B. Lond.,
Assistant-Curator of the Anatomical and Pathological Museum at University College.

The well-known "amyloid" reaction produced by treating with iodine and sulphuric acid organs affected by the albuminoid, waxy, or lardaceous degeneration, and considered by Virchow to indicate a connexion between this new product and a group of compounds which do not appear as normal constituents of the body, has never found much favour in this country, and many pathologists have been unable to obtain the results described by Continental observers. This difficulty may have arisen in part from a misapprehension as to the best method of employing the test, but in particular from the fact that the blue colour cannot be obtained in all cases, and that it rarely if ever resembles the blue obtained by acting upon cellulose or amylaceous matter with the same reagents.

Two methods of employing this test are at present practised in Berlin for the production of the blue colour. One way, still recommended by Virchow in his lectures, is to use small quantities of very concentrated reagents. A drop of a strong solution of iodine is allowed to fall on the cut surface of the organ under examination, and soak into the tissue; then a drop of concentrated sulphuric acid is let fall upon the spot where the iodine has been absorbed, and in fortunate cases a blue colour may be produced; but I have never seen this succeed, and it is acknowledged that the colour is very transient, owing to the rapid destruction of the tissues by the sulphuric acid. The other way is to use very dilute reagents. For example, a solution of iodine is employed which contains only so much iodine as can be dissolved by an aqueous solution of iodide of potassium of 5 per cent. strength, and the sulphuric acid is diluted with twenty to thirty times its bulk of water; a thin section of the organ is made with a razor or Valentin's knife, well washed with water to remove the blood, which forms a compound with iodine easily mistaken for albuminoid staining, and placed in the weak solution of iodine; it is allowed to remain there about four or five minutes until the unaffected parts have assumed a yellow colour, and is then washed free from superfluous iodine. The well-known reddish-brown staining of all the smaller arteries, the Malpighian corpuscles in the kidney, for example, is well shown. If the section be now placed in the dilute sulphuric acid, the reddish-brown parts quickly become black-blue in colour; in some places, where the masses are not very thick, a much lighter blue may be seen, and where the edges of the dark blue patches join the yellow staining of the surrounding tissue, a green discoloration very often appears. In rare cases, it is said that a pure violet colour may be obtained, but I have never been fortunate enough to see this, and the dark black-blue is the only colour which was shown to me in Berlin as the true "amyloid" reaction.

I do not think that any one can consider the albuminoid and cellulose reactions identical, as the colours, especially under the microscope, are so very different. The colour derived from cellulose is a pure light sky-blue; that from albuminoid tissues a black-blue. On the other hand, there can be no doubt that the albuminoid is a distinct blue, as is shown by the production of a green where it happens to come in contact with the yellow.

The reaction with cellulose differs from that with the albuminoid substance in other particulars; for example, it is only possible to produce a blue with cellulose when concentrated sulphuric acid is used. The best method of producing the albuminoid reaction is to employ a very dilute sulphuric acid. I have found also that the dilute nitric and hydrochloric acids, and even acetic acid, give the reaction with the albuminoid substance as distinctly as sulphuric acid; while with these acids and cellulose no colour is produced.

It is well known that the colour of the albuminoid tissue fades after a few days, but it may easily be brought out again by immersion in iodine and sulphuric acid. If the colour of the cellulose be removed by the action of ammonia, and the cellulose be again stained with iodine and treated with sul-

phuric acid, no blue colour is produced, but only a charring of the woody fibre, with liberation of iodine, takes place. The fading of the albuminoid colour, when left to itself, may occupy a week or a few months; the discharge of the colour may, however, be brought about more rapidly by some reagents, all of them solvents of iodine. Thus, alcohol and iodide of potassium remove the colour somewhat slowly; the caustic alkalies act more rapidly, and the quickest of all is caustic ammonia. With the latter reagent the bleaching is complete, the section becoming as colourless as before its immersion in the iodine. The bleaching with these solvents of iodine occurs also with the blue of cellulose, ammonia, as with the albuminoid tissues, acting the most rapidly of all.

Dr. Dickinson (*Med.-Chir. Trans.*, vol. l.) states, as the result of his experiments, that the addition of a small quantity of caustic soda or potash to the albuminoid substance destroys its power of producing the reaction with iodine. I have immersed sections of albuminoid organs in weak caustic soda or potash, only diluted so far as not immediately to destroy the tissues, and then proceeded to test the sections by the second method described above, and in every case I have succeeded in obtaining the reaction as perfectly as if no alkali had been used. I have then removed the colour with caustic alkali, and again subjected the section to iodine and sulphuric acid and obtained the reaction as well as at first, and I have repeated the staining and discharge of the colour with alkali six or eight times in the same specimen. In the same paper, it is also stated that a substance prepared from fibrin by digestion in water containing ·6 per mille of hydrochloric acid, gives a reaction identical with the albuminoid substance. This body, called by Dr. Dickinson "dealkalised fibrin," is identical with syntonin, a substance long known as the chief constituent of muscle. I have prepared this "dealkalised fibrin" according to the directions in the paper mentioned above, and have tested it with iodine and sulphuric acid in the way I have described. The results are, that with iodine the "dealkalised fibrin" or syntonin gives a light brown staining, very different, it is true, from the yellow staining of ordinary fibrin, but still not to be mistaken for the reddish brown so characteristic of the albuminoid change. With dilute sulphuric acid, there is absolutely not a trace of a reaction, the stained substance remaining of exactly the same colour as before its immersion in the acid.

The old opinion that the reaction was owing to the presence of a body allied to the starches had to be abandoned after Kekulé and Friedreich's analysis, which clearly demonstrated the relation of the albuminoid substance to the protein group, as will be seen by comparing the composition of normal fibrin and albumen with that of the albuminoid substance.

	C	H	N	O and S
Fibrin . . . . . =	53·58	7	15·04	23·38
Albumen . . . . =	53·60	7	17·4	23·
Albuminoid substance . =	53·50	7	15·5	24·

In England the opinion is generally current that the blue colour is due simply to the precipitation of the iodine upon the parts affected by the albuminoid degeneration. When the sulphuric acid decomposes the iodide of potassium which holds in solution the free iodine, the latter is precipitated upon the tissues affected by the albuminoid degeneration, which in this case is supposed to have a peculiar affinity for iodine, and in this manner the peculiar reaction is produced. If this were true, not only should the colour produced be that of precipitated iodine, but the reaction should only occur with those acids which are capable of decomposing the iodide of potassium. For example, the reaction should not occur with pure nitric or pure hydrochloric acids, but only with nitric acid containing some of the lower oxides of nitrogen, or hydrochloric acid containing free chlorine. I have, however, found that the reaction may occur as well with the pure as with the impure acids and, what is of greater importance, with acetic acid, which has no power of decomposing the iodide. It is true that the solvents of iodine, the caustic alkalies, ammonia, etc., have the power of removing the colour, but this is not peculiar to the albuminoid reaction: it occurs equally well with that of cellulose, a reaction which has never been attributed to the precipitation of iodine.

Dr. Dickinson draws three conclusions from his experiments on the albuminoid substance. The first is that "the morbid deposit loses its characteristic reaction when allowed to absorb potass or soda." I have mentioned above the ease with which I have procured the reaction after steeping the albuminoid section in potash or soda; the only explanation which I can offer of this conclusion is that too concentrated solutions of the alkalies were used, and that they have dissolved or destroyed the albuminoid substance in the same manner as they would affect any other tissue. The second conclusion, "that organs containing this deposit yield on analysis a smaller proportion of the alkalies than do the same organs in a state of health," is founded on analysis of albuminoid and healthy organs made with special reference to the quantity of potash and soda salts contained in them. The percentage of alkaline salts in six albuminoid livers is given and compared with the quantity contained in seven healthy livers. Let us see how this second conclusion is borne out by the figures which the author himself gives. Four out of the six cases of albuminoid liver contain a percentage of potash and soda either equal to, or very little indeed below, the percentage of four healthy livers. The numbers are as follows:—

Albuminoid.	Healthy.
·380	·379
·410	·419
·395	·406
·316	·314

The remaining two albuminoid livers contained respectively ·276 and ·173 per cent. of alkaline salts. But the figures above speak for themselves; they "would never have been looked upon" as evidence of the decrease of alkaline salts in albuminoid organs, "except by a person whose impartiality of observation had been warped by a desire to connect the morbid change" with the removal of alkali from the body.

The third conclusion arrived at is "that ordinary fibrin can be made to exhibit all the peculiarities of the 'amyloid' tissue by depriving it of alkali." Probably the light brown of the syntonin was mistaken for the reddish brown of the albuminoid substance, and the observer was thus induced to consider this a proof of the identity of the two substances. There is, moreover, another fact unfavourable to this theory—viz., that the muscles, which contain so large a quantity of syntonin, do not in health give the albuminoid reaction, but only in cases where the albuminoid degeneration has affected them. Even if syntonin did give the same reaction as the albuminoid substance, no conclusion as to the identity of the two bodies would necessarily follow, as cholestearin gives with iodine and sulphuric acid precisely the same reaction as the albuminoid substance itself; yet the two bodies are distinct in their chemical composition.

It cannot, then, be admitted that the problem of the albuminoid degeneration is solved, either by the amyloid theory or by the view that the colour is due merely to precipitated iodine; still less can it be explained by the latest hypothesis—the dealkalisation of the body.

EXISTENCE OF YELLOW FEVER IN PERU PRIOR TO 1833.

Translated and communicated by Dr. ARCHIBALD SMITH, late of Lima.(a)

In the Lima newspaper, called *El Comercio*, of May 7, 1868, the important paper here translated will be found, communicated by an eminent writer and Physician of that city, Dr. Jose Casimiro Ulloa, in the following terms:—

"It is a fact admitted to the present day, in science, that yellow fever has its circumscribed geographical limits which it has never passed. Thus it is believed that it has never crossed the boundary of 48° of N. lat. and 27° South; and within these limits having populations exempt from its invasion. Within these limits was placed Peru until 1853, when the appearance of yellow-typhus fever in Lima came to dispel these affirmations. In effect, Moreau de Jonnes, who in 1822 traced the geographical chart of yellow fever, considered Guayaquil as its boundary line; and M. Melier, in his celebrated report on the yellow fever that reigned in St. Nazaire (San Nazario) in 1861, conceived that the western shores of the Pacific were exempted from this malady; and he even assigned the grounds of this exemption. When in the year 1856 the Medical Society of Lima discussed the origin of the epidemic of 1853, it was a fact also established that yellow fever, in epidemic form at least, had not before that time appeared in Peru.(b) Those who combated the exotic

(a) Read before the Epidemiological Society, July 6.

(b) In 1852, this epidemic reigned along the coast of Peru in its incipient form.—Translator, A.S.

origin of the epidemic, in vain sought for antecedents on which to ground a contrary opinion; for among the contradictory writings of our old Physicians not one fact was recorded which could manifest the existence of epidemic yellow fever in the country before 1853. Nevertheless, there was registered among the records of science evidence on this very subject which at that stage of our search eluded our notice, but we have since met with it in our examination of old treatises, especially French, regarding yellow fever (*tifus amarillo*). Amongst these one very little read or consulted is by M. J. B. Lebland, a Physician and naturalist, who was sent by the French Government in the year 1779, to study intertropical regions, and in these circumstances it was that he resided in Lima from the said year (1779) to 1781. Well, then, this M. Lebland, in rendering an account of the diseases which prevailed in Peru during his own residence in Lima, says as follows. After relating how and wherefore he had found himself obliged to combat the tenets of the Physicians of Lima on the treatment of dysentery, he expresses himself in these terms:—

"'This doctrine, I repeat, very different from that entertained by the Lima Doctors, was in the long run adopted by some, and the rest culled out charlatanism! Notwithstanding, two years after my arrival in Lima (1781), I had the brilliant opportunity of testing my doctrine in the military Hospital at Callao, situated two leagues from the capital, where the Physician and one of the two Surgeons happened to have just died of an epidemic which they called *la peste*, or pestilence.

"'By order of the Viceroy, commissioned by the Protomedico, I set out at nine at night to ascertain the state of matters. On the road I met the second Surgeon, who was conveyed in a moribund condition. I arrived, and saw 120 sick in two wards, shut in on every side, and attacked with the epidemic that reigned in Lima—namely, *el bicho*, or dysentery. In a third ward there were shut up the patients who they said were pest-smitten, thirteen in number. The apothecary, aged, acclimatised, and full of experience, informed me that the sick in the third ward were mariners arrived from Chili three months ago, and that nine had died in eight days, the greater number with convulsions, and others of hæmorrhage by the mouth, tongue, and eyes; that all of them had been attacked with vomiting of a dark colour, and, in short, that it was black vomit, a disease which he knew well, as he had seen it in Carthagena and Portobello. He added that the first who had been brought to Hospital, five in number, belonged to a vessel loaded with wheat, proceeding from Chili; that this cargo of grain had been damaged by water on the voyage; that he had gone on board as a visitor, and that he himself, with those who had descended between decks, experienced great heat, vertigo, headache, all caused without doubt by the wheat in a state of fermentation.

"'Whilst the windows were being opened and the air of the ward purified with fumigations of vinegar, etc., I had all the fever cases affected with vertigo and vomiting, to the number of twenty-five, whom the apothecary pointed out to me, removed to another ward. They were sailors, all strangers come from Chili—that is to say, from a cold climate, like that of Europe, and consequently non-acclimatised.

"'The cinchona bark, in substance or in décoction, mixed with sulphuric acid and a few decigrammes of jalap or of laudanum, was administered to all those affected with vertigos, debility of pulse, hæmorrhages, petechias, and those other symptoms which accompany confirmed yellow fever. Sinapisms and other coadjuvants were also employed according to circumstances. Some of the patients, attacked with a furious delirium and as yellow as a quince, were bound hand and foot. I ordered ice applications to their heads. Such were my arrangements on the first night of my attendance. On the following morning I administered the emetic to the fever patients of the two first wards, who laboured under the reigning epidemic, and to those of the third ward, who were suffering from yellow fever. This remedy was used with the precautions indicated in the treatment of yellow fever. Those who were able to support the quina felt better. Three had succumbed without any remedy having been taken by them. Of the two attacked with delirium, one died; the other had recovered consciousness, and only experienced debility. He was covered in a general perspiration, which terminated the delirium and determined recovery.

"'At eight in the morning four coaches arrived from Lima, conveying the Protomedico and twelve Physicians that accompanied him. They were surprised to see that all the sick inmates were actually emeticised or placed under large doses of cascarilla—viz., cinchona—or put on a regimen of fruit and lemonades, etc. Some were better, others alleviated, and the rest, to say the least, as well as on the preceding evening. If my curative method was not applauded, at any rate it was not disapproved; it could only be justified by the final result.

"'They took their leave, and I remained superintending in person all proper means to purify the wards, the clothing, and everything that could be suspected to contain infection.

"'It would be a useless repetition to quote the curative means used in the treatment of the yellow-fever patients, which for want of proper precautions had become contagious in Hospital, but only among the strangers. The Physician and two Surgeons, who were most exposed to the contagion, were all three Europeans, and probably lost their lives in consequence of the bad treatment that had been pursued in regard to them. Bleeding, emollients, and certain beverages sweetened with syrup of Granada, which the native Physicians had employed were not in those cases means so suitable to assist nature with as they might be where the disease presented an inflammatory character. Let it suffice to say that of the thirty-five patients which I considered attacked or menaced with yellow fever, twenty-six were cured, so that of the nine fatal cases, of which number five succumbed on the night of my arrival, there were only four who died before the *quina* could have operated in them; and thus, at my departure from the Hospital, where I remained twenty-five days, there were only remaining in all more than sixty patients, a third of whom were renewed by new comers, and the yellow fever had vanished.

"'Here, then (continues M. Lebland), we have a notable fact in which yellow fever, without having been carried from a strange country by the merchant ships of Chili declared itself among their crew, while in the apparent enjoyment of perfect health, and it spared the natives of Peru, who were not impressed by its contagion; the reason of this difference being that the inhabitants of Chili are in respect to Lima, as regards climate, in the same relation that the people of France hold with regard to the West Indies. In the present instance no scorbutic predisposition could have been acquired on board, because the voyage from Chili to Callao does not occupy more than twelve or fifteen days, and the crews on this voyage made no use of salt meat. The remote predisposition alone which might affect them in coming from Chili was that of winter ailments at the commencement of the winter season, which, as is well known, is in that country coincident with the Peruvian summer. The proximate predisposing cause of the fever could be no other than the labour on board in discharging their cargoes of wheat destined for consumption in Lima—an operation of unloading which lasted several months, during which the crews were exposed to all the burning heat of the Peruvian sun, in the months of January, February, and March, and this again followed up by the injurious foggy and humid atmosphere which usually sets in at the close of the hot season. Well, then, let us but consider that these Chilian sailors had arrived in Callao in the month of January or February, and had endured for a month or two thereafter all the intense heat of a climate where rain is never seen, a climate totally new to them, and where, during this season of the year, the sky is absolutely cloudless. Besides, these crews retired to pass the night between decks, immersed in an atmosphere of fermenting emanations from the moist wheat of their own vessels, over-exciting their systems by too much heat at night, followed up by exposure to morning fogs, which in April are peculiarly chilly and damp, and consequently tend to suppress perspiration. In view of such causes of indisposition, it is nothing strange that the yellow fever should have been developed among the crews, in the same manner as among ourselves autumnal fevers become more or less of a pernicious form, in proportion as the preceding summer has been more or less hot and humid, or the succeeding autumn more or less cold and moist, during the reign of calm weather and exposure to unhealthy emanations.'"(c)

On the above statements of M. Lebland, his Spanish translator, the eminently gifted and literary Dr. J. C. Ulloa, with whom I had the good fortune of being associated in 1859, at Lima, on a commission on the yellow-fever epidemics of 1852-7 in Peru, makes the following remarks:—"As may be seen from the details of the above narrative, there remains not

(c) See "Observations sur la Fièvre Jaune et sur les Maladies des Tropiques, faites dans une Voyage au Pérou, etc., précédées d'un Rapport à l'Institut, Classe des Sciences Physiques et Matématiques." Par J. B. Lebland. Médecin-Naturaliste, Correspondant de l'Académie des Sciences au Jardin des Plantes, de la Société Royale de Médecine, etc. A Paris, chez Théophile Barrois père, libraire, rue Haute-Feuille. No. 22. An xiii. 1805.

the smallest doubt that in the summer of 1787 there broke out in the port of Callao a little epidemic of yellow fever, which had its origin aboard two ships proceeding from Chili, whose crews were almost exclusively the persons attacked, having, notwithstanding, communicated the disease to various sick inmates of the Hospital, and to the Physician and two Surgeons of the same establishment. Unfortunately we have no notice that the Medical tradition of the country preserves any recollection of this fact, but not on this account does it lose its characters of authenticity, nor all its importance, not merely in its relations to the history of yellow fever in general, but especially of that disease as observed in Peru.

"For the present it remains demonstrated that this pestilence has existed among us at a period considerably anterior to the year 1852, which has been hitherto believed to be the earliest date of its appearance as an epidemic in this country."(d)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MEDICAL CHARITIES OF MANCHESTER.

THE ROYAL INFIRMARY.

(*Concluded from page 66.*)

Our readers will doubtless remember the most valuable and instructive paper published by Dr. W. Roberts in these columns early this year, narrating some experiments as to the effects of tapping collections of fluid by a fine trocar, used along with the suction power of a siphon. In some of the cases which we saw, this method had been used with complete success, and its results promise to be highly valuable. One case we saw in the end of December last, which showed for a time the great benefit derivable from this mode of treatment. The man was suffering greatly from oppression in the chest caused by fluid. It was tapped in the way described by Dr. Roberts, no less a quantity than ten pints and eight ounces of fluid being thus removed on December 21, 1867. When seen by us he was wonderfully comfortable, although his chest was flattened, but he died on January 2, 1868. Here are some notes of his case:—

F. H., aged 35, married, a compositor, residing in Chorlton-on-Medlock, admitted into the Manchester Royal Infirmary, under the care of Dr. Henry Browne, November 23, 1867. His family history is good. Twelve months ago he took cold, and for some days he suffered from a severe catching pain in the right side of the chest. From that time he has found his breathing short, particularly on making any exertion, and for some months he has noticed that he could only breathe with comfort when lying on the right side.

On admission, he is a well-formed man, somewhat emaciated, with a dusky-looking complexion. He has no lividity of lips, and no œdema of the cellular tissue. His skin is moist. The extraordinary muscles of respiration are in continual use. There is bulging of the intercostal spaces of the right side, and the whole of that side is more prominent than the left, and is an inch larger in circumference, according to a measurement taken round the level of the nipple. The right side is completely immobile during deep inspiration, and the patient can only lie on that side. There is dulness on percussion over the whole right side of the chest, both behind and in front, extending in front to the left border of the sternum, the dulness being rather less marked above the second rib in front while the patient retains the horizontal posture, and, when he sits up in bed, the extreme dulness only extending as high as the upper margin of the third rib. Over the whole area of intense dulness neither respiratory murmur nor vocal resonance can be heard, and no tactile vibration can be felt. Above the second rib faint tubular breathing is audible. On the left side the percussion note is natural, and the respiratory murmur is loud and exaggerated, and attended with a little rhonchus. The number of respirations in the minute is 24. The heart is displaced, so that its apex beats in the sixth intercostal space, and two inches external to the left nipple. Its sounds are clear and distinct. Pulse 110, feeble and regular. The liver is pushed downwards, so that its anterior margin extends within an inch of the umbilicus, and towards the left side is found to project four inches below the costal cartilages. Urine scanty, high-coloured, specific gravity 1035, containing no albumen. Ordered blister to front of right side of chest. ℞ Pil. hydrarg. gr. j., pulv. digitalis gr. j, pulv. scillæ gr. j. Misce; ft. pilul. j. ter die sumend. ℞ Vini ipecacuanhæ ʒ ij., tincturæ hyoscyami ʒ vj., pulv. potass. bitart. ʒ vj., decoct. scoparii ää ʒ xij. Misce; ft. mist. cujus capt. ʒ j. 4tis hor. To have three ounces of gin daily.

November 28.— During the last two nights he has perspired profusely. Pulse 100, feeble; respirations 28; tongue moist and clean; bowels regular.

December 7.— Gums slightly affected; pulse 108; the number of respirations as before. Ordered to discontinue his medicines.

13th.—Dr. William Roberts endeavoured to tap the chest by means of a large-sized perforated needle, inserting it in the sixth intercostal space in the axillary line, and affixing the elastic siphon tube, but there was no flow. A fine trocar was then introduced, and the elastic siphon adapted, when three ounces of pus were removed. There was no further flow, and the aperture was closed.

14th.—No ill effects. Pulse 108; number of respirations 28.

21st.—Again tapped in the sixth intercostal space by means of fine trocar and siphon tube. Pus continued to run from 1.10 p.m. to 3.40 p.m., and 10 pints 8 ounces were thus removed. After the operation moderate resonance on percussion was perceptible over the whole right anterior surface of the chest and over its upper half posteriorly. In these situations, too, a distant respiratory sound could be heard.

22nd.—Perspiration very profuse. The patient expresses himself as feeling greatly relieved. Pulse 106; respirations 28.

23rd.—Pulse 120; respirations 36.

24th.—Loud mucous râles are heard over the whole left side, and he complains of pain across the lower ribs, with a feeling of faintness and nausea. He now gradually sank, and died January 2, 1868, at 3 a.m.

Sectio Cadaveris Thirty-two Hours after Death.—Body emaciated; no œdema; no rigor mortis. The right side of the chest appeared considerably fuller than the left, and the abdomen was distended and tympanitic. There was no fluid in the pericardium. Its layers were adherent on the right side, where it was immediately contiguous to the right pleura. Heart soft and flabby, with slightly dilated right ventricle. Valves natural. The right lung and the heart were both lying completely to the left of the median line, the whole right side of the chest, as far as the lower margin of the ribs, being occupied by the right pleural sac. On opening this there was a sudden audible escape of air from within, and lying in the sac was a quantity of pus measuring five pints. The inner surface of the membrane was injected, irregularly thickened, and covered with thick pus. The right lung was compressed into a narrow thin mass of inelastic hard tissue, containing no air, and lying entirely on the left side of the vertebral column. Its surface was riddled with ulcers, varying in size from a shilling downwards, and extending deeply, here and there, into the mass. The left lung was shrunken and non-elastic, and, on pressure, exuded much bloody serum, containing scarcely any air. The shrivelled right lung was firmly adherent to the left lung along its whole left border; otherwise, the left pleura was healthy. There were a few small hard lumps of cretaceous tubercle scattered throughout the left lung, unsurrounded, however, by any alteration of lung-texture. On opening the abdomen in the middle line, a quantity of fœtid gas escaped, and the abdomen collapsed. This was found to be owing to a slit having been made into the bowel where it had become adherent to the abdominal wall. There was no serous or purulent exudation into the peritoneal cavity. There was very extensive matting together of the viscera in the upper part of the cavity, the adhesions being evidently recent. The liver was pushed below the ribs and much altered in shape; it was universally adherent to adjacent structures, and to its left extremity the spleen was very firmly attached. The pancreas, shrivelled and compressed, was inseparably impacted in the fissure of the liver. The transverse colon and the small intestines near it were adherent to each other, and to every organ within their reach. The kidneys were healthy.

In a case of ovarian dropsy, under Dr. Simpson's care, Dr. Roberts removed, by means of his siphon, thirteen pints and twelve ounces of fluid without a single bad symptom following; in another, under Dr. Wilkinson, also of ovarian disease, twenty-eight pints were removed.

(d) Dr. Paredes and also Dr. Valdes have left a description of a Lima epidemic of 1818, which evidently partook of the nature of yellow fever. —A. S.

A highly interesting case of localised rheumatism of an acute character was for a time under the care of Dr. Roberts. The only part affected was the articulations of the lower jaw. These were extremely painful and much swollen. The mouth could not be opened, and for many days the patient was fed through a narrow chink between the teeth. There was also talkative delirium for a long time, indicating much systemic disturbance, although there was so little local manifestation. Cotton wool was used locally. Alkalies were given internally, half a drachm of the bicarbonate with ten grains of the acetate of potass for a dose, every three hours. Morphia was exhibited hypodermically, half a grain at a time, and ultimately the pain was relieved. This hypodermic method of exhibiting medicines is in much favour among the Physicians here. Morphia is generally so exhibited in rheumatic fever, peritonitis, etc., a quarter of a grain in five minims of water for a dose. With this dose, however, there have not been wanting examples of intense sickness and great prostration following immediately on its administration, and in one case of severe peritonitis where there was very great pain, half a grain of morphia having been so given, dangerous coma supervened, and galvanism had to be used for some hours.

Under the care of Dr. Browne was a rather interesting case of aphasia. A woman aged 27, a week after her confinement, suddenly lost the use of her right side and the power of speech. Five weeks after this event she came into Hospital, where she was found to be distinctly hemiplegic on the right side, and could only articulate the word "aye;" but she had evidently lost the faculty as well as the power of speech, for she used this word when she meant no. She became more and more childish until finally she appeared to be quite imbecile, and was sent to an asylum.

Dr. Browne has long laboured as a teacher, and he seizes every opportunity of urging the immense importance of a greater share of attention being paid to climate, diet, and clothing in the prevention and treatment of disease. Believing that the majority of diseases are produced by inattention to the questions of food and clothing, a good case of dyspepsia is his delight, and both in his in-patient and out-patient practice he always accompanies his prescriptions with verbal directions on the points referred to. He recognises three principal kinds of dyspepsia, which he calls respectively sulphuretted hydrogen dyspepsia, or that accompanied with "rotten-egg" eructations; carbonic acid dyspepsia, or that evidenced by tasteless eructations; and butyric acid dyspepsia, in which the eructations are sour or acrid. To a patient suffering from the first-named of these he recommends abstinence from meat and eggs, and prescribes farinaceous diet along with a mixture containing strong hydrochloric acid and chlorate of potash, filled up with a vegetable bitter. In the case of patients afflicted with carbonic acid dyspepsia he orders a lean meat diet and an avoidance of bread, potatoes, and farinaceous food generally; while to the third class he prescribes the use of sugar and fat. Dr. Browne is fond of pointing out the incalculable harm done to the digestive system by an immoderate indulgence in tea, and in his, as in every Medical out-patient-room, he finds abundant illustrations of his observations. These cases he styles "tea dyspepsia," and he relies for the cure of them upon a daily allowance of wine, regularity of meals, and abstinence from tea. He insists very strongly on the necessity of wearing flannel, especially in the rheumatic diathesis, enjoining upon his patients the use not only of flannel jackets or shirts, but also of flannel drawers and woollen stockings; and he invariably adds this precept—"Never wear during the night the flannel clothing you have worn during the day, but change your flannel garments night and morning, taking care to have them well aired and dried in the meantime."

Dr. Simpson pays a good deal of attention to the use of the laryngoscope, and carefully demonstrates to the students all suitable cases presenting themselves. He is fond of prescribing vapour baths in dropsy, and these he applies without removing the patient from his bed, by heating bricks, covering them with wet cloths, and introducing them below the patient's bed-clothes, which are then to be tucked close in all round. They should be changed when the bath is over. In cases of acute renal dropsy he finds these temporary baths of great service. In one case we saw there was enormous distension of the abdomen, so great, in fact, that the baths could do little good. In another case of ascites arising from cirrhosis, milk diet, with an occasional purgative, had done much good.

In a place where rheumatism is so common, chorea might be expected, and we have seen that this disease is not unfrequent. A case under Dr. Morgan assumed the character of unilateral chorea, the right side, as usual, being the one affected. The patient was a clerk, and had suffered from curvature of the spine from infancy, but there appeared to be no active mischief going on there. His left side was quite still; his right was constantly moving. His tongue was affected. The ordinary remedies employed for such cases here are iron, strychnine, belladonna. Iron and arsenic appear to answer best.

As at Leeds, large doses of the syrup of sarsaparilla are here given in cases of advanced syphilis, with much good to the patient.

Turning to the Surgical practice of this Hospital, we find that important Surgical operations are not uncommon. In the earlier part of this year there was a case of ligature of the common carotid for an aneurism by anastomosis in the forehead, ending unfortunately in death, and an amputation at the hip-joint for malignant disease of the thigh, which, at the time we last heard of the case, was doing well. Many fractures are brought in here, but there appears to be nothing uncommon in their mode of treatment. Machine smashes and compound fractures are very common. For these Mr. Lund has used the carbolic acid treatment with, on the whole, good results. He fills the wound with pure carbolic acid, and then covers it up after Lister's method. Abscesses have, however, not been infrequent, mostly, however, at a distance from the wound. Mr. Lund is also fond of using carbolic acid, in the proportion of one-fourth in olive oil, as an application to burns. The results are very good, and the application is now also generally used in all forms of lacerated wound. For the reasons we gave when speaking of Leeds—viz. the high price of labour, and the consequent tendency to leave children to themselves—burns are very common, especially when the cold weather comes on.

Mr. Lund has used acupressure with good results, especially in a case of open syphilitic testicle, which he removed some time ago. Most Surgeons here perform the old circular in preference to the flap operations, and in operating on stricture of the urethra Mr. Lund prefers Mr. Wakley's plan of procedure. As in most Hospitals of any age, pyæmia is not unknown in Manchester; most frequently it occurs after operation. Morbus coxæ and necrosis are diseases very often seen among the younger members of the community.

Our readers may remember that we pointed out, in connexion with Mr. Marshall's practice in University College Hospital, the valuable uses of bromine in spreading ulcer. Some time ago Mr. Southam here had a man, aged 65, under his charge, affected with an enormous rodent ulcer on his left cheek, which was rapidly spreading. Zinc paste was employed, which arrested the phagedænic action, and the old man left the Hospital only to come back much worse. Bromine, in the proportion of a scruple to an ounce of spirit, was used, but the patient could not bear the pain, which seems to be the great fault of this application. It was weakened, but still he complained much of pain, and again left the Hospital with his cheek much improved, but not completely cured.

In a case under the care of Mr. Smith, the patient laboured under a rather large epulis on the right side of the lower jaw. A portion, but not the whole of this, was removed by means of the écraseur. A strong solution of bromine was applied soon after, which soon caused the remains of the tumour to shrink.

The only case we remember under Mr. Heath's care which afforded a good practical hint, was that of a girl who came in bleeding profusely from a varicose ulcer of the leg. Perchloride of iron stopped the bleeding, and a carbolic acid lotion in the strength of 1 to 50 soon healed the ulcer.

On taking our leave of this Hospital for the time being, we desire to return our thanks to the whole staff for their courtesy and kindness. To Mr. Cullingworth, the Resident Physician-Assistant, and to Mr. Fennell, the Senior House-Surgeon, we are especially indebted for many notes and particulars.

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(*Continued from page* 33.)

Case 115.—*Non-adherent Multilocular Tumour—Ovariotomy—Recovery.*

An unmarried lady's-maid, 28 years old, consulted Mr. Spencer Wells in November, 1867, on account of a very large ovarian

tumour, which had been growing for about six years. He advised her to have it removed without delay, but she was persuaded by others to the contrary, and he did not see her again till March, 1868. She was then very ill, suffering from great difficulty of breathing and palpitation. Regurgitation of blood in the jugulars was very marked. The catamenia, which had been regular till January, had not appeared since. On admission to Hospital (March 9) the pulse was 134 and feeble. The right side of the chest, from the third rib downwards, was dull on percussion, and the respiratory sounds very indistinct. Both legs were œdematous, and the face also in the morning. The urine was normal. A wave of ascitic fluid was detected over the surface of a semi-solid ovarian tumour. The uterus was normal and movable. As there was no cyst large enough to tap with any hope of relieving distress, ovariotomy was performed on March 18. Sir James Simpson and Sir Wm. Fergusson were among the visitors. A non-adherent cyst was exposed by an incision five inches long, tapped, and a few pints of fluid evacuated. It was then opened, groups of inner cysts broken up, their contents pressed out, and the whole tumour removed, after separating a large piece of adhering omentum and a coil of intestine. The pedicle was secured in a clamp about two inches from the left side of the uterus, and was kept outside without traction. Scarcely any blood was lost. The right ovary was healthy, but several small transparent cysts with long pedicles depended fringe-like from the fimbriæ of the right Fallopian tube. These were drawn outside and secured to the clamp. Sixteen pints of fluid and 3 lbs. 5 oz. of solid matter were removed. Dr. Junker administered chloroform to this patient, and she was not sick. Only two opiates were required. The stitches were removed on the fourth day, the bowels acted spontaneously on the seventh, the clamp was removed on the eighth. The right lung gradually filled, and the patient went to the country twenty-three days after operation. She has been seen since her return in excellent health.

Case 116.—*Adherent Multilocular Cyst—Three Tappings—Ovariotomy—Recovery.*

A widow, 39 years old, was admitted January 10, 1868. She had been married two years before, had lost her husband within a year of marriage, and had not been pregnant. Some abdominal pain had been felt before marriage, and the size increased gradually afterwards. The pain increased in March, 1867, and in May, 1867, she was tapped twice—on the 9th when five pints, and on the 30th when sixteen pints of thick red fluid were removed. Relief was only temporary, and on admission she was suffering very much, though florid in complexion and unusually fat. The abdomen was filled by a large multilocular cyst which caused such anteversion of the uterus that a sound could not be introduced. Four days after admission Mr. Wells tapped the largest cyst, and removed fifteen pints of dark viscid ovarian fluid. The uterus remained high and flexed forwards, but was movable. The patient was relieved, went to the country, was readmitted to Hospital in March, and ovariotomy was fixed for the 25th, but the catamenia appeared on the 24th, after only ten days' interval, and ceased on the 27th. The operation was performed on April 1, 1868. Chloromethyl was administered by Dr. Junker. A cyst, apparently free, was exposed by an incision four inches long, but it was attached to different parts of the abdominal wall by several long firm cellular bands, which admitted of free movements of the cyst. After emptying a large cyst, breaking up masses of inner cysts, and separating the bands of adhesion, the whole tumour was withdrawn without any ovarian fluid entering the peritoneal cavity. A short pedicle was secured in a small clamp near the right side of a small uterus, and kept out with some traction. The left ovary was healthy. Fifteen pints of fluid and 3 lbs. 4 oz. of solid matter were removed. The anæsthesia from chloromethyl was not complete in this case. The patient appeared to be semi-conscious, and said next day that she heard the voice of Mr. Wells distinctly two or three times, but felt no pain, and only had a sort of confused notion that something was being done about her body. No sickness followed the operation, nor did anything check recovery. The bowels acted on the eighth day, the clamp came off on the ninth, and the patient went into the country twenty-four days after operation.

Case 117.—*Adherent Piliferous Cyst—Ovariotomy—Recovery.*

An unmarried daughter of a mine agent, 20 years old, was sent to Mr. Wells by Mr. Reed, of Pool, Cornwall, and was admitted April 6, 1868. The abdomen was largely distended by a multilocular cyst of some four years' standing, which could also be felt to the left and in front of the uterus. The catamenia were always quite regular. As no good could be done by tapping, and the catamenia were expected in a fortnight, ovariotomy was performed two days after admission. Dr. Junker administered chloromethyl. A closely adherent cyst was opened and emptied before any attempt was made to separate the adhesions. About thirty pints of dark fluid, with lumps of stearoid matter and bundles of loose hair, were pressed out. Some very intimate parietal adhesions and a piece of omentum were separated, and the cyst-wall, with hard bone-like plates, was drawn out through a four-inch opening, the lower end of which was two inches above the symphysis pubis. A long pedicle to the right of a small uterus was secured in a small aluminium clamp. The left ovary was rather large, but healthy. The omentum was studded with myriads of minute hard granular tubercles. Two shreds of it, which had been adherent, were removed after ligature, the ends of the silk being cut off close. At the lower angle of the wound there was a quantity of loose vascular subperitoneal cellular tissue, in which three bleeding vessels were tied. While securing these vessels, Mr. Wells noticed that the urachus was pervious, and he fixed it outside with a bundle of the cellular tissue and the ligatures below the clamp. The solid portion of the tumour, which weighed 2 lbs. 5 oz., was sent to Dr. Wilson Fox, who has made a careful examination of it for publication.

The tubercular state of the omentum excited great apprehension that, in this case, the progress after operation would be unfavourable; but nothing could have been more satisfactory. There was scarcely any sickness; only two opiates were required; the pulse and temperature hardly indicated more than ordinary reaction; metrostaxis went on from the second to the eighth day; the stitches were removed on the fourth, and the clamp on the eighth day. The bowels acted on the tenth, and the patient left the Hospital twenty-two days after operation. She has been seen since in apparently robust health. Mr. Wells and Dr. Keith have both recorded cases before this where extensive deposits of tubercle in the peritoneum were observed during ovariotomy, but had no perceptible influence upon recovery. In this case the great peculiarity was the pervious urachus, and it was fortunately secured beside the clamp, for on the seventh day urine began to escape through it, and continued freely on the eighth and ninth days, not ceasing till the seventeenth. It had been noticed before the operation that the urine was abundant and of low specific gravity, only 1008, but free from albumen. After the operation it became extremely profuse, and the nurse began to notice that if the catheter was not used frequently urine flowed beside the clamp. When the clamp came off, this escape of urine became freer; and, on collecting it and comparing it with the urine removed by the catheter from the bladder, Dr. Junker found that it was identical. As cicatrisation of the wound became perfect, the escape of urine lessened, and quite ceased on the seventeenth day.

Case 118.—*Adherent Multilocular Cyst—Pulmonary Congestion—One Tapping—Ovariotomy—Recovery.*

A married woman, 42 years old, sent by Mr. Stretton, of Beverley, was admitted March 30, 1868. The abdomen was greatly distended by an ovarian cyst; the legs were œdematous; there was extreme emaciation, some cough, and rapid respiration. Large crepitation or loud bronchial respiration were audible all over the right lung. Not wishing to perform ovariotomy until the pulmonary congestion was relieved, Mr. Wells tapped on April 4, and removed twenty-seven pints of dark fluid. Relief was obtained, and though cough continued troublesome, a careful examination on April 19 failed to detect more than some mucus in the larger bronchial tubes. It should have been stated that the disease had commenced soon after the last confinement seven years ago, and that the increase had been slow until about two months before admission, but had been rapid since.

Ovariotomy was performed on April 22. Chloromethyl was given by Dr. Junker. The cyst adhered very closely and extensively in front and to the left side. On separating the adhesions two or three pints of ascitic fluid escaped from the depending parts of the peritoneal cavity. A large cyst was then tapped, emptied, and drawn out after separating some adhesions in the left iliac fossa. A short pedicle on the right side was secured in a middle-sized clamp, and was kept out with some traction on the broad ligament, but none on the uterus. The left ovary was healthy. Scarcely any blood was

lost. Sixteen pints of fluid and five pounds and a half of solid or semi-solid matter were removed. After the operation there was no abdominal symptom which caused any anxiety, but the bronchitis gave rise to serious alarm. As it had been relieved by the tapping, it is probable that this sudden aggravation was more or less due to the anæsthetic vapour employed. The tubes became loaded with tough viscid mucus which was expectorated with great difficulty, and constant cough was distressing. The pulse, which was 94 before operation, rose to 108 in the evening, 130 on the first day, and 140 on the second. The respirations were 32 to 36, and the temperature 100° to 101°. On the second and third days sickness was frequent. Beef-tea and brandy were injected at short intervals. On the fourth day diarrhœa came on, and there was less sickness and dyspnœa. The stitches were removed on the fifth day, and the clamp on the sixth. Diarrhœa went on during the seventh day. On the eighth metrostaxis commenced, and the blood not only came away by the vagina, but freely through the pedicle. This continued during the ninth and tenth days, the expectoration becoming freer and the cough less. A good deal of purulent discharge continued for some days from the lower angle of the wound, but the patient gained strength and went to Brentwood five weeks after operation. After a short stay there she went to Yorkshire in excellent health.

Case 119.—*Adherent Multilocular Cyst—Once Tapped—Ovariotomy—Both Ovaries removed—Recovery.*

A widow, 50 years old, sent by Dr. Jackson, of Southsea, was admitted April 30, 1868. The abdomen was filled by a tumour, apparently solid, and surrounded by some ascitic fluid. Both legs were œdematous; emaciation was considerable. The uterine cavity measured three inches and a half. The body began to enlarge early in 1867, but increase had been slow until three months before admission; then it became very rapid. The catamenia ceased before she was 40—soon after the birth of the youngest of six children.

The extreme hardness of the tumour, and the absence of distinct fluctuation in it at any part, induced Mr. Wells to make an exploratory tapping on May 7. A little ascitic fluid and about a pint of viscid ovarian gelatinoid matter escaped. Ovariotomy was performed two days afterwards. A combination of methylene and chloroform was given by Dr. Junker. An adherent tumour was exposed by a five-inch incision, extensive adhesions were easily separated, and a little ascitic fluid escaped. The tumour was opened, broken up inside, the contents pressed out, and the shell of the tumour withdrawn. Rather a short pedicle was secured in a small clamp near the left side of the uterus, and was kept out with slight traction. On examining the right ovary, Mr. Wells found it expanded into a thin cyst of the size of a small adult head. The cyst was punctured, and the clear fluid it contained was pressed out. The broad ligament was then transfixed, and tied with silk in two portions close to the neck of the cyst, the Fallopian tube not being included in the ligature. The ligatures were tied to the arc and screw of the clamp, and as an additional precaution against the tied part slipping inwards, both sides of the wound and the tied cyst were transfixed by a long harelip pin, and a twisted suture was applied over it. Scarcely any blood was lost. The tumour on the left side with its colloid contents weighed 31 lbs. 6 oz., that on the right side about 2 lbs. No unfavourable symptom occurred in this case. There was very slight sickness, and so little pain that no opium was given. The bowels acted on the fourth day. On the fifth, sixth, and seventh days there was free serous discharge beside the clamp. The clamp and pins came away on the eighth day; the ligatures with some shreds of slough on the twelfth day. The patient went to Brentwood on the twenty-fifth day, and, after a short stay there, returned to Southsea in excellent health.

(To be continued.)

Chlorate of Potash in Gonorrhœa.—M. Pascuel Candela states that he has met with great success in the employment of injections of chlorate of potash in the second or subacute stage of gonorrhœa. It is also useful in the third stage, or gleet, but in this it is less certain, and at all events requires more patience. He employs a solution of one part in thirty of water, at first injecting twice, and in two or three days four times a day, and continuing for ten or twelve days after all traces of the disease have disappeared.—*Presse Belge*, June 28.

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Medical Times and Gazette.

SATURDAY, JULY 25, 1868.

THE PHARMACY BILL, 1868.

There can be little doubt but that this measure will become law, and it is idle work to recount the objections that may be raised against it. If on the one side it may be considered as giving an improved status to persons who practise Medicine illegally, on the other it fosters a class of pharmaceutists whose policy it is to raise pharmacy proper in the scale of civilised callings, and who would scorn to be thought encroaching on the domain of Medical practice. Anyhow, we must make the best of what cannot be helped.

We of the *Medical Times and Gazette* have always taken one plain line on the subject of Medical politics. We affirm that the good or bad fortune of Medical men (if their opportunities be equal) depends on the skill, tact, and energy which they show in their conduct towards their individual patients. If a Practitioner in any given town possess the public confidence, no Act of Parliament can hurt his practice; if he do not, none can mend it. Laws in England are thoroughly inoperative when they go against the prejudices and the habits of the people, and against what they think their rights. Any Act that should prohibit counter-practice by chemists would not be worth the paper it was printed on; for be it remembered, the chemists, up to a certain point, can't help themselves. It is not they who are the sinners, but the public.

It is the public who claim the right of prescribing for themselves, and of sending to a chemist's to purchase whatever they or he may designate as the best thing for a given complaint. They want a summary and cheap method of treatment for slight disorders, and to pay for it offhand without running up a bill. To expect the public to give up this right is as hopeless as it would be to expect the chemists to do so, considering that fully half their business in some neighbourhoods is derived from counter-practice. If our Profession wants to put down the counter-practice of chemists, they must either educate the public to a higher point or must give them an equivalent. They must accustom them to look on health as a thing to be got and kept by other means than drugs, and on Medical advice as a thing that need not always issue in a dose of physic; and if the physic be needed it ought to be supplied on the easiest of terms, and for ready money if that kind of transaction be preferred. In fact, let the Practitioner's Surgery be as accessible as the chemist's shop, and as cheap, for that kind of offhand practice for which it is suitable.

But there is one kind of offence against the public interests which the Pharmaceutical Society now, for its own credit, ought to discountenance actively. One instance which has lately come under our notice may serve as an example of what we believe is done daily. A man contracts a venereal

sore, applies to a chemist, and is kept by him under treatment for three months, paying for a long course of mercurial pills, whilst any educated Practitioner would most certainly have refrained from giving one particle of that mineral. We hear also of chemists "applying the stethoscope!" We are certain that the able and energetic men at the head of the Pharmaceutical Society will teach their younger members that they will gain much more by being expert chemists than by aping something worse than the worst kind of Medical Practitioner.

FRENCH THERAPEUTICS.

Most of our readers are probably aware that the French Pharmacopœia is published under the name of *Codex Medicamentarius*, and that its latest edition, with many alterations and additions, appeared in 1866, almost simultaneously with the improved edition of our own British Pharmacopœia. When we state that the Committee, or Commission as our neighbours term it, who were appointed to superintend the editing of the Codex of 1866, included the names of Dumas, Rayer, Bouchardat, Grisolle, J. Regnault, Tardieu, Wurtz, Chatin, Le Canu, Buignet, Gobley, Mayet, Mialhe, Schaeuffèle, Petit, and Mourier, it need excite no wonder (as Dr. Gubler observes) that the new edition, while not laying claim to absolute perfection, exhibits a considerable progress as compared with its predecessor. The present volume of Commentaries(a) is intended to occupy the same relation to the French Codex as the various works of Christison, Thomson, Squire, Wood and Bache, and others occupy in illustrating the Pharmacopœias which have been published in the English language.

The Commentaries are divided into two parts, of which the first, which occupies more than half the volume, is divided into two series, which treat respectively of (*a*) substances obtained directly from vegetables or animals, and (*b*) substances obtained from minerals and chemical products; while the second part includes the consideration of the simple bodies, mineral acids, metallic oxides, sulphides, chlorides, iodides, cyanides, sulphur-salts, nitrates, hypochlorites, phosphates, arseniates, arsenites, carbonates, permanganates, vegetable acids, vegetable alkalies, salts of the vegetable acids, salts of the vegetable bases, alcohols, ethers, chloroform, neutral organic substances, and pyrogenous products, or products of destructive distillation, which are included in the *Codex*.

As an illustration of the mode in which the work is constructed, we will refer to the article on *aloes*—a medicine of great importance (and one with which our readers may be supposed to be specially familiar, since it was fully discussed in a recent number of this journal, January 4, 1868).

After noticing (1) the varieties and (2) the composition of aloes, he discusses (3) the physiological action; (4) the auxiliary and synergetic substances; (5) the antagonistic and incompatible substances; (6) its uses; and (7) the modes of administration and doses.

The following is a brief summary of our author's views regarding the physiological action of aloes. Its purgative action is characterised by certain peculiarities. In the first place, it is slow in exhibiting itself, the bowels seldom acting in less than five or six hours after the administration of the dose in the case of man, or from twelve to twenty hours in the case of the horse; in the second place, the evacuation is characterised by the presence of much bile; and, thirdly, the action of the medicine induces an irritation and congestion of the lower part of the bowel. These phenomena, he observes, have been differently interpreted. Wedekind's opinion that aloes, in order to produce a purgative action, must be previously absorbed and conveyed to the liver, where it excites the secretion of bile, is now most commonly accepted. He bases this opinion upon the slowness of the results, whether the medicine be administered by the mouth or by the rectum; on the manifestation of two successive purgations when we associate aloes with a neutral salt—as, for example, sulphate of soda; on the absence of any action when there is a deficiency of bile in the intestines, as in cases of jaundice; on its maximum or excessive action in bilious persons; and on the possibility of obtaining the purgative action of this medicine by topical applications, external to the digestive tract. Dr. Gubler shows that these facts admit of other interpretations.

In the first place, the length of time that elapses between the administration of the medicine and its action may be due to the slowness with which the reactions of the biliary apparatus (reflex secretion and contraction) follow the impressions made on the orifice of the *ductus hepaticus communis* and the adjacent mucous membrane. Secondly, it is not easy to conceive that the absorption of aloes should take place in the presence of a salt such as sulphate of soda, which directs the flow of blood to the intestinal capillaries and speedily excites the discharge of one or more evacuations. Thirdly, the inefficiency of aloes in cases of obliteration of the biliary ducts simply indicates that the bile takes a part (probably the greater part) in the intestinal irritation on which the distension of the mucous capillaries and the evacuations depend. Notwithstanding these arguments against the views of Wedekind, Dr. Gubler is inclined to admit that absorption does actually take place, and that the liver is stimulated to extra secretion by the active principle of the drug circulating within it. This is, in point of fact, the same view which is adopted in our article on aloes, in which it is stated that "its action on the colon is through the blood." The abundant flow of bile which characterises a true aloetic stool is capable of being explained either by Wedekind's hypothesis or by the one suggested some years ago by Gubler—namely, that the irritation of the mouth of the duct and surrounding mucous membrane occasions a flow of bile by reflex action. The observations regarding the use and abuse of aloes are very judicious; and in concluding our notice of Dr. Gubler's remarks on this medicine, we can only express our surprise that he seems to regard the resin as the active ingredient.

Under the head of *Butter* we learn that the Japanese have from time immemorial prescribed balls of salt butter in cases of phthisis, and that Trousseau used to recommend that the butter eaten in the form of bread and butter by scrofulous or cachectic children should be seasoned with a mixture of common salt and the iodide and bromide of potassium.

Under *Bile de Bœuf*, or ox-gall, we learn that this remedy has been recommended in that singular affection of sight in which the patient ceases to see after the sun has sunk beneath the horizon, and to which the name *Hemeralopia* has been applied. Unfortunately the authority for this statement is not given.

On glancing at *Ergot of Rye*, we find that, independently of pregnancy and uterine hypertrophy, he recommends it in incontinence of urine (for which, however, extract of belladonna is a better remedy) and in spermatorrhœa, in cases of gravel, and in paralytic or other affections in which there is reason to suspect that there is habitual congestion of the nervous centres. Brown-Séquard and Trousseau recommend it in meningo-myelitis, and Dr. Gubler has prescribed it in different cases of lesion of the nervous centres in which hyperæmia was the chief symptom. Our author very truly remarks that "science is not yet in a state to trace accurately the indications for its use."

With regard to the *Calabar bean*, a new remedy which has lately excited much interest both in this country and on the Continent, our author, after having noticed its antimydriatic power, or property of causing dilated pupils to contract, whatever be the cause of the dilatation, points out its value in

(a) *Commentaires Thérapeutiques du Codex Medicamentarius, ou Histoire de l'Action Physiologique et des Effets Thérapeutiques des Médicaments inscrits dans la Pharmacopée française.* Par Adolphe Gubler, Professeur Agrégé à la Faculté de Médecine, etc. 1868. Paris: Baillière; London: Baillière, and Williams and Norgate.

breaking down adhesions of the iris, either to the posterior surface of the cornea or to the anterior capsule of the lens. Sédillot has administered it internally in cases of chorea, and with the view of antagonising the action of belladonna and atropine.

Its base, *eserine*, has been employed in the same class of cases in which the bean or its extract is used. Dr. Gubler has employed it successfully in a case of paralysis of the third pair of nerves with mydriasis, and found that, as long as his patient was under the action of the medicine, not only was vision more distinct, but there was a very well marked diminution of pain in the eyes. In a case of adhesion of the iris with the capsule of the lens, consecutive on variolous iritis, the same Physician obtained a successful result by introducing into the eye a few drops of a solution of one part of this base to 1000 of water. As the record of unsuccessful cases is almost as instructive as that of successful ones, we may add that M. Vée tried eserine administered hypodermically in a case of "symptomatic contraction of the extremities," without any appreciable result, and that Dr. Gubler saw no benefit from its internal administration (even when ten milligrammes, or 0·154 of a grain, of the sulphate were administered daily) in cases of chorea.

In the section on *milk* we learn that Dr. Labourdette has lately revived the plan suggested by the experiments of Peligot regarding the passage of salts into the milk, and has prescribed medicated milk, obtained direct from the cow, with whose food common salt, iodide of potassium, or bichloride of mercury has been mixed. According to Dr. Latour, salted milk is especially useful in phthisis, while that containing iodide of potassium is given with benefit in cases of scrofula and tertiary syphilis. We have somewhere read (but we cannot call to mind our authority) of the milk of goats, which had been treated externally with mercurial ointment, being given with great service in cases of infantile syphilis.

In our new Pharmacopœia we have an *oil of mustard*, of which we are told by Mr. Squire in his excellent "Companion to the British Pharmacopœia," that, "applied to the skin, it produces almost instant vesication." Dr. Gubler speaks very highly of this preparation, and states that he used it with great advantage, and on a large scale, in the cholera of 1866. The following is his method of applying it:—A mixture of 1 part of the oil and 10 or 15 of alcohol is to be made to saturate a piece of lint, which must be laid on the part to be affected, and at once covered with oil-silk or gutta-percha. If neither of the latter is at hand, a piece of paper soaked in salad or lamp oil will suffice. In a very few seconds the desired result will be obtained.

Chickens' milk (*lait de poule*) is a compound which has puzzled many a Practitioner, as it is not usually met with in English works on diet. It is described in the article *Œuf de Poule* in this work. It is prepared by rubbing up the yelk with hot water, and adding sugar and some aromatic substance according to the taste of the patient. If taken sufficiently hot, it acts as an emollient and sudorific, and may be used (as we take wine-whey in this country) at the beginning of a cold.

The article on *opium* contains a good *résumé* of Bernard's memoir on the alkaloids of that substance. No less than eight distinct alkaloids (exclusive of pseudomorphine, whose presence in opium is not constant) have been isolated—viz., morphia, codeia, narcotina, narcein, meconin, thebaica (or paramorphia), opianin, and papaverin. The first two are admitted into the *Codex*. There has been so much difference of opinion as to the action of codeia that we shall give Dr. Gubler's opinion on this subject. He regards it as *un diminutif* of morphia, and is not inclined to believe that it has the advantage over the latter of not exciting headache and general constitutional disturbance, for when given in a sufficient dose he has seen it produce as severe nausea and vomiting as would have been caused by a corresponding dose of morphia or opium. He considers it to be five times less efficient than morphia. With regard to the physiological action of the other alkaloids, Cl. Bernard's experiments show that narcotina acts as a convulsive or tetanic agent; that narcein is an hypnotic, but, as shown by the clinical experiments of Béhier, Delpech, Gubler, and others, three or four times less active than morphia, while in its toxic action it is slightly more powerful; that thebaica, from its great convulsive or tetanic action, is the most dangerous of all the constitutents of opium; and that papaverin excites convulsive action nearly as powerfully as thebaica.

In cases of poisoning by opium our author trusts more to sulphate of quinine than to any other agent; it is, he observes, *l'antidote par excellence*. The following brief quotation from the paragraph on the uses and contra-indications of opium affords good evidence of the sound practical skill of our author:—

"Opium is, without doubt, the best of our hypnotics; it may fail in its effects, or even increase the insomnia, since it possesses no specific *dormitive* power. When it induces sleep it does so by placing the organism in anatomical conditions corresponding to those which prevail in natural sleep—namely, a certain quieting (sedation) of the nervous system, and especially vascular congestion of the brain. Now, if insomnia results from an excessive activity of the circulation, the congestion occasioned by the opium will be superadded to the spontaneous disease, to the great injury of the patient. In this case, sulphate of quinine or bromide of potassium will probably cause sleep, and opium should consequently be reserved for cases of anæmic insomnia occurring in emaciated and badly-nourished persons."—P. 234.

We turned with some interest to the section on carbolic acid, to see the latest French views regarding its value. Dr. Gubler is obviously not so sanguine as to its numerous valuable properties as some of our own countrymen. "Only just introduced into the Materia Medica, it enjoys an extraordinary reputation, which it owes less to its own value, which is, however, very decided, than to the simultaneous efforts of some of its admirers." He mentions one application which we do not recollect to have noticed. The acid is now being largely sold in Paris in small pocket flasks as a remedy for the stings of bees and wasps and even for the bite of the viper. It is to be feared, as Dr. Gubler observes, that its styptic and coagulating action may be an obstacle to its penetrating into such minute openings as are formed in these cases.

Had our space permitted it, we should have extracted one or two brief quotations from the chapters on alcohol, ether, and chloroform; we have, however, said enough to show our opinion of Dr. Gubler's work, and conclude by warmly recommending it to all who take an interest in the department of Medicine of which it treats.

THE WEEK.

TOPICS OF THE DAY.

The meeting of the Fellows of the Royal College of Physicians for the election of Members into their body is to take place on July 30. As the list nominated by the Council has been now officially circulated, we can have no hesitation in publishing it. The following are the gentlemen who have found favour in their sight:—Dr. William Ogle, of Derby; Dr. Lockhart Robertson, of Hayward's-heath; Dr. Harrington Tuke, of Manor House, Chiswick; Dr. J. D. Heaton, of Leeds; Dr. J. E. Morgan, of Manchester; Dr. Walter Moxon, of Finsbury-circus; Dr. J. Hughlings Jackson, of Bedford-place; Dr. Reginald E. Thompson, of South-street; and Dr. E. Symes Thompson, of Upper George-street, Portman-square. To arrive at any conclusion as to the principles of selection on which the Council have acted, or the grounds of their choice, seems an utter impossibility. We have looked through the above list, and compared it most carefully with the names

of the gentlemen who have been passed over, and the puzzle why they were chosen simply defies our powers of guessing. We freely admit that some of the gentlemen selected are known as good workers in Medicine, but for every one of these half a dozen equally, and often more, distinguished might be pricked from the list of those passed over. To assign any reason why the remainder have been selected utterly passes ingenuity. It may be that the Council of the Royal College of Physicians have rules of their own to guide them in their choice which are above all ordinary comprehension, and that they hold themselves untrammelled by those principles of justice and fairness which at least are supposed to govern public bodies. If this be so, argument in the case is useless, as far as the Council is concerned. But at least it may be hoped that the general body of Fellows has not arrived at that sublime indifference to a reputation for fairness which the Council, by its long practice, seems to have attained. We believe that no higher-minded body of English gentlemen exists than the Fellows of the Royal College of Physicians, and we appeal to them to do justice at the coming election, to vindicate their reputation in the eyes of the whole Profession, and to save their College from the effects of the blind favouritism which passes for policy within its Council.

It is understood that the Fellows of the College have determined not to accede to a memorial signed by a certain number of General Practitioners in the metropolitan district praying that they should be admitted Licentiates of the College upon the production of testimonials without examination. The Fellows, we believe, look upon such a step as an injustice to those gentlemen who have already taken their licence by examination. We think that they are thoroughly justified in their refusal. But we may fairly remind them of the large number of able Physicians attached to public charities both in London and the provinces who, before the year of grace, passed a much more difficult examination for the College licence to practise Medicine and paid a much larger fee to the College coffers, and who, to say nothing of having had the satisfaction of seeing a number of Physicians admitted to the same privileges on much easier terms than themselves, have yearly the still higher gratification of finding themselves excluded from all share in the honours of the College, and, for no fault of their own, stamped with the semblance of Professional inferiority.

The meeting which was held at the Freemasons' Tavern on Tuesday last has pledged the St. Andrews Graduates' Association, as a body, to support a Medical candidate for the representation of the Universities of Edinburgh and St. Andrews, and the candidate they have chosen is, as we expected, Dr. Richardson. We believe that the Profession will be thoroughly satisfied with the step which the Association has taken. The opportunity which now presents of asserting the principle that the Medical Profession must be represented in the House of Commons by Medical men of mark and ability, if allowed to slip, will probably never return. Dr. Richardson, if he be successful, will enter Parliament as a representative, not of Tories or Whigs, Conservatives or Radicals, but as the expounder of the views, principles, and claims of the great science and Profession to which society, in its physical aspects, owes probably more than to any other. The payment has heretofore been in reverse proportion to the obligation. Whilst the clergy, the law, engineers, architects, railway directors, the army, the navy, agricultural and trading interests have all had powerful and successful supporters in the national councils, Medicine has alone been unheard, and the claims of Medical men on public recognition and public respect, unsupported by men of standing and ability in the Profession, have either never been thought of, or have been civilly relegated to the limbo of impracticabilities. It is the fault of the Medical graduates of the national Universities if this state of things any longer exist. In the case of the Universities of Edinburgh and St. Andrews, we believe that, if they choose, Dr. Richardson will be successful. It has been urged that he is late in the field, but, as he told the meeting on Tuesday, it was absolutely necessary, to insure the franchise for the St. Andrews Medical graduates, that his candidature should not be premature. A hint that an independent Medical candidate was to be started would have insured opposition from one or both sides of the House. The lateness of Dr. Richardson's candidature affords, therefore, only another reason why the Medical graduates should now rally to his support. Of his opponents it cannot be too clearly understood that not one is a Medical candidate in the sense of the term we have indicated. Dr. Playfair is not a member of our Profession, Mr. Campbell Swinton is a lawyer, Dr. Prosser James, although a Physician, stated at the meeting on Tuesday last, that he came forward on political grounds as a Liberal. In Dr. Richardson alone the Medical graduates will have a man who, by sheer force of intellect, ability, and perseverance, has worked himself to a foremost place in science and to the highest honours of the Medical Profession. He stands aloof from political cliques, and is unpledged to political parties. We believe that his great aim in the House of Commons will be to promote by his scientific knowledge the welfare of the people, and by his experience of the wants and wishes of the Medical Profession their position and influence in society. What will be the result of the election it would be vain to prophesy. But we believe it to be true that, out of a constituency of some 5000, no candidate has yet received 1000 promises, and that one-half of the voters are Medical. It seems clear, therefore, that, with unanimity in the Medical ranks, the success of a Medical candidate would be certain. Yet one glance at Mr. Campbell Swinton's committee, published elsewhere in our columns, will show that Dr. Richardson's friends have no time to lose. More than three hundred Doctors of Medicine, including Christison, Sir J. Y. Simpson, Laycock, Sir C. Locock, Trench of Liverpool, Barclay of Leicester, J. Hughes Bennett, Bree of Colchester, have pledged themselves to support the Doctor of Laws. It is clear that a strong committee and some of the sinews of war ought to be got together at once if the Doctor of Medicine is to have a chance.

The papers mention the death of a venerable clergyman, Dr. Kirwan, the Protestant Dean of Limerick, who is said to have died in the dressing-room of a Turkish bath. It appears that he had been in enfeebled health for some years, and had led an inactive life. He supplied the want of exercise by almost daily Turkish baths. For some days previously to his death he had been ailing, and had been advised not to venture into the bath. He however determined to venture, and died an hour afterwards.

Accidental poisoning and sunstroke have supplied a long list of casualties during the past week. A lady for whom strychnine was prescribed was supplied with an ounce of the *liquor strychniæ* P.B., containing four grains of that drug. She put five drops of it into a small bottle of water of the same size and shape, and then took up the wrong bottle, and swallowed the contents at dinner. She died in half an hour. The moral of it is, that it is bad economy to supply forty-eight doses of a dangerous drug in one bottle.

Mr. Henry Scholefield, Surgeon, of Congleton, has died from the effects of a large dose of laudanum taken for the relief of toothache.

Deaths from sunstroke are reported from the London Hospital, where a dock porter was brought in dead, and from the Hackney-road, where a child of 4 years died, who was taken ill immediately after playing in the sun in Victoria-park. A death is said to have taken place near Bedford, and another at the Polsall Ironworks. Stimulants and cold affusion seem the best treatment.

MEDICAL J.P.

We are glad to notice that the name of John Livy, M.D., has been added to the Commission of the Peace for the borough of Bolton.

PRESENTATION OF A TESTIMONIAL TO DR. HARLEY.

A number of gentlemen, Associates of the College and former students of his class of Animal Physiology, met, on the 17th inst., at 78, Upper Berkeley-street, to present to Dr. John Harley a perfect and beautiful copy, in silver, of the Cellini jug, "in testimony of their sincere regard, esteem, and regret on the occasion of his retirement from King's College, London." The testimonial was accompanied by a suitable address on vellum.

HEALTH OF LIVERPOOL.

One case—and up to July 20 only one case—has been returned to the registrar as "Asiatic cholera." The patient, a young man in previously good health, was seized, and died in eight hours, on Wednesday last. What may be called choleraic diarrhœa abounds. It can be no exaggeration to say that there are thousands of cases, some of them with symptoms of a severe character. The great majority, however, soon recover. The single case of cholera occurred in private practice. In the large Workhouse Infirmary, where it generally shows itself early, no case has occurred. The general health of the town (with the exception of the prevalence of diarrhœa) is remarkably good.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

At a recent general meeting of the governors of this charity, specially convened for the purpose of revising the regulations of the Hospital and of appointing Medical officers, some very important matters came up for discussion. Among other changes effected were the addition of all the Medical and Surgical officers to the Committee instead of two delegates as formerly; also the constitution of a body of electors apart from, but representing, the governors of the charity, thereby lessening the expenses of a contested election. These changes, although sufficiently important in themselves, would not call for any special notice, but a motion, brought forward by Dr. Fleming, and opposed by Mr. Sampson Gamgee, at a later period, demands more general attention. The matter in dispute was what should, and what should not, be allowed as proper qualification in the case of candidates for the appointment of Physician to the Hospital. In the first place, the restriction of such an appointment to Fellows or Members of the three Royal Colleges of Physicians was proposed to be removed; but the motion fell to the ground, the only change effected being the admission as candidates of graduates in Medicine of a foreign or colonial *University*. The next motion was of still greater importance; it was to the effect "that no Physician shall hold office should he engage in practice in midwifery, surgery, or pharmacy." This was vehemently opposed by Mr. Gamgee, who upheld the proposition that the Hospital had no right to dictate the terms on which its officers should hold their appointments. He maintained that the great difficulty experienced in procuring proper officers for the Medical charities of the town depended on such crippling restrictions as these, and that it was a hard case for a young man to be forced to give up ordinary practice should he be appointed Physician to the Queen's Hospital. We believe it to be the best thing possible for a county town that a man of independent means, able to hold his own and to practise as a pure Physician, should be induced to settle there, and that if such a candidate present himself he ought to have the Physicianship to the County Hospital as a matter of course. In the absence of a pure Physician, let the ablest General Practitioner take it.

TEMPERATURE AT ST. MORITZ.

The subjoined account of the temperature at St. Moritz, in the Upper Engadine, during the middle of July, will excite the envy of many of us who have been panting under the heat of London:—

July.	Temperature.	Lowest night.	8 a.m.	2 p.m.
8	Brilliant night. Hoar-frost in morning. Wind N.E. a.m., S.W. p.m.	31·5	45·5	52·5
9	Fair. Wind N.E. a.m., S.W. p.m.	33·2	54·2	53·3
10	Fair. Wind NN.E. a.m., cloudy. Wind SS.W. p.m.	37·7	49·3	60·3
11	Fair. Wind N.E. a.m., clouds and partial showers. Wind S.W. p.m	40·3	59·	59·5
12	Changeable. Wind S.W.	43·	61·	68·
13	Cloudy a.m., fair p.m. Wind SS.W.	42·	57·	64·
14	Fair, and partial showers. Wind N.E. a.m., S.W. p.m.	47·	57·5	58·5

During this week there has been very little barometric variation.

THE FATAL SNAKE-BITE AT MELBOURNE.

It is not easy to conceive of a death more singular in its circumstances than that of Mr. William Murray Drummond, at Melbourne, from the bite of a tiger snake. Mr. Drummond was of the good old Scottish family, had held a commission in H. M. 97th Regiment, had next served as a volunteer with the French army against the Kabyles, and since had been employed as police magistrate and in divers other civil capacities at Melbourne. He is described as accomplished, ardent, careless of danger, and fond of adventure—qualities which his death gives evidence of no less than his life.

Now it so fell out that, at the end of April in this year, an adventurer, named Shires, came to Melbourne with an antidote for snake-bites for sale, in small phials. This antidote, we may say here, was a solution of iodine and ammonia in spirits of wine. He also brought with him a set of tiger snakes, pronounced by Professor Halford to be *Hoplocephalus curtus*, of whose venomous qualities there could be no doubt, and he held public *séances* at which he exhibited his wares and allowed a snake to bite himself and a fowl, the result being that he applied the antidote to himself and took no harm, whilst the fowl died.

Of course, opinions differed in Melbourne as to the honesty of Shires's experiments, and some persons could not believe that he really allowed himself to be bitten by the venomous snake; amongst others, Mr. Drummond avowed his belief that the man was an impostor, and, at a dinner party on May 1, expressed his intention to get himself bitten by one of the most venomous of the snakes in order to test the thing fairly. Spite of the remonstrances of all his friends, he carried out his project. He took Shires, with two other men, to a private room at an hotel at 9 p.m., and desired him to allow a snake to bite him. Shires tried to dissuade him, telling him that he would suffer a good deal from pain and faintness; but Drummond persisted, bared his arm for the bite, and taunted Shires with want of faith in his own antidote. Then Shires gave way, and produced a snake, which he held by the neck, and allowed to bite Drummond's wrist. The antidote was applied to the wrist, and the patient, who seemed unaffected, busied himself in seeing that there was no fraud, for he forced Shires to strip in order to show that there was no other snake about him, then had the head of the snake cut off and packed up, that it might be sent to Professor Halford for identification. Hereupon Shires took his fee and departed, and went through his usual performance at another hotel later in the evening. Before he left, however, Mr. Drummond had swooned, which Shires told him was likely to happen, and desired him to take no stout nor brandy. Hereupon a friend insisted on driving him to Professor Halford's house, taking the dead snake with him; this was reached about midnight, up to which time the patient only exhibited symptoms of some nausea and vomiting.

Professor Halford ordered the patient home, and roused Mr. Wooldridge, a neighbouring Practitioner, whom he took with him to visit the patient at his own house; they prescribed rum and ammonia, and desired to be called in case of any change for the worse. Next morning at 9 a.m. the patient was found to have had bloody purging; skin warm and perspiring, pulse and respiration good, but pain in left shoulder and about the throat, and dilated pupils; unfavourable symptoms continued, and he died at 9 p.m., twenty-four hours after the accident. Meanwhile Shires is committed for manslaughter, and the Doctors are blamed for not remaining with the patient to see their remedial measures carried out. Suspicions are aroused as to the possibly suicidal nature of the act, so far as the sufferer is concerned, and there is (of course) a cry for an act of the Legislature to *put down* snake exhibitions. Meanwhile, as the antidote is pronounced worthless, the wonder is all the greater at Shires's repeated escapes. To say that his idiosyncrasy is insusceptible of the operation of the venom is only to repeat with a parade of scientific talk what we know already.

A SANITARY TRIUMPH.

Not long ago we had occasion to refer to Croydon in illustration of our view that drainage works, under certain circumstances, were not an unmixed good, as in cases where an elaborate system of sewerage has been introduced without the complementary adjunct of efficient ventilation. Our remarks at the time having been somewhat misunderstood, to the extent (that is) of imagining we were disposed to undervalue the exertions which the Croydon authorities had been making to improve the sanitary condition of the town, we feel all the more pleasure in giving the utmost prominence in our power to an excellent report lately issued by Mr. Latham, engineer to the Croydon Board. The history of Croydon in its pre-sanitary epoch has much the same characteristics as the corresponding history of nine English towns out of ten—cesspools, open drains, and wells of water contaminated with fæcal and other impurities within the town; and all around its borders stagnant ditches overflowing with filth, watercourses reeking with pollution, and the cottages of the poor abounding in all the elements favourable to the development of epidemic disease. The Registrar-General's returns showed that the district of Croydon at that period was one of the most unhealthy in the country. The average mortality during the seven years prior to the construction of sanitary works was 23·7 per 1000, and in the year 1848—the year previous to the adoption of the Public Health Act in Croydon—the death-rate had risen to 28 per 1000, the deaths from preventible diseases constituting a third of the gross mortality. The adoption of the Public Health Act, just then passed, was determined on, and Croydon ranks as one of the first fifteen towns which took advantage of that measure. Plans for a scheme of sewerage and water supply were prepared, and without much delay the necessary money was borrowed, and the sanitary epoch was forthwith inaugurated. Sewers were made, sewage irrigation works established, cesspools abolished, unhealthy dwellings and streets improved, and a copious and excellent supply of water was obtained.

By the year 1855 the chief sanitary works were in successful operation, and, in the thirteen years which have since elapsed, Mr. Latham states that the average annual mortality has been reduced to 18·6 per 1000 from an average of 23·7 in the pre-sanitary period, thus showing a reduction in the death-rate of 5 on every 1000 of the mean population, which, in the thirteen years, is equivalent altogether to a saving of 2439 lives. There has also been a steady increase of the birth-rate from 29 to 31 per 1000. In 1867 the birth-rate was 34, and the death-rate 16·6 per 1000.

It is, however, very necessary that the public, and especially those holding office as "local authorities," should know that the path of sanitary reform is not always strewn with flowers; read Mr. Latham's report, and you will find that victory was obtained at Croydon by steadily persevering in the face of really formidable difficulties. To take an instance: No sooner had the local board completed their works for a supply of water from subterranean sources in the chalk formation of the district than they were suddenly confronted by the millowners of the adjacent river Wandle, who brought actions against the Board for lessening the flow of underground water into the river. The history of this litigation is peculiarly illustrative of the "glorious uncertainty of the law;" for although discouraged by the discovery that a similar case involving the right to underground water had been decided by four judges adversely to the position which the Board occupied, yet they persevered and finally succeeded in beating the millowners. Mr. Latham refers to this episode in the Board's history with just pride. "This action determined a great principle as to the rights of owners of the soil to the water percolating through it, and although it was fought by the Croydon Local Board at an expense of over five thousand pounds, the results of that action have been of incalculable advantage, not only to Croydon, in preserving their water-works, but to numerous other local authorities and owners of property throughout the United Kingdom."

Mr. Latham's estimate of the pecuniary benefits of sanitary work in Croydon is not the least interesting feature of his report. Dealing with the 2439 lives saved in the thirteen years, the expense of funerals saved (averaged at £5 each) is put at £12,195; then, on the assumption that for every life saved twenty-five persons escape sickness, entailing an expense of at least £1 per patient, the estimated total saving under that head is £60,975; and lastly, it is estimated that of the 2439 lives saved about 1317 would be adults in the full vigour of life, the value of whose labour (over and above cost of maintenance) would amount to about £167,000, making an aggregate of about £240,000 on the 2439 lives saved to the community. Of course there is the additional gain to the people at large by increased health with its increased capacity for work, but the equivalent value under this head Mr. Latham does not attempt to estimate. Nor is it necessary for the purpose of his report, or for the moral lesson conveyed, that he should do more than he has done—namely, to establish beyond doubt the fact that sanitary works have their fitting share of the rewards of "godliness."

FUNGI AND DISEASE.

The question which is now on the *tapis* in Professional circles, and which it is of the highest interest to obtain a satisfactory reply to, is—In how far do fungi and disease stand to each other in the relation of cause to effect? Professor Hallier, Mr. Simon, Dr. Salisbury, and all that school, believe implicitly in the influence of fungi as causes of disease. On the other side, we have two very able authorities in this country in Dr. Thudichum and the Rev. J. M. Berkeley, who utterly deny the fungus hypothesis. Now, it must be admitted that up to this time the advocates of the fungus theory, on whom the *onus probandi* fairly lies, have failed in all cases to do more than show the coincidence of fungi and disease. But this is but small ground for the inference they draw from the observation. As has been often suggested, both the disease and the fungus may be coincident terms of the same unknown condition. The crucial test is a tolerably easy one. Let Dr. Salisbury and his party propagate their fungi, and then, by inoculation, reproduce the disease with which the parent fungi were originally associated. This would convince every one. But really, till it is accomplished, it is unwise to push too far a fascinating hypothesis, which too sanguine Practitioners may make the basis of an unsound and therefore dangerous practice. In the meantime, we would call the attention of those who care to follow

up the matter to three important publications bearing on the subject—(1) Dr. Salisbury's paper "On Syphilitic Fungi," which, with numerous figures, is published in the April number of the *American Journal of Medical Science;* (2) Dr. Thudichum's paper read before the Royal Microscopical Society a few weeks since; (3) Mr. Berkeley's answers to Dr. Gavin Milroy, which recently appeared, in categorical form, in the pages of the *Gardeners' Chronicle.* Mr. Berkeley is the most eminent of living fungologists, and his opinions, though diametrically opposite to those of Professor Hallier and Mr. Simon, carry great weight with them.

FROM ABROAD.—PROLONGED SUPPRESSION OF URINE.—M. CLAUDE BERNARD ON OBSERVATION AND EXPERIMENT.

Dr. Gallina, of Leno Bresciano, relates (*Gazetta Med. Ital.-Lombardia*, July 4) the following extraordinary case:—B. G., aged 27, and a mother, when first seen August 22, 1867, had suffered for five months from amenorrhœa and leucorrhœa, and had not passed any urine since the preceding day. A few drops of a dark coffee-coloured fluid were removed by the catheter. On account of some lumbar and abdominal pain, some leeches were applied to the anus, and an oleaginous purgative prescribed, together with diuretic drinks. During the next eight days no urine appeared, and, the lumbar pain persisting, other leeches were applied to the perineum and the nitrate of urea administered. The leeches were repeated, and tepid baths were resorted to, but all in vain, for by the fourteenth day no urine had appeared. The patient's general health did not suffer, and on the twenty-fifth day of the suspension she was enabled to accompany her attendant to Brescia, to consult Dr. Albertini, of the Milan Hospital, who had arrived there. The most careful examination continued during two hours failed to detect anything amiss in the system beyond this absence of secretion of urine. Professor Rodolfi, of Brescia, was also consulted, and he felt persuaded that to the amenorrhœa the suspension of the secretion was to be attributed. Emmenagogues were prescribed, and the menstrual flux after a while was produced. On the forty-third day after the suspension, distension in the region of the bladder was observed, and 600 grammes of urine were removed by the catheter. The same was done next day, and the day after the patient passed it spontaneously, and has continued to do so, her health not having suffered from this prolonged suspension.

At a recent meeting of the Academy of Sciences, M. Coste took exception to a passage in M. Claude Bernard's Report on the Progress of General Physiology in France, which we noticed soon after its publication. The passage in question was the following:—

"All the natural sciences are sciences of observation—that is, contemplative sciences of nature which can only result in precision. All the experimental sciences are explanatory sciences, which advance further than the sciences of observation that constitute their base, and end in becoming sciences of action—that is, the conquering sciences of nature. This fundamental distinction arises from the very definition of observation and experiment. The observer considers the phenomena in the conditions under which nature presents them to him, while the experimenter produces the conditions of their appearance of which he is the master."

M. Coste denies the accuracy of the statement that the sciences of observation are merely contemplative and incapable of explaining the phenomena of life, and becoming conquering forces of living nature. Had M. Bernard, he says, paid attention to the conclusions derived from embryogeny and the teachings of natural history and pathology, he never could have made such a statement. That the sciences of observation may become explanatory of the phenomena of life, he furnishes several proofs derived from the habits of bees and the development of the embryo; while their conquering power over living nature is seen in the artificial fecundation of the date tree and of animals, and the construction of salmon-ladders to facilitate the passage of the animal up the rivers.

M. Claude Bernard felt great difficulty in knowing what M. Coste really meant in the absence of definitions, and in his confused statements in which he cited experiments under the name of observations, and *vice versâ.*

"As to the fact, however," he added, "the sciences of observation are not really separate from those of experiment, it being only the method of investigation that is modified. All sciences necessarily commence by simple and contemplative observation. It is only after having ascertained the facts that we can seek for the explanation by bringing them in contact with other facts which are connected with or flow from them. As long as the simple observation of phenomena, pursued under natural conditions, is possible, we pursue it; and when it is exhausted we have recourse to artificial means, arming and amplifying our senses by the aid of various instruments to enable us to penetrate into the interior of bodies in order there to observe phenomena which are, under ordinary circumstances, concealed. We no longer confine ourselves to the observation of phenomena as nature presents them to us, trusting to chance; but we induce and compel the appearance of new ones under determinate conditions of which we have rendered ourselves masters, and which we vary according to the preconceived experimental idea that directs us. Then we really make experiments, the facts, however, which we thus create or provoke experimentally not differing essentially from the facts of observation. I have elsewhere defined experiment as a forced observation, which means, in other words, that it does not present itself spontaneously or naturally. But for the proper institution of experiments destined to verify or decide hypotheses on the proximate causes of phenomena, we must be guided by the principles of the experimental method, of which M. Coste seems to make no account. All the genius of the experimenter consists in the determination of the appearance of a fact under the conditions most suitable for throwing light on the scientific problem for the solution of which he is in search. In this relation observation and experiment approach each other and are confounded together, because they are found in both orders of sciences, but in a different order of subordination. . . . . Each science is distinguished by the nature of the special problem it is in pursuit of; but, besides this, the experimental sciences are characterised by this fact—that they can render themselves masters of the conditions under which the phenomena of nature are manifested. It is in this sense that they are more active and more conquering than the sciences of observation, which, besides, pursue other problems. I regard physiology as an experimental science, separating itself in this respect from the natural sciences of observation. In fact, at this time there are two grand groups of sciences, the one eminently experimental—physics, chemistry, and physiology; and the other much more essentially the subjects of observation—geology, zoology, and botany properly so called."

PARLIAMENTARY.—CONTAGIOUS DISEASES ACT (AMENDMENT) BILL—POOR-LAW MEDICAL INSPECTORS (IRELAND) BILL—SANITARY ACT AMENDMENT BILL—VACCINATION (IRELAND) BILL—GREENWICH HOSPITAL—POOR RELIEF BILL—SALE OF POISONS AND PHARMACY ACT AMENDMENT BILL—ARTISANS' AND LABOURERS' DWELLINGS BILL.

In the House of Lords, on Thursday, July 16,

The Contagious Diseases Act (1866) Amendment Bill was read a second time.

The Poor-law Medical Inspectors (Ireland) Bill passed through Committee.

On Friday, June 17,

The Contagious Diseases Act (1866) Amendment Bill passed through Committee.

The Sanitary Act (1866) Amendment Bill and the Vaccination (Ireland) Bill were read a second time.

In the House of Commons the condition of Greenwich Hospital was discussed at some length at the instance of Mr. B. Cochrane, who called attention to the recent report of the Admiralty Committee. After an elaborate review of the history of the institution from its first foundation, Mr. Cochrane canvassed next, in a tone of unfriendly criticism, the changes of 1865. The transformation of Greenwich into a mere Hospital for sick he held to be a reversal of its original

design as a refuge and shelter for worn-out seamen, and particularly he insisted that the intention of the foundation had been violated by not making provision for seamen's widows, and by the complete passing over of the claims of the merchant navy, which had contributed more than two millions and a half to the Hospital.

A discussion followed in which various speakers denounced the revolutionary changes of 1865, and the exclusion of merchant seamen from the benefits of the Hospital to which they contributed.

The House went into Committee on the Poor Relief Bill. After considerable discussion, clause 6, which gives the Poor-law Board power to appoint officers when the guardians make default, was added to the Bill.

On the order of the day for considering the Sale of Poisons and Pharmacy Act Amendment Bill as amended,

Mr. Lowe moved an amendment to the effect that prescriptions containing poison should not be dispensed unless signed by a legally qualified Medical Practitioner.

Lord Elcho opposed the amendment.

The House divided, when the numbers were:—

For the amendment	2
Against it	14
Majority	12

The division showing that forty members were not present, the House at half past 2 o'clock adjourned.

On Monday, July 20, in the House of Commons, the Sale of Poisons and Pharmacy Act Amendment Bill was considered as amended, and ordered for third reading.

On Tuesday, in the House of Lords, the Commons' amendments to the Lords' amendments to the Artisans' and Labourers' Dwellings Bill were agreed to.

In the House of Commons, after several unsuccessful attempts on the part of Scottish and metropolitan members to induce the Government to withdraw the Poor Relief Bill, the Committee agreed to several of its clauses up to clause 9.

The Sale of Poisons and Pharmacy Act Amendment Bill was read a third time and passed.

GRESHAM LECTURES.

DELIVERED IN TRINITY TERM

By E. SYMES THOMPSON, M.D.,
Gresham Professor of Medicine.

ON THE DIAGNOSIS OF DISEASE.

THERE is a widespread notion that a Doctor's mind is arranged like a dictionary, with the name of a disease on one side and that of the appropriate remedial drug on the other. It is well the public should know something of what diagnosis really is, and of the means by which we arrive at a knowledge of the nature and cause of a malady.

A precise nomenclature and classification is of immense value for systematic teaching, yet there are really but few broad barriers of separation between different diseases. The Darwinian views as to the "origin of species" hold good in pathology more largely even than in physiology, and maladies of diverse name gradate transitionally, and have much in common.

Disease means nothing more than want of ease (or, as we say, "out of sorts," "seedy," and "below the mark"), and it is a real evil to erect the name of the malady into a distinct living entity, to be attacked and destroyed by knives, lancets, and glass bottles.

There is little danger in this age of following too blindly the prescribed authority of our predecessors; our danger is, regarding the present age as the oldest and the best, to set at nought all authority and antiquity. To understand the nature of disease, we want a broad foundation. To treat disease without a knowledge of the collateral sciences on which Medicine is based, is like beginning to build a "pyramid at the apex." No man can treat any one disease well who does not know the nature of the organism he is dealing with, and he who knows this best can most successfully deal with all its deviations. The attempt to specialise without having first acquired this broad basis has a narrowing and cramping influence on the mind. The "mad-doctor" thinks every man insane—the orthopædist would put every one in irons.

Oliver Goldsmith, with his usual felicity of expression, writes: "In other countries the Physician pretends to cure disorders in the lump; the same Doctor who combats the gout in the toe, shall pretend to prescribe for a pain in the head; and he who at one time cures a consumption, shall at another give drugs for a dropsy. How absurd and ridiculous! This is being a jack-of-all-trades. Is the animal mechanism less complicated than a brass pin? Not less than ten different hands are required to make a pin; and shall the body be set right by a single operator? The English are sensitive to the force of this reasoning; they have, therefore, one Doctor for the eyes, another for the toes, etc. . . . The professors of other arts confess the inevitable intricacy of things, talk with doubt, and decide with hesitation; but doubting is entirely unknown in Medicine. The advertising professor here delights in cases of difficulty. Be the disorder never so desperate, you find numbers in every street who, by levelling a pill at the part affected, promise a certain cure. Few of these Physicians go through the ordinary course of education, but receive their knowledge of Medicine by immediate inspiration from heaven. Some have spent a great part of their lives unconscious of any latent excellence, till a bankruptcy or a residence in gaol have called their miraculous powers into exertion, and thus are indebted to their superlative ignorance alone for success. The more ignorant the Practitioner the less capable is he thought of deceiving. The people here judge as they do in the East, where it is thought absolutely requisite that a man should be an idiot before he pretends to be either a conjuror or a Doctor."

Sir H. Holland has truly observed that a right estimate of Medical evidence is a good test of sound understanding. The complexities are so various, and sources of error so numerous. It was formerly the practice for the Doctor to tell the patient nothing of his ailment. Now we go to the opposite extreme, and keep nothing back, till the patient thinks he knows at least as much as the Doctor, and is better qualified to treat himself. In France such is the importance attached to diagnosis that many of the most eminent Physicians devote their whole attention to it, and leave the treatment to their subordinates.

The importance of having an accurate view of the nature and cause of a disease cannot be over-estimated. It is no diagnosis to say the patient is suffering from "pleurodynia or paralysis," or that the "liver is out of order;" we must find out the nature of the deviation, and the cause too—not give a long name to cloak our ignorance, though this will satisfy the public morbid craving for names, but determine what is the real evil. People are not satisfied to be told that they have a "weak digestion," "poor blood," and "want bracing," but feel their consultation fee well spent if told, "The chylopoetic viscera are in a deteriorated condition;" that "the transformation of chyme into hæmatoglobuiin is delayed;" that the "neurogenesis is pathologically, not physiologically, conducted; and that a new preparation of iron—the 'hydrosesqui-ferricyanuric acid'—will precisely neutralise the abnormality."

In many cases of dyspepsia the stomach is no more the cause of the malady than the great toe is of the gout. What has been said in the previous lecture will explain the fact that if all the force introduced into the body is used up in muscular or mental work none is available for purposes of digestion or secretion; or, again, if more food is introduced than is needed for the requirements of the body, the stomach and the blood are overcharged, and the gorged replete state called "biliousness" results, not that the "stomach is weak," as the patient thinks, but that the supply of food is in excess of the demands of the organism.

In the present day such are the aids to diagnosis, and such the improved means of investigation, that it might be supposed there could be no difficulty in ascertaining the precise nature of the deviation from health and preventing its development. For instance, much may be learnt through the eye—from the physiognomy, attitude, colour, movement, gait, bearing, etc., especially when aided by the microscope, ophthalmoscope, laryngoscope (the lecturer exhibited and illustrated the use of these instruments); through the ear—from the sound of the voice (*e.g.* as in hysteria, aneurism, cholera), of the breathing (croup, asthma), of the cough (phthisis, bronchitis, laryngitis), aided by the stethoscope, single and double; by the nose—as in rheumatic fever, small-pox, measles; by the touch—palpitation, percussion, pulse, etc., aided by thermo-

meter, sphygmograph. Chemistry affords much help in the analysis of the blood, secretions, and structures of the body. Analysis by the spectrum is of value in estimating the length of time which various drugs remain in the body.

The lecture concluded with a reference to the application of statistics to Medical questions, showing some of the difficulties in the way of collecting facts in scientific investigations, as illustrated by the statistical mare's-nest, from which a deduction had been drawn that, inasmuch as the proportionate mortality of Hospitals is in excess of that of workhouse infirmaries, therefore the latter are more healthy than the former, and the attendance better—a deduction just as sound as that sitting-rooms are more healthy than bed-rooms because fewer people die in them.

MEDICAL NOTES ON PRISONS, PRISONERS, AND PUNISHMENTS.

THE SURREY PRISONS: HORSEMONGER-LANE GAOL AND WANDSWORTH HOUSE OF CORRECTION.

Horsemonger-lane Gaol is, in point of fact, the only common gaol now in use in London, for in it alone we find all classes of prisoners—those on remand, those committed for trial, those already condemned—as well as debtors, both those in the custody of the sheriffs, and those committed by the County Courts. To the inadequate provision made for the accommodation of the latter classes we have already alluded, and we shall now find that many other portions of the prison are equally defective. In truth, there is very little to say in favour of this prison, which was originally built on the association system, a large number of men being confined in one ward or division, and only separated at night. When the American system of separate confinement was introduced, the prison was surveyed, and an attempt made to convert it on the modern plan. To this end, in the open wards, on the ground floor, partitions were run up in the arches constituting its groined roof, and so a central arched passage was formed, having a row of arched cells on either side. There being no direct communication from floor to floor except by narrow staircases, and the few windows in the corridors being situated far apart, the passages or corridors cannot fail to be badly ventilated. This is all the more evident when we consider that the prison is quadrangular in shape, and that one portion is cut off from another by a dead wall, that the male may be separated from the female prisoners. It will thus be readily understood why the unpleasant prison smell or atmosphere is particularly noticeable in this establishment. But there are other causes at work for its production, as we shall see.

The cells are arranged in three floors, one above the other, communicating only by a single narrow staircase. They are, for the most part, single cells, but occasionally, with epileptic or insane prisoners, several prisoners are put in association in one large cell. Those on the ground-floor are arched, and are rather larger than the others. They contain the ordinary prison furniture, and are floored with wood, which, when washed, gives out a rather disagreeable odour. Those on the other floors are laid with stone. There are two gratings for ventilation—one on a level with the floor, another near the roof; but the currents seem, even in winter when warm air is employed, very slight. To aid in ventilation, therefore, there is a portion of the window rendered movable; but this is left in the prisoners' control, which means that it is closed when most wanted, for the prisoner class have a wholesome hatred of a current of air, and will have recourse to almost any means for arresting it, even caulking up the interstices with fæces if nothing else is to be had. In the door is a small wicket covered with wire gauze; and this, which is intended to allow of communication between prisoners and their visitors, is sometimes called in to aid the ventilation of the cell; but, as we have seen, the air of the corridors of themselves is not exactly wholesome. The cell door is left open when the prisoners are at exercise, which will have some little influence in purifying its atmosphere; but improved ventilation is much to be desired.

Another most objectionable feature is the almost universal use of *pots de chambre* instead of closets throughout the building. Owing to the plan of its original structure, closets could only be introduced into certain cells, and these do not seem to be in a too wholesome condition. As the building is of no great height, and the water tanks are situate on the roof, the closets, which are made of deal, and are of the self-acting variety, have insufficient water power to wash away completely the substances deposited in them. They want increased water pressure, frequent cleansing out with a volume of water, and the use of a little carbolic acid. Some of the cells which we visited were almost unbearable from derangement of the closets, etc. In the cells which have no closets, the prisoners have pots, which are popularly supposed to be used during the night only; but as there is no punishment affixed to their use during the day, some prisoners do not care to put themselves to the trouble of sounding the gong and walking to the closet. The pots themselves are of earthenware, and are supposed to be cleaned at a sink each morning when emptied by the prisoners; but this is insufficient to keep them sweet. They have no lids of any kind, and it may be readily understood how injurious they must be when prisoners make use of them during the day, they not being emptied till next morning. Yet the nasty habits of these men will lead them to such filthy acts. One man we saw contentedly eating his dinner beside a pot just used; yet he had only to ring and walk to the end of the corridor to secure himself against this additional discomfort. The authorities say that water-closets cannot be used; why should they not make use of the dry-earth system, which has succeeded admirably in other prisons, and so do away with the present filthy plans? If not, surely lids should be provided for the present utensils.

We have already described the ordinary kind of washing apparatus contained in a prison cell. In Surrey Gaol the basins are of iron, enamelled internally, and they are somewhat larger than those in common use. The most important modification we noticed with regard to them was the mode of introducing the water. We have already shown that the pressure of the small quantity of water allowed to each prisoner is inadequate for thoroughly clearing out his closet, so that a continuous supply, direct from the cistern, ought to be laid on. To this proposition it has been objected that a mischievous prisoner, before leaving his cell, might turn on the water, and so in time empty the cistern. The taps employed at Horsemonger-lane would to a certain extent obviate this objection; they require constant pressure on a knob to cause a flow of water, and this, of course, could not be kept up in the absence of the prisoner, nor even while in the cell, if he had a certain amount of work to do. There is another difficulty connected with the plugs of these basins, when removed, and in Horsemonger-lane they are too easily so—the sewer gases escape into the cell, and thus still further taint the tainted air. Where they are only partially movable, so that, when relinquished by the hand, they fall back into the orifice, this objectionable feature is avoided.

We have already spoken of the water tanks situated on the roof. These used to be filled from a well in the centre of the quadrangle, whence it was drawn by a pump. Since, however, the works in connexion with the great sewerage system on the south side of the river have been begun in Newington-causeway, the supply has been cut off, and the water company have had to send in a supply. This is probably fortunate; for, although the water is described as having been excellent in quality, it is surely high time to give up drinking surface water collected in the heart of a large city. If we have learnt any lesson as to the evil effects of polluted water, it is surely time that all London wells of this kind were abandoned. The working of this pump, which is not heavy, is still continued, as the pressure of the company's mains cannot raise their water to the roof of the building. This labour, as well as that of keeping the prison clean, falls upon the prisoners (of course every man is compelled to keep his own cell clean); but as there are few convicted prisoners, those for trial also take part in the work—not, of course, by compulsion, but of their own free will, as they can thereby obtain certain privileges. Apart from the keeping of the prison clean, the work performed by the male prisoners is chiefly in the way of oakum-picking; but there is not much of this done, as they are ordinarily sent off as soon as possible after trial, some to Wandsworth, some to the Government convict prisons. Those, however, who are summarily convicted and sentenced to imprisonment without hard labour, are retained at Horsemonger-lane. In the female prison, again, washing is the principal occupation; both convicted and unconvicted prisoners are so employed, an improved dietary being given to those at this work. This portion of the prison is kept admirably clean, but the same objections urged against the sanitary condition of other parts of the gaol apply here, though with diminished force. Not long ago it was a rule to send all

female convicts sentenced to penal servitude direct to Millbank, whether pregnant or not, and in the large convict prison of Brixton there was a regular nursery for these infants. This is now, however, done away with, female convicts when pregnant being detained at Horsemonger-lane until nine months after their delivery, when the child is sent to the woman's friends or to the workhouse.

The paved yard formed by the hollow square of the prison constitutes a very good exercising ground for the prisoners, but, as in all other prisons, it is open to the objection of want of shelter in bad weather. Each prisoner exercises one hour a day under the supervision of a warder; but, connected with this, there still exists a condition of things which should have been abolished when the prison was altered. When prisoners were permitted to prowl about in the yards as their own sweet fancy directed them, with the intention of separating more effectually debtors from criminals, wooden screens were erected in front of the windows of the debtors' prison, thus excluding light and air from dens already too dark and badly ventilated. When the prisoners were put into separate cells and only allowed to exercise in the custody of a warder, all necessity for maintaining these was done away; not so the obstructions—there they still remain, freshly painted for their better preservation. The debtors' prison does not want any additional disqualification as an abode—it is already quite bad enough.

As you enter the prison gate, the governor's house is directly in front, constituting a part of the prison quadrangle; directly behind this, on the opposite side of the square, is the prison chapel, and in the yard immediately in front of this, the criminals executed at the gaol are buried. There is no memorial of these in the way of initials since the old walls separating the yard into compartments were removed. Still, however, an old warder will tell where Mrs. Manning lies, and of the morning when she was executed, and black satin went out of fashion.

Little now remains to be said of this prison but to condemn the offices and officers' residences as bad and inconvenient, and the infirmary, which is not, however, much occupied, as not what it should be, the closet and pantry being associated. We may speak well of the prison dietary. The bread, supplied by the Aerated Bread Company, is good, as are the meat and the soup. The following is the diet most frequently given in this prison—it is amply sufficient for men not engaged in hard work:—

Class 4.

Convicted Criminal Prisoners sentenced to terms exceeding Four Months, and Prisoners for Trial and Examination, Prisoners for Want of Sureties, Deserters, Misdemeanants of the first division, who do not maintain themselves, Destitute Debtors; Debtors committed under the 8th and 9th Vict., cap. 127, and 9th and 10th Vict., cap. 95; Fraudulent Debtors committed by Commissioners of Bankrupts under the Bankruptcy Laws; and Prisoners who are neither Debtors nor Criminal Prisoners within the Meaning of the "Prisons Act," 1865.

	Males.	Females.
Daily . .	*Breakfast.*—Oatmeal gruel, 1 pint; bread, 8 oz.	Oatmeal gruel, 1 pint; bread, 6 oz.
Sunday . . Tuesday . Thursday . Saturday .	*Dinner.* — Cooked meat, without bone, 3 oz.; potatoes, ½ lb.; bread, 8 oz.	Cooked meat, without bone, 3 oz.; potatoes, ½ lb.; bread, 6 oz.
Monday . Wednesday Friday . .	*Dinner.* — Soup, 1 pint; bread, 8 oz.	Soup, 1 pint; bread, 6 oz.
Daily . .	*Supper.*—Same as Breakfast.	Same as Breakfast.

Ingredients of Soup and Gruel.—The soup to contain, per pint, 3 ounces of cooked meat, without bone, 3 ounces of potatoes, 1 ounce of barley, rice, or oatmeal, and 1 ounce of onions, leeks, or other vegetables, with pepper and salt. The gruel to contain 2 ounces of oatmeal per pint. The gruel, on alternate days, to be sweetened with ¾ ounce of molasses or sugar, or seasoned with salt. In seasons when the potato crop has failed, 4 ounces of split peas made into a pudding may be occasionally substituted for potatoes, but the change must not be made more than *twice* in each week. *Boys under fourteen years of age to be placed on the same diet as females.*

A valuable means of detecting criminals who, having been previously convicted and sentenced to penal servitude, have been allowed to go out on tickets-of-leave, has just been introduced, and is in force at Horsemonger-lane. The photograph of each is taken before he leaves the convict prison, and a copy sent to each gaol in the neighbourhood of which the prisoner professes his intention of residing. Should, therefore, he be guilty of any misdemeanour which lands him in prison, he is met by the evidence of his former guilt, even although personally unknown to the prison officials. One thing, however, seems to stand in the way of ready recognition: the portraits—and a more villanous set could not well be conceived—are taken just before the prisoners are set at liberty, when they have been allowed to grow their beards; should they get into further trouble, this is immediately removed, and a considerable difference thereby effected in their general appearance.

REVIEWS.

Hoarseness, Loss of Voice, and Stridulous Breathing, in relation to Nervo-Muscular Affections of the Larynx. By Morell Mackenzie, M.D. Lond., etc. Second Edition. John Churchill and Sons. 1868.

The nervous affections of the larynx present an almost untrodden field of inquiry. We believe the work before us embodies the first attempt which has been made—at least in this country—to discriminate between the several affections of its nervous apparatus, and to classify and treat them according to some scientific plan. Dr. Mackenzie divides these diseases into those of the motor and those of the sensory system of the larynx. In discussing the former class he divides the muscles of the larynx into adductors, or those approximating the two cords to the median line, as in vocalisation (the crico-arytenoidei laterales and arytenoideus proprius); the abductors, or those drawing the cords from the median line, as in inspiration (the crico-arytenoidei postici); the tensors of the vocal cords (the crico-thyroidei) and the laxors (thyro-arytenoidei). Paralysis may attack either of these sets of muscles, and may be unilateral or bilateral, and some of these paralyses are often found existing together. But the latter is no reason why an attempt should not be made to discriminate them, for frequently a careful study of the set of muscles paralysed will be the best index to the cause of the loss or impairment of function and to the appropriate treatment. The first and one of the most valuable sections in this little book is on bilateral paralysis of the adductors—the condition commonly giving rise to what is known as nervous aphonia, or hysterical loss of voice. That it is not always associated with hysteria should be remembered, as it is sometimes a symptom of a graver malady elsewhere. Functional aphonia is common in the second and third stages of phthisis, where the loss of voice is often wrongly ascribed to phthisical disease of the larynx. Of thirty-seven cases of phthisical aphonia examined by Dr. Mackenzie with the laryngoscope at Brompton Hospital, in eleven the affection was purely functional; in twelve there was thickening of the mucous membrane; in fourteen there was congestion. But undoubtedly a vast number of these cases are due to causes acting directly on the nervous system. Prolonged and forced silence is one of these. Dr. Mackenzie states that he has met with cases of obstinate paralysis of the adductors of the larynx, arising, as he thinks, from this cause, amongst *religieuses*. When cases of functional aphonia arising from paralysis of the adductors are examined with the laryngoscope, it is at once, seen on directing the patient to say "a," "e," or "o," that the vocal cords do not approximate. They may approach slightly or may remain perfectly immobile, leaving a large triangular space between them. We cannot follow Dr. Mackenzie through his full description of this not uncommon affection or the numerous cases by which he illustrates it. We can only say that he has found the greatest benefit in many obstinate cases of several years' standing from the direct application of electricity to the vocal cords by the introduction of one pole within the glottis, the other pole being applied externally. He has invented for this purpose a little instrument which he calls the laryngeal electrode, and of which he gives a figure. The instrument consists of two parts—a necklet which the patient wears, to which one chain of the battery is attached, and the laryngeal electrode itself, which is connected with the other conductor. "The electrode is so constructed that the current does not pass beyond a certain point until the pole is seen in the laryngeal mirror to be upon the vocal cords, when the operator touches a little spring in the handle, and the current immediately passes through the laryngeal muscles."

Unilateral paralysis of the adductors of a vocal cord is often a more serious matter than the bilateral variety. It is often due to chronic toxæmia, as from lead, arsenic, or diphtheria, or it may result from cerebral disease or cold. The author has met with it after small-pox, in constitutional syphilis, and in phthisis. Of course, when it is the result of cerebral disease, local treatment must be useless; but when it has resulted from cold, metallic poisoning, diphtheria, etc., it will frequently yield to the topical application of electricity, or even to stimulating inhalations, as of creasote vapour, which Dr. Mackenzie has often prescribed with the best results.

Bilateral paralysis of the abductors, preventing the outward movement of the vocal cords on inspiration and giving rise to dyspnœa and stridulous breathing, is generally the result of cerebral disease, or of some morbid influence affecting the pneumogastric or recurrent nerve. Tracheotomy, to save from suffocation, is generally the only resource. Unilateral paralysis is more often due to peripheral influences affecting one recurrent or one pneumogastric—aneurism of the arch of the aorta or malignant tumours may thus produce it. Dr. Mackenzie relates one or two valuable cases of this kind. Want of space prevents us noticing the other neuroses of the larynx which Dr. Mackenzie describes. We ourselves can only say that a perusal of his little work has strengthened our belief in the power of art over disease, and has enhanced our opinion of the value of the laryngoscope as an instrument available for diagnosis. Dr. Mackenzie has worked in a new field in a scientific spirit; and although, no doubt, time and perseverance will add much to his labours, the Profession are under a great obligation to him for the progress he has already made in this unexplored region of clinical research.

On Spinal Weakness and Spinal Curvatures: their early Recognition and Treatment. By W. J. Little, M.D. London: Longmans, Green, and Co. 1868.

Cases of spinal disease—or rather of disease the symptoms of which are referred to the region of the spine—not unfrequently present themselves in which the Practitioner is in some doubt as to whether the affection really belongs to the spinal column itself and to the contained spinal cord, or whether it is to be referred to the class of reflex phenomena or the hysterical condition. Dr. Little has attempted in the present work to throw some light upon these very difficult cases, which he classes together under the head of Spinal Weakness, although at the same time frankly admitting that he has adopted this name simply for want of a more exact scientific term to apply to them. These affections, although in many cases destroying the happiness of a lifetime, and even terminating in paraplegia or some other form of spinal paralysis, infinitely rarely prove fatal at an early period, and consequently the anatomical lesions which accompany them have not yet been accurately described. We cannot be surprised, therefore, that this class of diseases presents that want of precision of character which always exists when clinical observations are not seconded by pathological investigations. Dr. Little divides these cases into four groups, viz.:—

Simple uncomplicated spinal weakness.
Spinal irritation.
Hysterical spinal weakness.
Tabes dorsalis.

The simple form is observed in girls about the period of puberty, and is usually the result of an intellect too highly cultivated in proportion to the bodily force and vigour. It is most commonly seen in young women brought up as governesses, or exposed to unusual causes of anxiety or emotion. We would earnestly recommend this fact to those enthusiastic apostles of "women's rights" who are attempting to urge their protégées into every department of professional and literary activity. The imperfect nutrition which so often occurs in girls at this period is accompanied by a corresponding want of nervous energy and of muscular activity, which act and react upon one another, leading ultimately to some of the worst forms of spinal weakness. Dr. Little's description of the attendant symptoms of atonic dyspepsia, languid circulation, disturbed uterine functions, etc., is excellent and truthful, and is evidently drawn from nature. The treatment which he finds most effectual is simply physiological, and consists in attempts to rouse the dormant powers of the spinal cord and muscular system, together with such measures for relieving irritability and pain as may be found most suited to the individual. He strongly urges the necessity of dissociating this form of the disease from hysteria on the one hand, and from true paralytic conditions on the other. The prognosis is usually favourable, except in those cases in which the tendency is hereditary.

By "spinal irritation" is meant "a state of things in which, besides much want of energy in the vegetative functions, there is considerable disinclination to use, if not weakness of, the voluntary muscular system, and so great an amount of spinal hyperæsthesia exists, that the slightest touch, almost a breath of wind, along the spine, excites suffering, and even spasms." It would appear as if in this affection the "sensitive columns of the cord" are chiefly disturbed, whilst in spinal weakness the motor columns mostly suffer. When it occurs in young females, it closely simulates hysteria, especially in the prominence of hyperæsthesia over debility of the muscular system. It may, however, occur in married women between the ages of 30 and 40, in which cases its origin may be usually traced to sexual influences or to the undue use of alcohol. It not unfrequently terminates in paralysis, and is probably always accompanied by some hyperæmia of the cord.

The hysterical form is simply a variety of the general disease, and may present all the protean symptoms so characteristic of that affection. It may usually be diagnosed from the other varieties by its paroxysmal character, "the patient being at times free from the disorder, and liable to its sudden return under the operation of any renewed exciting cause."

Tabes dorsalis is so fully described in other works that the author does not enter into particulars respecting it.

The remainder, and by far the larger portion, of the volume is devoted to the consideration of curvatures of the spine, especially those usually called "lateral," but which Dr. Little clearly shows are always accompanied by a certain degree of rotation, and for which he suggests the name of "rotatory lateral," as the nearest approach to the term "scoliosis" employed by Hippocrates to describe this condition, and adopted by German writers on this subject. A chapter is devoted to the subject of contractions of the chest following pleurisy, and to the diagnosis between this form of spinal distortion and other varieties of lateral curvature. The use, or rather the abuse, of cumbrous machinery for rectifying these deformities is strongly deprecated, but the author has already done such good service in this direction that it is needless to do more than remind our readers of the fact.

We can only regret that Dr. Little has not been able to combine more pathology with his clinical remarks, as affording a sure basis for future investigations; but we welcome the work as the result of much careful observation continued over a lengthened period of professional activity.

GENERAL CORRESPONDENCE.

PARLIAMENTARY REPRESENTATION OF THE UNIVERSITIES OF GLASGOW AND ABERDEEN.

Letter from Dr. R. Martin.

[To the Editor of the Medical Times and Gazette.]

Sir,—As a graduate of the Universities of Aberdeen, I have withheld pledging myself to either of the legal candidates who have appealed to me, hoping that Dr. Andrew Clark, who appears to be most eligible, or some other Medical man, would positively announce himself as a candidate for the representation of the Universities.

I think that it is very deeply to be regretted that the members of the Profession do not more clearly perceive the importance of taking adequate means to make their influence felt in the national councils.

The treatment which we receive from the Government and Parliament is humiliating. Need I refer to the injustice so long endured by Poor-law Medical officers? The Medical Act is wretchedly ineffective, yet the Home Secretary cannot be induced to undertake its amendment. The treatment of Surgeons by the naval authorities continues to be disgraceful—that of Dr. Stirling is a case in point; others almost if not quite as bad might be cited.

The latest illustration of the manner in which the Profession is treated by the Government is seen in the omission of any reference in Parliament to the all-important services rendered by the Medical department in Abyssinia. Votes of thanks

were given to all the other branches of the army, save and except the Medical.

If such conduct does not arouse the Profession to a sense of its wrongs, and excite, on the part of those who have votes to give, a determination to do themselves and their brethren justice, then we shall deserve the indignities so constantly heaped upon us.

But Medical men are needed in Parliament not merely to promote the good of the Profession. The most vital interests of the community require their presence there in greatly increased numbers. Questions affecting the sanitary condition of the people of this and other countries under the British crown, as well as of the army and navy, are continually coming up for discussion, and on such occasions the counsels of Medical men would prove invaluable. The House of Commons is overdone with lawyers; it stands in the utmost need of able Medical advisers.

The meeting of the British Medical Association at Oxford offers an excellent opportunity for a gathering of the graduates of the two Universities, to confer as to the best man and the best course. I doubt not that the local secretaries would kindly offer facilities for holding such a meeting, seeing that the object would be to promote the interests of the Profession.

I am, &c.

Warrington, July 20. R. Martin, M.D.

TORSION *VERSUS* ACUPRESSURE.

Letter from Mr. Lawson Tait.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust that Mr. Bryant will forgive me for drawing attention to one of his conclusions regarding the effects of acupressure on arteries as compared with those of torsion, which, I am certain, contains an error. In the sixth sentence of the conclusions Mr. Bryant says that "permanent safety of acupressure rests only upon the coagulation of the blood in the vessel down to the first branch." Now, if there is any one point which I believe to be more thoroughly set at rest than another in the pathology of the arteries, it is that the conical clot is an accident of extremely slight importance in the majority of instances of divided vessels. I have so frequently found vessels thoroughly secured both by the ligature and by acupressure, in which there have been no clots at all, that I do not regard the existence of the clot as of the slightest importance—indeed, its consistence until the tenth day is so very far from firm, that I am sure, did circumstances obtain that the closure of the vessel should depend on it alone, secondary hæmorrhage would occur. It is this fact, I believe, which explains what has been noticed in the occurrence of secondary hæmorrhage more frequently when the vessels are diseased than when healthy, because under the former condition, if the clot is present and the vessel cut through before it is adherent, secondary hæmorrhage must take place, and it does so, as is well known, at an earlier period than if the vessels are healthy. The true function of the clot is to aid in the obliteration of the artery down to the first branch.

The adhesion of the arterial walls occurs in the most perfect manner when no other condition is present than their apposition by a needle; and since Deschamps wrote that there is no difference between the process of their union and that which occurs between two opposing surfaces of peritoneum, when there exists a slight irritation to originate the action, I am not aware that any good reason has been advanced to set aside this view of the question; and I have seen evidences of this "union by primary adhesion" so frequently in the walls of arteries that I am emboldened to write thus in spite of the recently expressed opinion of so competent an observer as Mr. Henry Lee.

Experiments on the arteries of the lower animals I believe to have but slight value in deciding questions like the present, because it is extremely difficult—in the case of the pig almost impossible—to produce suppuration by any process short of the introduction of a seton; while we know that a very different condition is the rule among human patients. Again, every experimenter must have observed how readily vessels often close by their own process in the lower animals after having been perfectly divided. I have seen a vessel in the dog as large as the human adult radial cease to bleed in ten or twelve seconds after its division, and I have often seen the common femoral of a cat perfectly secured by the pressure of the finger for about a minute, while in one case this artery ceased to bleed almost immediately after its division without any interference with it whatever. This result is obtained invariably by the retraction and incurvation of the middle coat, the clot apparently not being formed for two or three hours after. For these reasons I think we must be cautious in accepting the conclusion that torsion would be as safe when applied to the human subject as it is when used on the lower animals, when we have such very strong *à priori* grounds for suspecting that it would not be so.

In the case of diseased arteries, where the ligature often fails, one might be tempted to express a strong conviction that torsion would be still more apt to do so. In a case where, on amputation below the knee, I found the vessels converted into quills of chalk, I am certain that neither the ligature nor torsion could possibly have checked the hæmorrhage: acupressure did so without the slightest difficulty.

I am, &c.

Wakefield, July 20. Lawson Tait.

ANCIENT REGULATIONS AS TO PUBLIC WOMEN.

Letter from Dr. David Macloughlin.

[To the Editor of the Medical Times and Gazette.]

Sir,—At this moment, when so much has been said and written relative to the so-called enthetic disease, permit me to make known to the Medical Profession, through your valuable paper, the decree of the Parliament of Paris, dated March 6, 1496, which first gave the idea of the existence of an enthetic virus.

You are aware that diseases of the reproductive organs were known from the remotest antiquity. They were supposed to depend on want of proper ablution. Hence circumcision in the male and *ablutio nympharum* in the female. But no one thought that a specific virus existed.

In 1493-4-5 and 6, an epidemic cutaneous disease raged in Europe. It was said to be highly contagious, and the Parliament of Paris assumed that disease was propagated by sexual intercourse. Therefore they issued the above decree, which ordered that all foreigners having anything the matter with their reproductive organs, if they were found in France twenty-four hours after this decree was published, were to be hanged; and that a Frenchman having anything the matter with his reproductive organs, if seen out of his house, was to be hanged.

This decree alarmed the whole world. Hence the idea of an enthetic virus first began, which has entailed such calamity on the human race.

I forward you a copy of that decree, which I hope you will publish. I am, &c. David Macloughlin, M.D.,

July 2. Member of the Legion of Honour.

Copie du décret du Parlement de Paris.

Le 6 mars 1496.—Aujourd'hui, pour ce que en cette ville de Paris, y avoir plusieurs malades, de certaine maladie contagieuse, nommée la grosse variole, qui depuis deux ans en ça a eu grand cours en ce royaume, tant en cette ville de Paris que d'autres lieux, à l'occasion de quoi estoit à craindre que sur le printemps elle multiplieroit, a esté advisé qu'il estoit expédient y pourvoir.

Suivant les articles du parlement, dont le premier condamne les étrangers attaqués de cette maladie à être pendus s'ils ne sortent pas du royaume en vingt-quatre heures, le second prononçait la même peine contre les habitans de Paris qui, atteins du même mal, ne se renfermeroient pas chez eux et se présenteroient dans les rues avant d'être guéris.

Prize Question.—The Imperial Society of Medicine of Lyons proposes the following subject for a prize of 300 francs:—Pathogeny of non-traumatic hæmorrhages, their clinical characters, and their treatment under the different conditions in which they are produced. The Society directs the attention of candidates to the various vascular changes which may give rise to the hæmorrhages termed spontaneous, and especially to *hæmorrhage by transudation*, as founded on traditional knowledge, clinical observation, and experiments on the extravasation of the blood corpuscles by filtration through the parietes of the small vessels. Essays to be sent to the Secretary of the Society, Palais St. Pierre, Lyons, before August 15, 1869.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 3, 1868.

Dr. GRAILY HEWITT, Vice-President, in the Chair.

DR. HERMANN BEIGEL, Mr. W. Jones (of Tynewydd), Dr. J. Locking, Dr. Moodelly (of Madras), and Mr. Spaull were elected Fellows.

Dr. BARNES exhibited

THE UTERUS AND VESSELS CONCERNED IN A CASE OF PHLEGMASIA DOLENS.

The patient from whom the preparation had been taken was delivered of her first child on February 22, and on April 17 was admitted into St. Thomas's Hospital with the right leg swollen from the hip downwards, with pain and thickening in the course of the femoral vessels, and still more in the course of the iliacs; the uterus small and movable; urine sp. gr. 1015, slightly albuminous. She went on mending slowly until May 5, when erysipelas seized the affected leg, and she sank on the 15th. At the autopsy the uterus was found as much contracted and involution as far advanced as usual at that date from delivery. The mucous membrane was covered with a glairy mucus. The uterus was quite free from adhesions. The veins running in the right broad ligament from the uterus were closed. The right iliac, femoral, and popliteal arteries were diminished in calibre, but healthy. The right common iliac vein as far as the junction with the cava, the external and internal iliac veins, were entirely closed and contracted. The femoral, popliteal, and upper part of the venæ comites were obstructed by coagula, some portions of which were decolorised and firmly adherent. The whole of the right lower extremity was swollen and œdematous, the integuments being extensively sloughy. In the upper part of the thigh there was an extensive diffuse suppuration, following the course of the deep femoral vessels. It extended upwards, and was connected with the hip-joint. On opening this joint, a thin pus, similar to that diffused throughout the adjacent tissues, was found in it. The vessels on the left side were clear. Dr. Barnes remarked, in conclusion, that he believed that, but for the attack of erysipelas, the case would, like most others, have ended in recovery. The state of the uterus being healthy, there being no evidence of pus in its substance, and the broad ligament on the side corresponding to the obstructed veins being free from any morbid action, there seemed no reason to conclude that the obstruction in the iliac and femoral veins was due to absorption from the uterus.

Dr. GERVIS exhibited a rare form of monstrosity. It was one of twins, of which a primipara had been delivered at term, and the second child was well-formed and healthy.

A paper on Ovariotomy in Southern India was read by Dr. Moodelly, Native Surgeon, Madras. Particulars were given of three cases on which Dr. Moodelly had operated, in one of which recovery had followed the operation, and in two death.

Dr. A. E. SANSOM read a paper

ON THE PAIN OF PARTURITION AND ANÆSTHESIA IN OBSTETRIC PRACTICE.

The author commenced by giving a *résumé* of the history of chloroform, and then referred to the immunity from danger that prevailed in chloroformisation in obstetric practice, apparently from the fact that women are less prone to the ill effects of chloroform than men, and the abolition of pain was one of the earliest and simplest effects of the anæsthetic. The author then entered upon an examination of the nature of the pain of parturition. True uterine pain differs from pain affecting the sensitive surfaces of the body in being referred to parts other than the uterus itself, and in the fact that the nerves involved are not those of common sensation, but the great sympathetic. The cervix is the starting-point and chief centre of true uterine pain; the nerve filaments which supply the intestines, the periphery, where occurs the chief manifestation of pain; the correlated influences contributing to form the entirety of the pain being chiefly spasm of local muscles and pains more remotely reflected to other parts of the body. True uterine pain presents just those conditions which anæsthetics are best calculated to relieve at the earliest stages of their influence; for pain and spasm are always annulled before common sensibility, and the sympathetic is more readily influenced than the nerves of common sensation. Parturition, however, at the full term differs from true uterine pain in the superaddition of motor correlations, these being so closely united that "pains" and contractions are used synonymously. The tendency of modern investigation has been to show that the abrogation of the pain of labour is a direct means of diminishing after dangers, and so of conserving life. The only question, therefore, which occurs is, whether anæsthetics ever superinduce danger, and so compromise the boon of the abolition of suffering. The author considered that hæmorrhage and, possibly, a retardation of expulsive efforts had in some instances issued from the use of chloroform, but it was easy to find a reason for these complications. Either a too profound narcosis had been induced, or the agent employed had caused an enfeeblement of the powers of the circulation. Both these conditions are to be prevented by a cautious use and proper dilution of the agent employed. The author then entered at length upon the *rationale* of the action of anæsthetics, showing that chloroform acts, not by any special determination to the brain, but, like carbonic acid and the gaseous narcotics, by suspending the normal oxygenation of the blood. The first effect of anæsthetics is upon the forces of the circulation, which they exalt by increasing not only the *vis-a-tergo* of the heart, but the contractile and therefore impulsive power of the arteries. This effect, however, varies with different anæsthetics, and this is the keystone of their danger. Chloroform, when dilute, allows of anæsthesia with no impairment, but even an exaltation, of the powers of the circulation; but concentrated it acts by superinducing circulatory paralysis. Again, anæsthetics impede the oxygenation of the blood. In doing this they do not obviously act as so-called asphyxiants. The blood need not show any change in colour, but yet science has proved that its property as an oxygen-absorber is suspended. The author next passed in review the agents at present used to relieve the pains of labour: 1. Tetrachloride of carbon, which he considered the best agent to relieve headache and the slighter manifestations of pain, but not the pains of parturition. 2. Bichloride of methylene, which seemed to present no advantages over chloroform. 3. Nitrous oxide, which, as inducing a state of asphyxia repeatedly, as would be the case in the course of parturition, he could but condemn. 4. Chloroform, which, carefully administered and properly diluted, he considered the best of all anæsthetics in this branch of practice. The great desideratum is to avoid large doses, and, above all, large proportions. It is abundantly proved that an atmosphere containing from 1 to 5 per cent. of chloroform vapour is sufficient for all the purposes of anæsthesia. A table containing the results of a large number of experiments detailed by the author showed that when chloroform is given by a handkerchief in the common way at temperatures of from 60° to 64° F. the proportion may vary from 9 to 35 per cent. From a number of other experiments the author determined that absolute alcohol is a good diluting agent for chloroform, restraining its volatility so that in a mixture of equal parts about one half the vapour is given off which would obtain in the case of undiluted chloroform. The author concluded by strongly recommending to those who practised obstetrics the employment of an anæsthetic composed of one part of liquid chloroform mixed with three parts of absolute alcohol.

Dr. GRAILY HEWITT briefly directed the attention of the Society to the principal points brought out in Dr. Sansom's paper, which he characterised as a most philosophical discussion of the subject.

Dr. CHARLES KIDD, after offering the meed of approbation so justly due to the author for his laborious researches, ventured to doubt, nevertheless, the chemico-vital hypothesis of anæsthesia, as being only deficient oxygenation. Else why was the hyperoxidised "laughing-gas" such an active anæsthetic, and how was it that the arterial blood was not at all darkened in the deepest coma under chloroform? Dr. Kidd agreed with the author that methylene chlorides and laughing-gas were all far inferior to the old anæsthetics. As to Dr. Sansom's idea that chloroform acts only on sensitive nerves, never on the motility of the uterine muscles, surely in version cases the grand value of chloroform was to relax the grasp of the uterus, or its motility. As to the anæsthetic "mixtures," they only blunt and confuse the action of the chloroform. Ether and chloroform are best when not mixed, but used alternately. The ether always quickens the pulse if flagging under chloroform. As regards experiments on animals with anæsthetics, they develope only a part of the truth. They are invaluable in pure physiology, but we cannot obtain the same

conditions in observing two or three pigeons suffocated as in two or three thousand midwifery patients, with their hopes, fears, and emotions.

Dr. Cleveland wished to know if, in administering the mixture of chloroform and alcohol, it were necessary that an inhaler be employed whereby the proportion of anæsthetic vapour set free could be regulated. He had from time to time been in the habit of using a mixture of chloroform and alcohol as suggested by Dr. Sansom at a previous meeting. using it in half-drachm doses, and waiting until evaporation had taken place before adding a further supply. The effect had been for the most part that of materially soothing pain and producing semi-unconsciousness, but never complete insensibility or any symptom that could cause alarm.

Dr. Martyn said that in his experience of chloroform he had not found it predispose to post-partum hæmorrhage, but rather the contrary.

Dr. Sansom, in reply, said that it was with a view to avoid the necessity of using inhalers and any machinery for dilution that he recommended the mixture with alcohol. In this case no other means than the handkerchief, or, what was better, a handkerchief pinned upon cardboard and folded into a hollow cone, were used. Dr. Kidd had objected that when the mixture was exposed the chloroform evaporated away from the alcohol. Precisely so, but it did not evaporate so fast, and this was the reason why its dilution with air was insured. Those who deprecated inferences from experiments on the lower animals, and condemned physico-chemical inquiries, he thought scarcely walked in the light of the science of the day. It was where deductions from these coincided with the results of actual experience that practice was guided and theory confirmed.

THE CLINICAL SOCIETY.

Friday, May 22.

Dr. Greenhow, Treasurer, in the Chair.

The following gentlemen were elected members of the Society:—Dr. W. H. Holman, Dr. A. Silver, Dr. F. Simms.

Reports were read on Dr. Hillier's case of infantile ascites, and on Dr. Greenhow's case of motor asynergy.

Professor Gairdner (of Glasgow) drew attention to the complete loss of the power of maintaining the body in equilibrium which is observed in patients suffering from the disease under consideration as a characteristic feature by which it may be distinguished from most other allied affections, and especially from the general paralysis of the insane. In the last-mentioned disease he had observed that even in advanced cases the power of equilibration was maintained amid the wreck of every other motor function, whereas it was markedly impaired even in the earliest stages of ataxy.

Mr. Hart commented on the absence in the two cases which had been communicated of the symptoms referable to the special senses, particularly those of sight and hearing. In his experience inflammation of the optic nerve and hyperæmia, with or without hæmorrhage, of the choroid had occurred so constantly in the very numerous cases of ataxy in which he had been asked to explore the eye ophthalmoscopically, that in the absence of these lesions he felt disposed to hesitate in assenting to the diagnosis which Dr. Greenhow and the reporters had come to; at all events, he thought the case admitted of a much more favourable prognosis than that which had been given.

Dr. Bastian, in reply, argued that inasmuch as the term locomotor ataxy was not used to denote a pathological entity, but merely an aggregate of symptoms supposed to have a more or less constant relation to a special lesion of the spinal cord, the absence of one set of symptoms did not affect the interpretation of the rest. As regards the prognosis, his gloomy anticipations had been mainly formed rather on the rapid progress of the case, which had been the leading feature in the patient's history.

Mr. Holmes brought before the Society a case of

EXCISION OF BOTH ELBOWS,

showing the good results of the operation; and, in reply to some remarks by Mr. Maunder and Mr. C. Heath, stated that he always employed splints to support the arm after operation, which support was chiefly needed because of the risk of the patient becoming restless during sleep, and then disturbing the wound. He was of opinion that passive movements were not required in these cases if a sufficient amount of bone was taken away, and he decidedly held that the entire joint ought to be removed. Partial excision had, to his knowledge, been followed by unsatisfactory results, requiring even amputation of the limb.

Dr. Handfield Jones narrated two cases. The first of these was of great interest in relation to railway accidents. It was a case of

MYELITIS SUPERVENING ON CONCUSSION OF THE SPINE.

The patient, a young man, aged 23, had become paraplegic six weeks after a fall on the perinæum. He was admitted nineteen weeks after the accident, and consequently after the first supervention of symptoms of myelitis, when there was almost complete paralysis of the lower limbs, both of motion and sensation. At first ergot was given, in ten-grain doses, three times a day, while counter-irritation by savin ointment, applied to a blistered surface, was used in the neighbourhood of the affected part; subsequently corrosive sublimate was given for a considerable time in doses of $\frac{1}{32}$ to $\frac{1}{16}$ of a grain, and finally faradisation. The patient left the Hospital four months after admission. Dr. Handfield Jones brought forward the case as affording evidence that a concussion which produces but little apparent damage at the time, and for a varying period afterwards, may set up an insidiously advancing inflamation of the spinal cord which may issue in irreparable mischief. In such cases success may be hoped for from prompt and judicious treatment, even under very discouraging circumstances.

The second case was one of

HYPERTROPHY OF THE LEFT VENTRICLE OF THE HEART,

with dilatation of the right auricle and chronic nephritis, the principal symptoms being præcordial pain, dyspnœa, and extreme feebleness of the pulse. The interest of the case lay in the signal benefit that appeared to result from the administration of digitalis, which manifested itself in the strengthening of the pulse, the diminution of dropsy, and the relief of the symptoms.

Dr. Sanderson communicated observations illustrative of the condition of the circulation in Bright's disease, and particularly of the increase of arterial pressure.

Mr. Hart related a case of aneurism at the elbow treated by flexion.

A brief discussion ensued respecting the manner in which the cure was effected in this and in similar cases, in which Mr. Maunder, Mr. Bruce, and Mr. Hart took part.

Mr. Callender briefly described an operation on a girl, aged 14, for the cure of cleft palate.

In adjourning the Society until October, Dr. Greenhow said that he could not but greatly regret the unavoidable absence of the President, Sir Thomas Watson, who would undoubtedly have closed the session with some valedictory words, replete with wisdom and good counsel, regarding both its past and future proceedings. Although the duty of presiding over the meeting had devolved upon him at a moment's notice, he could not allow them to depart without offering the members his hearty congratulations upon the great, he might even say the unprecedented, success the Clinical Society had attained. As regarded numbers, he might inform them that the Society already counted nearly 200 members, who had for the most part come forward voluntarily to swell its ranks—a circumstance which plainly showed that the Clinical Society had but filled a vacant space and supplied a recognised want among metropolitan Medical societies. As regarded communications, he was sure they would be admitted to have been for the most part possessed of a high order of merit, and he confidently expected that the forthcoming volume of *Transactions* would occupy a good position among its contemporaries. In the early days of the Society, however, the Council had been of course unable to insist too strictly that communications should be exactly of the desired character and pattern; but now that the Society was fairly launched he felt assured that, under the skilful government of its distinguished President and zealous Secretaries, the next session would surpass the present, and that the Clinical Society would obtain as definite a position as was held by any other of the special Medical societies of London—that it would, in fact, soon occupy in reference to clinical Medicine and therapeutics a similar position to that which had been so long and usefully held by the Pathological Society in reference to pathology and morbid anatomy. In order to do this, the purpose for which it had been founded must be kept in view, and in that case he believed that, to quote the eloquent words employed by the

President at its inauguration, it would "hereafter be spoken of as a starting-point of a vast and solid improvement in that which was our special office in the world—the scientific and intelligent exercise of the divine art of healing."

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 20, 1868.

Dr. RICHARDSON, F.R.S., President, in the Chair.

DR. SANSOM quoted a case of

COEXISTENCE OF SCARLATINA AND VARIOLA

in a young lady aged 26. Five days after a prefatory coryza the rash and throat signs of scarlatina appeared; at the same time occurred violent pain in the back and limbs. Seven days after the initial signs, papules of modified variola commenced to appear, and developed in the ordinary way. There was on the ninth day from the commencement the phenomenon of a scarlatinal rash coexistent with variola in the vesicular stage.

In the discussion which followed Dr. Rugg, Dr. Leared, Dr. Llewellyn Williams, Dr. Wolfe, Dr. Farquharson, and the President took part. The first speaker alone had met with a similar case, but instances were related of occurrence of scarlatina with measles, with a vesicular appearance somewhat simulating variola, with the signs of acute rheumatism, and of coexistence of variola and of secondary syphilis.

Mr. BROWNING exhibited a new and improved magneto-electric machine.

Dr. OPPERT read a paper on the defects and recent improvements of existing Hospitals.

Mr. PETER MARSHALL read a paper on

BICHLORIDE OF METHYLENE AS A GENERAL ANÆSTHETIC.

The discovery of the anæsthetic properties of this agent was attained by Dr. Richardson by a process of induction; its qualities are intermediate between those of the gaseous and unstable chloride of methyl and the heavy liquid chloroform. The author described the physical and chemical characters of the new anæsthetic. Like other bodies of its class, the boiling point is variable. Its vapour is agreeable, and patients generally prefer it to chloroform. For its administration the author preferred a hollow cone of domet or other absorbent material, though Weiss's and Dr. Junker's inhalers were valuable. Narcotism to the deepest degree could be induced with three drachms, in short operations one drachm or two drachms being necessary. Complete anæsthesia can be induced in three minutes. A sign peculiar to its action is the occurrence of double strabismus. For its administration a temperature of from 60° to 80° Fahr. is to be preferred. Patients submit to its agency quietly, and the delirium takes a "serious" turn. It has been said of patients that "they groan under ether, swear under chloroform, and under bichloride of methylene they say their prayers." The advantages of this anæsthetic may be thus summarised:—Over ether: More easy of administration; less sense of suffocation; no lividity. Over amylene: Less excitement; no collapse. Over chloroform: Quicker in action; less exciting, causing no headache nor depression; less chance of vomiting (author had met with vomiting in one in three cases of chloroform administration); anæsthesia more placid, more persistent, causing no rigidity of muscles of jaws.

After some remarks by Dr. TILBURY FOX and Mr. HAINWORTH, Mr. CLOVER urged that, as with other anæsthetics so with this, a definite admixture with air was a desideratum. He had found a difficulty in obtaining the agent in a state of purity. He could not admit that stable substances could have variable boiling-points. A specimen which had been sent to him presented the characters of a mixture of chloroform and ether. He approved of the effects of nitrous oxide, though the lividity which it induced gave a rather alarming appearance to the symptoms.

Dr. SANSOM hailed the approach of the time when, among many anæsthetics, a choice may be made for an individual case. It behoves us to be very cautious before giving up our old friend chloroform. He could not agree with the author's data on chloroform-vomiting. In his experience, where chloroform was carefully and progressively administered, vomiting was very rare indeed. From the evidence given, he thought that the bichloride of methylene would be very valuable in dental operations and those of lesser magnitude. With regard to nitrous oxide, he considered it a dangerous asphyxiant, and he expected, if its use were persisted in, to hear of a case in which an enfeebled heart could not bear the distension of its right cavities which the gas *proprio motu* induces.

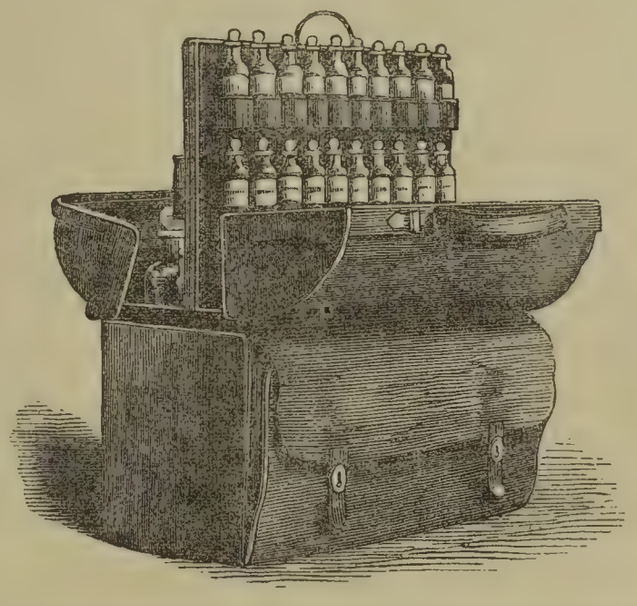
After some observations by Mr. DAVY and Dr. CAMPS,

The PRESIDENT expressed his satisfaction at the confirmation of his own views. As to nitrous oxide, carbonic acid is just as safe. Animals are very prone to die under its influence, and in America its danger has been proved by many deaths.

NEW INVENTIONS.

DR. KIRBY'S MINIATURE DISPENSARIES AND TASTELESS MEDICINES.

WE have to apologise to the inventor of these very useful, pretty, and convenient portable dispensaries for not having noticed them before. A glance at them is a sufficient recommendation. They tell their own tale. Any Practitioner who is liable to be called up at night or whose patients lie scattered over a wide district will be under a constant obligation to Dr. Kirby if he possess one of his beautiful little cases. They contain, according to their size, collections of the medicines most commonly in use—where practicable in the form of pills, rendered tasteless by a non-metallic coating, or capsulated powders—or, where the medicine can only be given in a fluid form, as tinctures or concentrated solutions. The medicines are all arranged in little glass tube bottles, with tasteful gold labels, and most ingeniously packed in really elegant leather cases. One of Dr. Kirby's cases (the miniature dispensary) is intended for the pocket, bound in morocco, and is about the size of a good-sized Church Service. It contains two-and-twenty bottles of medicines, with graduated measure, etc. We really can hardly conceive anything more useful to a hardworked general Practitioner. We subjoin a woodcut of one of the larger cases in the form of a travelling bag.



NEW BOOKS, WITH SHORT CRITIQUES.

Water Analysis: a Practical Treatise on the Examination of Potable Water. By J. A. Wanklyn, M.R.C.S., Professor of Chemistry in the London Institution, and Ernest Theophron Chapman. London: Trübner and Co. Pp. 103.

*** We are extremely glad to see a small and portable volume on the examination of water intended to be used for drinking purposes. We have frequently been asked for references to such a work, but hitherto we have been unable to give such with satisfaction to ourselves or others. The little book now published will in this way be worth much, for Messrs. Wanklyn and Chapman have already earned for themselves laurels. Their process for the estimation of albuminoid matter in water, exact or inexact as it may be, is indicative of a decided step in the right direction.

Medical Education and Medical Interests. By Isaac Ashe, A.B., M.B., C.M. Trin. Coll. Dublin. Dublin: Fannin and Co. Pp. 164.

*** For this essay the second Carmichael Prize has been awarded. In many respects it differs from the work of Dr. Mapother; it does not treat of so many subjects, nor are those dealt with handled in so sketchy or so able a manner. The greater part of the volume is occupied with the subject of Medical education, a smaller portion with the licensing boards; but with regard to both divisions we have to complain, as with Dr. Mapother's work, that it is the Irish system that is dealt with, not that of Great Britain at large. We consider this want of a cosmopolitan character the most serious defect in both of the prize essays.

On Consumption and its Treatment by the Hypophosphites. By J. C. Thorowgood, M.D. Lond., M.R.C.P., Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, etc. Second Edition. London: John Churchill and Sons. Pp. 47.

*** Dr. Thorowgood has in this little work reprinted his former notes on the subject, and added to these the results of subsequent observations, whereby he is enabled to maintain his opinions as to the efficacy of phosphorus in the treatment of consumption.

On Aniline and its Derivatives: a Treatise upon the Manufacture of Aniline and Aniline Colours. By M. Reimann, P.D., L.A.M. Revised and edited by W. Crookes, F.R.S., etc. London: Longmans. Pp. 164.

*** This beautifully got-up book contains, besides the work of Dr. Reimann, the report of Hofmann, Laire, and Gerard, on the colouring matters derived from coal-tar shown at the French Exhibition of 1867. Although of no very direct interest to our strictly Medical readers, manufacturing chemists will know how to appreciate its value aright.

The Popular Science Review. Edited by H. Lawson, M.D., etc. London: Hardwicke. Pp. 237–344.

*** The present number of this ably conducted magazine contains, among other excellent material, a most valuable paper from the pen of Professor Huxley, on Animals intermediate between Birds and Reptiles. Professor Huxley refers, in the first instance, to the objection continually urged against the Darwinian hypothesis of evolution—viz., that no beings have been found capable of filling up the enormous gaps at present existing among some classes of animals. The reply of course is that these may exist in certain strata which have not yet been investigated, and it is the purpose of the paper to show how one of the gaps—that between birds and reptiles—is really much narrower than has been supposed. In proof of this, Professor Huxley undertook some researches into reptilian remains, and at first, naturally enough, considered the structure of the winged Pterodactyl. This, however, he found, was related to other reptiles, somewhat in the same way as bats to other mammals. Trying back, he was induced to consider the gigantic lizards of the mesozoic ages, and here found something more encouraging, unlikely as the field seemed at first sight, for he discovered that there were important points of resemblance between the skeletons of such beings as the Iguanodon and Megalosaurus, and the struthious or ostrich-like group of birds. First however, he had to show that a mistake had been made as to the position of certain of these saurian bones—that the so-called clavicle of the iguanodon was really its ischial bone, and the coracoid of megalosaurus its ilium. The skeleton of Campsognathus, found in the Solenhofen slates, still further tended to fill up the gap, and the relationship between birds and these reptiles may be taken to be established. Probably, however, the most curious part of the evidence is that relating to the attitude of the iguanodon, for there is tolerably good testimony that this ponderous animal occasionally, if not habitually, held itself erect, and moved about in this position. We confess that the triassic footprints of so-called birds of a struthious kind and which have been so well described by Hitchcock and Jardine, were ever a mystery to us. Now they are so no longer. Instead of being the footprints of gigantic birds, they are the tracks of ponderous reptiles.

Westminster Review. July, 1868.

*** This review is always worth consulting by those who desire to know the present movements in the world of thought; and whilst it delights the Radical by showing how and where to get a wedge into some ancient structure, it may warn the Conservative, and teach him where his bulwarks are considered feeble by the invading army of Rationalism. "The Character of British Rule in India" is but the secular version of a sermon we once heard the Bishop of Oxford preach for the S.P.G. The Review of Davidson's Introduction to the New Testament, the articles on the Dwellings of the People, on Nitro-glycerine, on the Marriage Laws, the Incas, Church and State, and the Spanish Gipsy, are all good. As to marriage, there is the tendency to degrade it from being what it is, an indissoluble sacrament of the Church, or even a status regulated by law, to be a mere voluntary contract, whose duration and terms shall depend on the will of the contractors. Will any of the marriage reformers give us a picture of married life as a voluntary and terminable arrangement?

Half-yearly Abstract of the Medical Sciences. Vol XLVII., Jan. to June, 1868. London: J. Churchill and Sons. Pp. 372.

Half-yearly Retrospect of Medicine. Edited by W. Braithwaite, M.D., Lecturer on Midwifery and Diseases of Women and Children at the Leeds School of Medicine; and James Braithwaite, M.D. Lond. Vol. LVII. London: Simpkin, Marshall, and Co. Pp. 407.

*** To those whose time is too much occupied to read our contemporary literature, these half-yearly compilations are acceptable.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Tuesday, July 21, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Aldridge, Charles W. R., Asylum, Wakefield.
Andrews, George, Guy's Hospital.
Ash, Robert Vacy, Holsworthy, North Devon.
Bradley, George, Bell Bank, Bentham, Yorkshire.
Brett, Francis Charles, 40, Halsey-street, Cadogan-place.
Burton, John Earp, 21, Boundary-street East, Liverpool.
Calthrop, Christopher William, Charing-cross Hospital.
Cole, Richard Mount, Guy's Hospital.
Cortis, William Richard, 141, Kennington-park-road.
Dalton, Frederick, Newhaven.
Edwards, Branford, Carr-street, Ipswich.
Fidler, John Dixon, M.D. Aberdeen, Whitehaven.
Godwin, Charles Henry Young, Royal Artillery, Woolwich.
Goodhart, James Frederic, Brighton.
Greenhill, Arthur Francis, Priory Lodge, Barnes.
Groves, Edward, 47, Bartholomew-close, E.C.
Havard, David, West-street, Newport, Pembrokeshire.
Howes, Frank Charles Plumptre, 5, Mecklenburgh-street, Mecklenburgh-square.
I'Anson, Thomas Francis, M.D. Aberdeen, Whitehaven.
Joseph, Thomas Morgan, Oaklands, Builth.
Kenyon, John Edward, 40, Winchester-street, Pimlico.
Lorimer, John Archibald, 3, Randolph-gardens, Maida-vale.
Milford, Frederick, M.D. Heidelberg, Sydney.
Prior, Richard Henry, Westgate, Chichester.
Rigby, James Morris, Chorley, Lancashire.
Rogers, Charles Edward Heron, Retford, Notts.
Sharp, John Adolphus, 225, Evelyn street, Deptford.
Sleightholme, John Pennock, 6, Esk-terrace, Whitby.
Snook, James Walbridge, Wellington, Salop.
Thompson, George W. R., Asylum, Wakefield.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Court of Examiners on the 16th inst., and when eligible will be admitted to the pass examination:—

Bunting, James, of Guy's Hospital.
Carter, C. H., of University College.
Evans, David, of St. Bartholomew's Hospital.
Roe, F. G., of St. George's Hospital.
Squire, R. H., of St. George's Hospital.
Wood, W. D., of Guy's and Edinburgh.

It is stated that twenty-five out of the eighty candidates examined were referred to their studies for three months.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 21st inst.:—

Alabone, E. G., Hackney, of the London Hospital.
Anderson, Tempest, L.S.A., York, of University College Hospital.
Bartlett, J. P., Ladbroke-square, Notting-hill, of University College Hospital.
Black, J. G., Newcastle-upon-Tyne, of Guy's Hospital.
Boulton, G. S., Albrighton, near Wolverhampton, of Guy's Hospital.
Brickwell, E. A., L.S.A., Sawbridgworth, Herts, of St. Bartholomew's Hospital.
Doughty, J. P., Hobart Town, Tasmania, of Guy's Hospital.
Fox, R. D., Beccles, Suffolk, of the Charing-cross and Middlesex Hospitals.
Heap, C. S., Belfast, of the Belfast Hospital.
Hodgson, William Brigham, Cumberland, of University College Hospital.
Johnson, G. B., Newcastle-upon-Tyne, of Guy's Hospital.
Littre, William, Eye, near Peterborough, of King's College Hospital.
Moullin, H. R., Guernsey, of St George's Hospital.
Payne, W. H., Bristol, of the Bristol Hospital
Peacock, Stanley, Kensington, of University College Hospital.
Pidwell, Samuel, Penzance, Cornwall, of University College Hospital.
Porter, John, Manchester, of the Manchester Royal Infirmary.
Price, William, Cardiff, South Wales, of University College Hospital.
Roche, William, L.R.C.P. Ire., Ipswich, Suffolk, of Dublin, and King's College, London
Scott, P. T., Fulham, Middlesex, of Guy's Hospital
Wheatcroft, S. H., Sheffield, of the Sheffield Hospital.
White, Frederick, Liverpool, of Liverpool and University College.
Whitefoord, C. C., Melbourne, Australia, of University College Hospital.
Yorath, E. W., St. John's-wood, of the Charing-cross Hospital.

The following gentlemen were admitted Members on the 22nd inst., viz.:—

Atkins, A. W. G., Hadleigh, Suffolk, of Guy's Hospital.
Bell, W. J. N., Leicester, of St. Bartholomew's Hospital.
Duke, Joshua, Kennington-park, of Guy's Hospital.
Esnouf, E. C. A., Mauritius, of University College Hospital.
Forder, J. L. W., Mauritius, of University College Hospital.
Foster, A. C., Leeds, of the Leeds School of Medicine.
Heim, C. M., Highbury-grove, of St. Bartholomew's Hospital.
Jones, W. O., Horton, Bucks, of St. Mary's Hospital.
Lafargue, Paul, Paris, of St. Bartholomew's Hospital.
Lewin, Friend, Bayswater, of St. Mary's Hospital
Mapei, L. V., Liverpool, of the Royal Infirmary, Liverpool.
Mason, George, L.S.A., Wisbeach, Cambridgeshire, of Guy's Hospital.
Nason, C. A., Nuneaton, of Guy's Hospital.
North, John, Winchester, Hants, of St. George's Hospital.
Rowlands, D. G., Carmarthen, South Wales, of Guy's Hospital.
Schön, J. E., Chatham, Kent, of the London and Middlesex Hospitals.
Shackelford, Shuckburgh, Bosworth, near Rugby, of St. Mary's Hospital.
Townsend, Meridith, L.S.A., Clapham-rise, of St. Thomas's Hospital.
Turner, T. B., Jamaica, West Indies, of Charing-cross Hospital.
Whitcombe, E. B., Birmingham, of the Birmingham Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 16, 1868:—

Kipling, William, Romaldkirk, Darlington.
Long, Mark, Adelaide-place, Barking-road.
Mackenzie, Frederick Morell, Tiverton, Devon.
Pritchard, Urban, St. Paul's-road, London.
Worts, Charles James, Trinity-street, Colchester.

As Assistants in compounding and dispensing medicines:—

Padwick, Thomas, Kentish Town-road.
Stanley, William, Blackman-street.

The following gentlemen also, on the same day, passed their First Examination:—

Jolliffe, John, Guy's Hospital.

Lill, William Frederick, Guy's Hospital.
Morris, John, Guy's Hospital.
Pinder, John William, Leeds School of Medicine.
Smithson, John, Leeds School of Medicine.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

COLES, OAKLEY, Esq.—Honorary Dentist to the Hospital for Diseases of the Throat, Golden-square.

FLOWER, THOMAS, M.R.C.S., L.S.A., late House-Surgeon to the Middlesex Hospital—Visiting Surgeon to the Chester General Infirmary.

NAVAL AND MILITARY APPOINTMENTS.

2nd Life Guards—Surgeon Frederick George Kerin having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

73rd Foot.—Staff Surgeon John Harrison Robotham to be Surgeon, *vice* John Henry Hearn, appointed to the staff.

BIRTHS.

COLLIER.—On June 26, at 29, Graham-road, Dalston, the widow of Thomas Poole Collier, M.D., late of 72, Worship-street, Finsbury-square, of a daughter.

FAIRBANK.—On July 19, at Windsor, the wife of Dr. Fairbank, of a daughter.

FYFFE.—On July 13, at Charlton-lodge, Woolston, Southampton, the wife of Dr. Fyffe, Staff Surgeon, of a son.

LAING.—On July 7, at Wantonwells, Skeene, Aberdeenshire, the wife of Dr. Laing, of a son.

MACGOWAN.—On July 16, at Mooreland-house, Martock, Somerset, the wife of Alexander Thorburn Macgowan, Esq., formerly Assistant-Surgeon 52nd Light Infantry, of a daughter.

PRANCE.—On July 18, at Heath-street, Hampstead, the wife of Robert Rooke Prance, M.D., of a son.

ROPER.—On July 16, at Granville-park, Blackheath, Kent, the wife of Arthur Roper, Surgeon, of a son.

MARRIAGES.

BARRETT—COWDELL.—On July 16, at St. Peter's Church, Dorchester, William Bowles Barrett, Esq., of Weymouth, to Maria Georgina, eldest daughter of Charles Cowdell, Esq., M.D., of Dorchester. No cards.

CUBITT—WHICHER.—On July 14, at St. James's, Hatcham, Herbert Cundall, sixth son of George Cubitt, of Norwich, to Kate Alice, only daughter of the late Charles Whicher, M.R.C.S., and stepdaughter of Thomas Allen, of New-cross.

HANBURY—OVERELL.—On July 14, at the Parish Church, Leamington, Richard Savill Hanbury, Esq., M.D., of Peterborough, and late of the 2nd West York Militia, to Mary, second daughter of William Overell, Esq., of Leamington.

LITCHFIELD—MINISTER.—On July 14, at St. Andrews, Wells-street, Randolph Litchfield, Esq., youngest son of Thomas Litchfield, Esq., M.D., to Mary, only daughter of E. W. Minister, Esq., Cross Deep, Twickenham.

PLANTE—STODART.—On July 16, at Emanuel Church, Streatham-common, Alfred Pope, eldest son of the late Peter Plante, of Norwood, Surrey, to Jessie, only daughter of the late Edward Stodart, M.D., of Hendon, Middlesex.

ROBBS—PATERSON.—On July 14, at Brigg, Decimus Mallett Robbs, solicitor, Brigg, to Julia, third daughter of Robert Haldane Paterson, Esq., Surgeon, Brigg.

THOROLD—KINGCOME.—On July 21, at St. Andrew's Church, Plymouth, Ellis Frederick Thorold, M.D., eldest son of the Rev. H. B. Thorold, to Ellen Clara, youngest and only surviving daughter of Vice-Admiral Sir John Kingcome, K.C.B., of 5, Windsor-villas, Plymouth. No cards.

TRENERRY—HEPPER.—On June 25, at the Cathedral of the Holy Trinity, Gibraltar, Charles James Trenerry, M.D., eldest son of Dr. Charles Trenerry, Surgeon of the Civil Hospital, to Louisa, second daughter of the late Richard Lawles Hepper, Esq. No cards.

DEATHS.

DAY, EDMOND HENRY, M.D., of Barton-under-Needwood, Staffordshire, at Swaffham, Norfolk, on July 17, aged 37.

EARLE, WILLIAM, the beloved son of E. S. Earle, F.R.C.S., at Brentford, Middlesex, of a scald, on July 17, aged 4 years.

KIDD, GEORGE FREDERIC, infant son of Leonard Kidd, M.B., Staff Surgeon, Army Medical Department, at 6, Newton-terrace, High-road, Lee, Kent, on July 17, aged 9½ months.

MOORE, LUDUVINA, the beloved wife of R. W. Moore, Esq., Colonial Surgeon, at Adelaide, South Australia, on May 14.

NAISMITH, Dr., Deputy Inspector-General of Hospitals, at Agra, on June 5, in his 51st year. Friends are requested to accept of this intimation.

STEEL, EDWIN, Esq., M.R.C.S., at Warrington, on July 9, aged 64.

STEVENS, WILLIAM, Esq., M.D., D.C.L., at Roslin-house, Great Malvern, formerly of the Island of St. Croix, of paralysis, on July 15, in the 82nd year of his age.

TURNBULL, MARION, youngest daughter of A. Turnbull, Esq., M.D., at 15A, Clifford-street, London, on July 16.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Derby Union.—The South District is vacant; area 1700; population 25,524; salary £80 per annum.

APPOINTMENTS.

Blackburn Union.—Henry Patchett, L.R.C.P. Edin., M.R.C.S.E., to the Mellor District.

Edmonton Union.—Edward C. Roberts, M.R.C.S.E., L.S.A., to the Southgate District.

Honiton Union.—Albert L. Peacock, M.R.C.S.E., L.S.A., to the Second District.

Manchester Township.—John Walsh, M.R.C.S.E., L.S.A., to the Cathedral District.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—Dr. Churchill, President of the King and Queen's College of Physicians, entertained at a sumptuous banquet in the College Hall, on Tuesday, the 21st inst., a party of forty-one, consisting of the Fellows of the College and a few externs. Among the non-Fellows present were the Right Hon. Sir William Carroll, Lord Mayor; the President of the College of Surgeons, Dr. George Porter; the Governor of the Apothecaries' Hall, Dr. Wyse; Inspector-General James Mouat, V.C., C.B, principal Medical officer in Ireland; and Dr. Fleetwood Churchill, jun., late of Simon's Town, Cape of Good Hope.

ST. MARY'S HOSPITAL MEDICAL SCHOOL has, it seems, attained to the period of age at which dinners become important to well-being. Growing in years, it has a numerous body of old students already attached to it, and to meet their wishes an old student dinner will, we hear, be held on October 1, after the introductory lecture. Mr. Milner M. Moore, Resident Registrar of the Hospital, is the hon. sec. of the dinner.

ACADÉMIE DES SCIENCES.—The post of Foreign Associate (vacant by the death of Sir D. Brewster) has again been very nearly conferred upon an Englishman. Of the 49 Academicans present, 23 gave their votes to Mr. Graham, Master of the Mint, and 23 to M. Kummer. At the second ballot there were 50 voters—23 for Mr. Graham, and 27 for M. Kummer.

OLD BOYS' "PROPERT MEMORIAL FUND," EPSOM COLLEGE.—On July 13, at 7 30 p.m., a general meeting of Old Boys was held at the Cannon-street Hotel, under the presidency of the Rev. Dr. Thornton, the Head Master of the College. After a statement of affairs had been read by one of the honorary secretaries, the following resolution, proposed by Mr. F. J. Marshall, and seconded by Mr. Hemming, was carried unanimously—"That this meeting considers that a library will be the most suitable form for this memorial to take." A Committee of Management to make necessary arrangements for this object, and to undertake the charge of the library when completed, was then formed, consisting of the Treasurer to the Fund, the Treasurer to the College, the Head Master, the Head Prefect, one of the Old Boys, and one of the Honorary Secretaries to the Fund. On the motion of Mr. G. M. Pretty, a cordial vote of thanks was given to the Committee, to the officers of the Fund, and to the Chairman. Over £100 have been already collected, and about £300 more are either promised or confidently expected. Previous to the meeting about forty Old Boys dined together, and a general feeling was then expressed that the dinner should be made an annual institution.

DIPSOMANIACS IN SCOTLAND.—In their eighth annual report the Scottish Lunacy Commissioners expressed a strong opinion that opportunities should be afforded to persons unable to resist the tendency to excessive drinking to place themselves under control and treatment without authority from the sheriff. By the Lunacy Amendment Act of 1866, the Asylum authorities are now authorised to receive for care and treatment any person who expresses to the Commissioners his wish in writing to become a voluntary patient, and has obtained their consent. This provision was taken advantage of in 1867 by seventeen persons, of whom fourteen were admitted into public, and three into private asylums. The only institution in Scotland for the special treatment of the intemperate is Queensberry Lodge, which is attached to the House of Refuge in Edinburgh. Only females are received, but its situation is regarded by the Commissioners as "unfavourable," and it is, moreover, not under their official cognisance. The Commissioners consider that the chief impediment to the success of such institutions is the want of the power of compulsory detention, and that the propriety of legalising such power has many strong arguments in its favour. At the same time they see the necessity for proper discrimination between the mere drunkard and the dipsomaniac, the determination of the point where vicious indulgence ends and disease begins being a matter of some difficulty.

We are informed that Dr. Bealey, Physician to St. Pancras Dispensary, has made arrangements to succeed Dr. Kennion at Harrogate. Dr. Bealey is an accomplished Physician and an earnest cultivator of Medical science. From personal knowledge we can affirm that his brethren will find him a gentleman at all times influenced by the nicest sense of honour.

The Sanitary Condition of Birmingham during the Hot Weather.—As might be expected from the excessive heat of the weather, diarrhœa has set in amongst all classes of the people, and in the infant population especially it has been attended with alarming mortality, causing no less than, during the past week, an increase of forty deaths. The annual death-rate per 1000 persons residing in the borough was last week 26·4, being a great increase over the two previous weeks, which had been only 17·9 to 21·8. We are happy to state that the sanitary authorities have taken active measures to obviate any injurious effects which may arise from the excessively high temperature and the continued drought, which have not been equalled for many years.

The vineyards of Victoria occupy 4176 acres, containing 8,341,497 vines, yielding in 1866 27,641 cwts. of grapes not made into wine, and 101,327 cwts. converted into 361,790 gallons of wine and 1709 gallons of brandy. A new wine company has started for the purpose of buying up the grape juice, and treating it on the large scale by skilled experts. In New South Wales there are 2281 acres, and in South Australia 6361, under vine culture.

Medical News from the Antipodes.—Mr. A. B. Jones, stipendiary magistrate of Hobart Town, is said to have accepted the appointment of agent for the sale of Professor Holloway's pills in Tasmania. It is suggested that a dose of the pills may be recommended to sufferers from undue conviviality, in lieu of the usual fine. The Medico-Ethical Society of Melbourne has agreed to a proposal for raising the scale of Medical fees; whereupon a correspondent of the *Melbourne Argus* advises the grocer, butcher, and baker to raise their prices against Medical men. The state of society at Burketown, Carpentaria, is described as "primitive." Society was too drunk to carry out its Christmas sports, but they contrived to catch and hobble an overseer, tie a bullock-bell round his neck, and drive him out of the township for refusing to pay a bet he had lost. At Norman River it is suggested that the inhabitants rather excel the Burketonians. Several of them dispense with shirts, and ride about in their own chocolate-coloured skins. The most popular wayside hotels are "The Flash of Lightning" and the "Dead Finish." Each man carries a revolver, because natives are plentiful in the vicinity. They will not be plentiful long. The heat and mosquitoes and fever are fearful. A new Doctor arrived by the *Ellesmere*, and was evidently a swell; but next day he was dancing in the street, after the way of Burketown. The other Doctor had an epileptic fit.

Perforation of the Bladder by a Calculus.—Dr. Mendel relates the case of a lady, 62 years of age, who came under his care January, 1868, on account of a urinary calculus in the vagina, which was expelled thence during a violent cough. Its presence had given rise to great febrile irritation, and had led to various erroneous diagnoses. The calculus measured 8 centimetres in its long diameter and $6\frac{1}{2}$ transversely, its largest periphery measuring 23 centimetres. It weighed 173 grammes when dry, and was found to be phosphatic. It had caused much suffering during six years, perforating the posterior wall of the bladder and the anterior wall of the vagina, the urine being involuntarily discharged through the vagina during three years and a half. At length it passed into the vagina, but instead of being immediately expelled, it accumulated around it new deposit, and was detained six months within that cavity. Cases of perforation of the vagina by urinary calculi are mentioned by P. Frank, Scanzoni, and Erichsen.—*Virchow's Archiv*, May 27.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A review of Dr. Matthews Duncan's work on obstetrics is ready for publication.

Dr. Beatson, of Nagpore.—The case shall be published immediately.

Ship.—Apply to Messrs. Silver and Co., emigration agents, etc., Cornhill; or write to Messrs. Green, Blackwall.

A.X.—John Hilton, Esq., F.R.S., President of the Royal College of Surgeons of England, 10, New Broad-street, E.C.

J. H. Groome, A.M.—We cannot see how that apparatus could have done good in such a case. If it had been one of error in distribution of blood, the case might have been otherwise; but unfortunately atmospheric pressure can have little to do with an ulcerated gall-bladder.

Mater.—Any one who levels a firearm or points a dangerous weapon against another in jest, deserves to be soundly thrashed. It is one of the moral rules which ought to be enforced in all schools. "Carelessness" and "Didn't think" are poor excuses for the loss of a life; but the root of all is the cowardly custom of taking pleasure in causing alarm to others.

Iced Tea to the Rescue!—The most delicious and sustaining beverage that can be drunk this weather is good strong tea cooled down with lumps of ice. It should be only slightly sweetened, without milk, and flavoured with a few slices of lemon, which are infused at the time the tea is first made. A jug of this ready at hand would suit the complaint of many of our readers to a T whilst the thermometer remains where it is and has been of late.

Age of the Gloucester and Winchester Infirmaries.

To the Editor of the Medical Times and Gazette.

Sir,—In the notice of the opening of the Royal Hants County Hospital contained in the *Medical Times and Gazette* of to-day, it is said that the old building was the first and oldest of the county Infirmaries, having been opened in 1759. Will you permit me to say that the Gloucester Infirmary was opened August 14, 1755? I am, &c

Gloucester, July 18. Buchanan Washbourn, M.D.

Effect of Peripheral Excitement on Milk Secretion.

To the Editor of the Medical Times and Gazette.

Sir,—In some civilised countries husbands and wives live apart whilst the latter are engaged in the duties of lactation. In others it is not so. Moreover, all "hirelings" who are employed as wet-nurses are denied access to their husbands. *Per contra*, amongst certain of the wise ancients, and amongst certain moderns whose customs have been preserved by tradition beyond all memory, a very different custom has prevailed as regards lactiferous animals. Thus, according to Herodotus, it was the custom of the Scythians to irritate the vulva of their mares whilst milking them; and Rawlinson says, in his notes to Herodotus, that the same is done now in some parts of India to milch buffaloes, the tail being twisted up and employed for this purpose. I am, &c. M. B.

Health at Bridgwater.

To the Editor of the Medical Times and Gazette.

Sir,—Holding, as I do, the office of Registrar of Deaths for Bridgwater, I feel it my duty to correct a statement in your paper. The statement I object to is the following:—"Fever has been for some time prevalent in Bridgwater. The epidemic is not confined to the poorer classes, some of the most respectable families having been attacked. Typhus fever is raging in Bridgwater." I always find the death-rate the best test to meet such assertions. The death-rate has been lower, with an increased population, during the last twelve months, than it ever has been during the time—viz., over twenty years—that I have held the office of Registrar of Deaths. During the whole year it has been 40 per cent. below the average, and only one death from fever has been registered during the last six months, and only five for the whole year, including all my district—viz., Bridgwater, Chedzoy, Wembdon, Durleigh Chilton, Trinity, and the Union workhouse. I am, &c. John Hurman.

1, Cornhill, Bridgwater, July 13.

*** Mr. Hurman does not deny the existence of fever.

Miss Firth and the Dialectical Society.

Dr. C. Drysdale presents compliments to the Editor of the *Medical Times and Gazette*, and would feel much obliged if he would insert the first sentence of Miss Firth's letter to him.

54, Davies-street, Berkeley-square, W., July 18.

Dear Sir,—Unfortunately I do not see the *Medical Times and Gazette* until it has been out a week; consequently only just now have I read what is therein printed on the question of what I said at the Dialectical Society, and I must confess myself anxious to have the matter put right. I did not name the "Contagious Diseases Act;" had I done so, it would have been to deprecate its operations, for I think they will be mischievous.

I am, dear Sir, yours faithfully,

C. Drysdale, Esq., M.D. Maria Firth.

Case of Swallowing a New Copper Halfpenny, passed Six Months after in a Hard Constipated Motion.

By James Pratchett Drinkwater, Surgeon Apothecary.

J. R., aged 5 years, swallowed a halfpenny last January. He was brought to me two hours afterwards. His mother said he was complaining of great pain in the throat, and of a choking and burning sensation. When I saw him the saliva was running from his mouth, and he seemed to have difficulty in swallowing. I examined him, but was not able to detect the coin in the throat or any prominence indicative of its situation. He could not swallow any bread, but drank milk freely. Some bread and water was given him, and he took a bottle of it. I ordered him to have milk and bread and water and some light food, but not to take any drastics or cathartics in large doses; but, if the bowels were constipated, a teaspoonful of castor oil or less. The child was getting thinner every day—wasting away—but took the food ordered, with rice, etc. My servant saw the child the second Saturday in July sitting in great pain in the field as if he wanted to pass a motion, and after a while he went to the place and found the motion—a very constipated one—with the halfpenny in the middle of it, quite corroded and black. For the last three weeks the child had been complaining of more pain and getting much thinner, to all appearance sinking.

Remarks.—I was afraid that it would not be able to pass from its size, and that if a strong cathartic was used it would be we get either in the pylorus or in passing through the ileo-cæcal opening into the colon.

Llangollen, July 18.

Action of Chlorine on Lead.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will some competent chemist inform me whether, or to what extent, chlorine acts upon and destroys lead? The question is one of very great importance, for nearly all our soil-pipes are made of lead, and yet we are continually urged by sanitary authorities to disinfect and deodorise our water-closets by means of chloride of lime. Within the last few years I have suffered so much inconvenience from the corrosion and decay of a soil-pipe, that I would gladly, if possible, save others from similar domestic misery. After having incurred great expense in opening and re-trapping my drains, the bad smells continued unabated, and at last I myself found out the cause of them. A portion of the soil-pipe of the water-closets, which was concealed by a curious and unsuspected arrangement of the flooring, was exposed to view, and it was found to be pierced with numerous holes, some large enough to admit one's thumb, and through these the fæcal gases had found vent, and so had invaded the whole house. For years past, while this unknown decay of the pipe was going on, I had constantly used chloride of lime, in hopes of at least deodorising my enemy; and now I wish to know whether by doing this I had been causing, or at least increasing, the perforation of the soil-pipe. My house was built about a hundred years ago, and the pipe was probably that which was originally fixed when the water-closets were constructed. The question I ask relates to a subject of vast importance; for millions of people depend upon the integrity of their soil-pipes for preventing the most subtle poison from contaminating the air of their dwellings. I am, &c. J. D.

June 17.

On the Use of Hot Milk as a Remedy for Diarrhœa.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Hot milk as a remedy for diarrhœa has been very successfully tried in Bengal, some of the particulars concerning which are given in the following extract from a letter from a resident:—"Hot milk is a specific for diarrhœa. A pint every four hours will check the most violent diarrhœa, stomach ache, incipient cholera, or dysentery; in fact, so much should rarely be given, as it causes subsequent constipation. Half a pint every meal generally reduces gradually and pleasantly any ordinary diarrhœa. If you have stomach ache, a pint of hot milk usually cures it in ten minutes—*i.e.*, if the stomach ache is accompanied by diarrhœa. It is perfectly soothing to the whole alimentary canal. It has never failed in curing me in six or twelve hours, and I have tried it, I should think, fifty times. I have also given it to a dying man who had been subject to dysentery eight months, latterly accompanied by one continual diarrhœa, and it acted on him like a charm. In two days his diarrhœa was gone, in three weeks he became a hale fat man, and now nothing that may hereafter occur will ever shake his faith in hot milk."

I have tried it in one case, and it had precisely the effect described, one half-pint being sufficient to cure the complaint, although subsequently cold milk was taken to allay the remains of the griping pains which it appeared to effect. It may deserve inquiry whether the milk should be boiled and allowed to become sufficiently cool to swallow, or whether it should be only made quite warm. In another part of his letter he observes that he always takes 'warmed milk" in preference to chlorodyne, from which it would appear that it is not usually boiled.

I am, &c. B. Clarke, M.R.C.S., etc.

2, Mount Vernon, Hampstead, June 30.

COMMUNICATIONS have been received from—

Dr. John Whitmore; M. A. B.; Mr. E. Bremridge; Dr. W. Bayes; A. X.; Ship; Dr. B. Washbourn; Rev. J. H Groome; Mr. Lawson Tait; Mr. J. W. Winchester; Mr. G. Street; Dr. R. Martin; Messrs. A. and C. Black; Mr. J. P. Drinkwater; Dr. Beatson; Dr. Livy; Mr. W. Copney; Mr J. H. Thomson; Alpha; Dr. Hughlings Jackson; Mr J. Chatto; Mr. Spencer Wells; Dr. Hermann Beigel; Mr. A. Bruce; Mr. J. Wickham Legg; Dr. Wilks; Mr. J. N. Radcliffe; Dr. Charles Orton; Mr. T. M Stone; Mr. Robert Whitworth; Mr. M. M. Moore; Mr. G. M. Stansfeld; Mr. L. J. Moseley.

BOOKS RECEIVED—

Rumsey's Educational Aspects of State Medicine—British Journal of Dental Science, June—Mouat's Report on the Gaols of the Lower Provinces of the Bengal Presidency, 1867—Report of the City of Glasgow Fever Hospital, 1868—Brunton on Digitalis—Holt on Stricture—Shaw on Anæsthesia.

NEWSPAPERS RECEIVED—

Aris's Birmingham Gazette—Shoreditch Observer—Sheldrake's Aldershot Gazette—Medical Press and Circular—Tewkesbury Weekly Record.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 18, 1868.

BIRTHS.

Births of Boys, 1017; Girls, 997; Total, 2014.
Average of 10 corresponding weeks, 1858-67, 1809·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	876	766	1642
Average of the ten years 1858-67	683·4	641·8	1325·2
Average corrected to increased population	..	..	1458
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	7	17	1	6	7	45	4
North ..	618,210	3	8	10	2	17	10	84	8
Central	378,058	1	2	12	..	3	3	36	3
East ..	571,158	1	12	8	2	6	14	71	7
South ..	773,175	6	10	17	4	16	11	104	15
Total ..	2,803,989	11	39	64	9	48	45	340	37

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·848 in.
Mean temperature	70·7
Highest point of thermometer	92·0
Lowest point of thermometer	52·7
Mean dew-point temperature	57·8
General direction of wind	N.E. & S.W.
Whole amount of rain in the week	0·70

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 18, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending July 18.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending July 18.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2014	1441	1642	92·0	52·7	70·7	0·70	71
Bristol (City)	167487	35·7	125	75	*71	..	..	..	..	..
Birmingham (Boro')	352296	45·0	238	171	189	88·3	52·5	66·0	0·34	34
Liverpool (Borough)	500676	98·0	344	290	321	88·8	51·6	65·2	0·17	17
Manchester (City)	366835	81·8	242	208	*275	95·5	52·5	66·6	0·22	22
Salford (Borough)	117162	22·7	66	59	63	89·6	49·9	64·4	0·29	29
Sheffield (Borough)	232362	10·2	163	122	145	87·6	52·0	64·2	0·02	2
Bradford (Borough)	108019	16·4	76	55	77	..	..	..	..	..
Leeds (Borough)	236746	11·0	161	120	126	90·5	45·5	64·1	0·23	23
Hull (Borough)	108269	30·4	82	50	56	87·0	48·0	60·1	0·45	45
Newcstl-on-Tyne, do.	127701	23·9	63	68	73	82·0	50·0	60·0	0·24	24
Edinburgh (City)	177039	40·0	149	85	86	85·7	48·0	63·0	0·16	10
Glasgow (City)	449868	88·9	293	262	243	85·6	47·9	62·4	0·22	22
Dublin (City and some suburbs)	319985	32·8	206	157	116	85·1	45·0	63·6	0·09	9
Total of 14 large Towns	6391080	34·7	4222	3163	3483	95·5	45·0	64·2	0·26	26
					Week ending July 11.	Week ending July 11.				
Vienna (City)	(1863) 560000	..	.	..	284	..	..	† 64·2	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·848 in. The barometrical reading decreased from 29·96 in. at the beginning of the week to 29·85 in. by 3 p.m. on Monday, July 13; increased to 29·93 in. by 9 a.m. on Tuesday, July 14; decreased to 29·75 in. by 3 p.m. on Wednesday, July 15; increased to 29·89 in. by 9 p.m. on Friday, July 17; and was 29·83 in. at the end of the week.

The general direction of the wind was N.E. and S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 65·7°.

APPOINTMENTS FOR THE WEEK.

July 25. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

28. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

29. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

31. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

THE ORIGINAL DISCOVERER & INVENTOR OF

CHLORODYNE

IS

DR. J. COLLIS BROWNE, M.R.C.S.L.,

Ex Army Medical Staff.

A WORD TO THE PROFESSION.

The word CHLORODYNE was coined by Dr. BROWNE to designate the remedy he discovered after ten years' protracted experiment with remedia not described or used in Hospital Practice at the Bedside of the Patient, where he was able, hour after hour, by night and day, to make his observations on the action of his remedy, in every phase of disease possible, and note its effects on the Pulse, Skin, Sensoria, Secretory, and Functional Arrangements of the Subject treated. It is in this way only that new discoveries in Medicine can be attempted or effected by the Physician. How comes it that, without the practice of Medicine, certain houses in the drug trade venture to vend compounds so-called Chlorodyne, without a knowledge of its formula, the same never having been publicly made known by Dr. BROWNE? It is evident, therefore, that those who use Spurious and Pirated Imitations are acting unjustly by encouraging a deception and misleading themselves.

CAUTION.

Vice-Chancellor Sir W. P. WOOD stated that Dr. J. COLLIS BROWNE was undoubtedly the Inventor of CHLORODYNE: that the story of the Defendant, FREEMAN, being the Inventor was deliberately untrue, which he regretted had been sworn to. Eminent Hospital Physicians of London stated that Dr. J. COLLIS BROWNE was the discoverer of Chlorodyne: that they prescribe it largely, and mean no other than Dr. BROWNE'S.—See *Times*, July 13, 1864.

EARL RUSSELL has graciously favoured J. T. DAVENPORT with the following:—

Extract from a Despatch from Mr. WEBB, H.B.M.'s Consul at Manilla, dated Sept. 17, 1864.

"The remedy most efficacious in its effects (in Epidemic Cholera) has been found to be Chlorodyne, and with a small quantity given to me by Dr. Burke I have saved several lives."

The following eminent Firms stated on Affidavit that Dr. J. Collis Browne was the discoverer of Chlorodyne, and that they always supplied the preparation as the Original Chlorodyne, or when Chlorodyne was asked for:—

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Messrs. ALLEN and HANBURY.	Messrs. BURGOYNE and BURBRIDGE.	Messrs. EVANS and LESCHER.
,, JOHN BELL and CO.	,, COX and GOULD.	,, MORSON and SON.
,, BARRON and HARVEY.	,, CORBYN and CO.	,, SAVORY and MOORE.

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith unjust to Patient and Physician. The value of the remedy *alone* creates the great demand.

Sold in Bottles at 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

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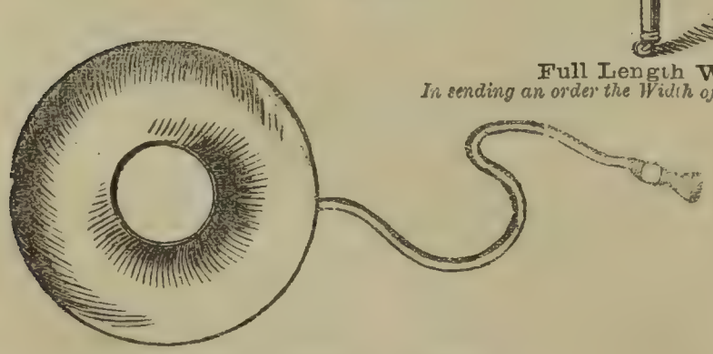
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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Inflammation of the Brain, including Softening and Meningitis.

(*Continued from page* 31.)

Now, as regards treatment, there is no use in endeavouring to evade the only conclusion which can possibly be arrived at after fully considering the subject in all its bearings—that we in all probability have no means of arresting inflammation of the brain when its nature has become manifest. It is easy to talk loosely about inflammation of the brain, as I sometimes find Medical men do, and confound together cases of convulsions, cerebral symptoms of the exanthemata, and true meningitis. I have already said that the violent onset of cerebral symptoms in a child previously well generally denotes anything but a head disease, and yet it is to such cases that remedies are actively applied, and to these the recovery is credited. It is a question whether an inflammation of the brain or of the meninges, when once it has evinced its characteristic symptoms, can ever be recovered from. It is a fair question, however, to ask whether, at the very onset, such inflammation might not be arrested. But then, again, we must inquire whether we are speaking of simple or tubercular meningitis. In the latter case the body is full of tubercles before the final inflammation sets in, and the beginning of the end has arrived before the Doctor has even diagnosed the case. It may be a question whether, even if recognised at its very earliest stage, it could be arrested, seeing that at the very next moment it would be ready to be lighted up again. I therefore regard the diagnosis of tubercular meningitis as equivalent to pronouncing the child's doom. I have no knowledge of the case of any person recovering from it. I do not know that this should in any way tend to weaken our faith in our art, because we are unable to withstand disease when the mischief is done; for this would be like saying that a fire-engine is of no service in saving a house from destruction, because it is rarely known to be required until the whole premises are in a blaze. The fact is, it is becoming more and more the duty of the Medical man to be the custodier of the public health, and thus to endeavour to divert the morbid processes at a time when they are young, and prevent their development into disease. I believe, as regards pulmonary consumption, attempts in the direction of prevention would be of far more service to the public health than the adoption of fanciful remedies when the disease has set in.

We might fairly ask, however, whether simple meningitis (as there appears to be such a disease) is not amenable to remedies, and to this I would answer in the afirmative. In the first place my own experience and that of others is corroborative of the opinion, and, secondly, I have met with appearances on the post-mortem table which seemed to leave little doubt of the existence of previous inflammation long cured. About two years ago, a little child was in one of my cribs, partially amaurotic and deaf, together with other cerebral symptoms, the result apparently of an acute meningitis following scarlatina. In the course of time, and whilst taking the iodide of potassium, the child gradually recovered, and at the end of three months had regained its sight, and was running about the ward. For some unknown reason, severe cerebral symptoms one day came on, accompanied by convulsions, and in a few hours the child died. On post-mortem examination, I found a quantity of lymph in the subarachnoid space, covering the optic commissures and neighbouring parts. This was hard and tough, and evidently of some age.

If you ask how this inflammatory process is to be arrested, I am looking forward to the time when the use of such remedies as I before mentioned as having a control over the vaso-motor nerves may be found of practical service, but in the meantime I should recommend the old-fashioned methods. Having witnessed such marked subsidence of symptoms after the use of blood-letting, I would adopt it, and I should be strengthened in its recommendation by such an authority as the late Dr. Alison, who, I remember, related some striking cases in its favour. I believe also antimony is an anti-inflammatory remedy, or one possessing an influence over the capillary or minute arterial circulation. I believe, therefore, that at the present day, if you think a child has acute meningitis setting in, there is no better treatment known than the application of leeches and the saline with antimony.

As regards calomel, I cannot speak with any satisfaction as to its administration. One of the very few cases I have seen of salivation in children was that of a little girl with tubercular meningitis. To her was given a grain of calomel every four hours, and this was continued for above a week, but without the slightest influence on the disease. In such cases we usually apply cold to the head, and have assumed that, because inflammation exists within, it is the correct remedy. I should judge myself entirely by experience, and it is, unfortunately, very difficult to test its value. I believe myself that heat and cold are very important agents in controlling or modifying morbid processes, and therefore the subject is deserving all our attention. I think it very probable that the piece of wet rag which generally adorns every one's head who has cerebral symptoms is not very potent in its action; and if we eventually discover that such means as I speak of are serviceable, we shall apply them in a much more effective and rational manner. As regards any criterion to be gained from the feeling of the patient, it has rather been in cases of purely functional brain disturbance that I have seen relief by cold afforded. We hear, for instance, of persons exposed to the heat of India plunging their heads in cold water, and we find women with hysterical headaches seek the application of cold. Then with sick headaches or headache following a debauch cold is used with relief. One such case I had an opportunity of witnessing not long ago in the person of a Medical man. He often suffered with headache, he had been overtaxed with work, and often had recourse to drops of brandy. Under the influence of these three causes, he, one evening, became almost raving mad. I found him rolling about in bed, complaining frightfully of his head, and asking for cold to be applied. On putting cold water on his head, he called out for more, so that we hung his head over the side of the bed, and, standing on a chair, let it fall in a stream upon him. He said it was most delightful, prayed for its continuance, soon said his head was better, and sank into a sleep. He subsequently confirmed his statement as to the value of the remedy. I believe, however, that putting a drunken man's head under the pump is an old and approved popular remedy.

As regards medicines, I have seen many given, but without much success, such as colchicum, digitalis, and iodide of potassium. I am constantly asked to see cases of acute hydrocephalic disease or tubercular meningitis, and have largely prescribed the iodide of potassium, but I am sorry to say that it is the rarest possible exception to see any good result. I have seen one or two cases of children with head symptoms recover after its use, but in all probability they were not tubercular, even if cases of meningitis.

My experience is this—that active treatment is never adopted in the most usual form of meningitis, simply because the disease is not recognised, and even if it were adopted early I am not aware that it would be of any use. The cases in which active measures are used are those in which cerebral symptoms appear at the very onset of the illness, and in such a recovery often occurs. Now, as I before said, in many of these cases there is no inflammation of the brain at all—it is a state of "irritation," to use the ordinary expression, from remote causes. There is, however, a residuum in which such well-marked cerebral symptoms are present, indicative of inflammation, that I cannot but think that the remedies are sometimes useful. Idiopathic simple meningitis is not a common disorder; when it does occur it sets in with violence, and is over in a few days; in such cases I have every reason to think that the old-fashioned so-called antiphlogistic method was eminently useful.

My experience has been mostly with the unfortunate cases of tubercular meningitis which are invariably fatal. I have seen all the medicines I have named given without success as well as sundry local applications, as blisters and iodine to the head. In a large majority of instances, when a post-mortem examination is made, tubercles are not only found in the meninges but scattered through the body; our helplessness is evident, and that we have only been called in for advice at the beginning of the end.

I think I told you that tubercular meningitis is not often a disease of infancy, and therefore you have much more hope of recovery in a child a few months old suffering from cerebral symptoms, for these may be set up by external causes. You may

remember, also, that in simple exhaustion or anæmia of the brain convulsions may occur, and that such must be combated by very different remedies from those I have been mentioning. The child may be atrophied or in a depressed condition from many causes, and the head may grow large from a passive collection of fluid in the ventricles; at all events, you may find a child in a very feeble condition, with a sunken fontanelle, and yet having convulsions. In this case a stimulant is the remedy. I saw a case only lately where a child was in constant convulsions, and these had been aggravated by depleting measures. An immediate change for the better occurred after the administration of a few doses of brandy and ammonia. I might here say that there is a state of atrophy in children where alcohol will cure when all nourishment and cod-liver oil have failed. I used to keep a mixture made of rectified spirit at the Infirmary for children. I should also say that the constant convulsions of children are much relieved by the breathing of chloroform. In those cases, where the whole body is constantly distorted to the great distress of the mother, chloroform will cause them instantly to cease, and sometimes with their arrest the child may fall into an apparent sleep. I have given it in many cases with the greatest advantage and relief.

I shall not take up the subject of chronic hydrocephalus more than to say that cases of this disease are often submissive to remedies, as I used to show you by many examples amongst our out-patients. I was in the habit of giving the iodide of potassium in steel wine, with an occasional mercurial powder. You must know that in many cases of enlargement of the head the effusion is a merely passive condition. An infant inherits a sickly constitution, or becomes cachectic from deficient food, and a change in the framework takes place—the chest falls in over the non-expanded lungs, whilst the belly and the cranium give way, the one being distended with gas and the other with fluid. This fluid may again be absorbed, or the head may remain permanently enlarged. I know now a highly intelligent youth with a good-shaped head, in whom the skull became much enlarged after a severe illness when he was about two years old. In two cases where the head was excessively large I had recourse to tapping, but without any success, so that I think I shall never do it again. It is remarkable, however, that no ill results followed.

ON "OPTIC NEURITIS" AS A SYMPTOM OF DISEASE OF THE BRAIN AND SPINAL CORD.(a)

By T. CLIFFORD ALLBUTT, M.A., M.B. Cantab., F.L.S.
Physician to the Leeds General Infirmary, etc.

(*Concluded from page* 62.)

Induration of the brain, I believe, not unfrequently produces sclerosis of the optic nerve or atrophy by pressure. I have not had any autopsies, however, nor have I been able to obtain the optic nerves from such cases. Amaurosis is known to occur in cases of lead poisoning, and the cerebral indurations of this and other diseases probably act upon the optic nerves or ganglia much as tumours would do, or the nerves are themselves involved in the process.

Acute and chronic softening never produces ischæmia, though ischæmia may be caused by an associated meningitis or tumour. I think Dr. Jackson doubts whether local softening acts as a cause of optic neuritis. I believe optic neuritis always results directly from meningitis or cerebritic softening, whatever may be the indirect causes.(b) But my evidence of the concurrence of optic neuritis with local softenings is very incomplete. It continually happens to me to see persons suffering from obscure symptoms like those of softening who also present changes of the optic nerve, such as acute neuritis, chronic neuritis, or atrophy. I have notes of perhaps a score or more of such cases, in some of which hæmorrhages have occurred to support the diagnosis. Those, however, who know the difficulty of securing post-mortem examinations in such cases will forgive me for avoiding definite assertion.

Cerebral hæmorrhage alone never causes ischæmia or neuritis. In this a clot differs from a tumour, that it does not enlarge and slowly arrest the movements of force or of blood, but rather contracts and withdraws itself. It is not a sudden thrust, but a gradual invasion, which does mischief. Yet, as clots often are antecedences or sequences of softening, so they are often associated with neuritis, but generally with chronic neuritis or simple atrophy. Atheroma of vessels, too, which I believe to be a not uncommon cause of slight but distinct degrees of optic atrophy, is, you know, frequently associated with both hæmorrhages and softening. Therefore I differ from Galezowski and other writers, who say that nothing is more rare than to find optic signs in cerebral hæmorrhage. Cerebral hæmorrhage, again, when it dashes into the thalamus, often causes, by pressure upon the tract, a temporary hemiopia—a fact which, I am glad to find, is noted also by the most acute and trustworthy Gräfe. Hæmorrhage into the optic centres must, of course, be followed by amaurosis, though not necessarily at first by ophthalmoscopic signs.

F. Chronic Optic Neuritis,

or red softening of the optic nerve, is a term I wish to introduce as a name for certain lesser degrees of resistance to destruction which often precede white atrophy, and which are constantly overlooked. They are attended with congestive appearances, with very slight or, it may be, with no effusion, and with but little disturbance of the central vessels. When I began to examine all cerebro-spinal cases with the mirror as a matter of routine, I quickly found that many states of the eye called "simple progressive atrophy" had a distinctly hyperæmic stage, with sometimes a little effusion preceding the whitening stage. This is certainly not described in the eye-books generally, and I was accordingly much pleased, a few days ago, to find it described by Mr. Hutchinson in the *London Hospital Reports*, vol. i.(c) In a very interesting paper on amaurosis, he says, in respect of the white atrophy, which he is disposed to attribute in some degree to tobacco smoking—"In this form of amaurosis the ophthalmoscope reveals to us remarkable and very constant conditions. In the early stage the optic disk is usually too red, and the whole of the choroid full of blood, and presenting the appearance of a pile of red velvet. There are no ecchymoses, nor any effusions of lymph. In a little time the congestion of the optic disk diminishes; instead of being too red it is too white. At this stage the arteria centralis retinæ is much lessened in calibre, but its accompanying vein is of normal or even increased size. From this stage outwards the optic disk gets whiter and whiter, until all traces of arteries, excepting the larger trunks, are lost; sometimes, but very rarely, even the largest cease to be visible. At this latest stage the veins are usually very small, but I have never known them absent. Whether the stage of preliminary congestion is always present or not, I do not know, since a large majority of cases come under notice long after it is passed." I have little to add to this description by Mr. Hutchinson of a process which I have watched in all its stages in such cases as general paralysis. As to the hæmorrhage, I may say that the capillary congestion of the disk seems, in many cases at least, to break up into a minutely hæmorrhagic condition, the capillaries seeming to give way, and their contents to be extravasated, so that the carmine passes into browner shades, and the disk at the end of the congestive stages appears smudgy, and as if stippled with dirty brickdust. One sees these appearances likewise in the brain in cerebral softening. I have observed again, in many of these cases, effusion to slight but decided degrees—effusion distending and blurring the nerve, or even spreading beyond it. For instance, it was present in the following case of "locomotor ataxy," in which the amaurosis is always supposed to be of the simplest progressive kind:—

Jane F., aged 28, admitted into the Leeds Infirmary in January, 1868. She has lancinating pains, and loss of sensation in the feet and legs, so that she feels as if walking on cushions, and she loses her legs in bed, especially if they be crossed. She can walk with fair readiness and speed, if she may look at her feet and may run the tips of her fingers along the wall. Put her feet together, and she totters; close her eyes, and she falls. There is little or no loss of muscular power. *She says she has no loss of vision whatever,* nor does she seem to

(a) These lectures form part of a course delivered at the Leeds School by Mr. Teale and myself to Practitioners and senior students. I have been very careful, therefore, to avoid many interesting questions both of ophthalmic and of cerebral change which might in some places seem naturally to arise. I hope I have not erred on the side of narrowness, and I may also hope on some future occasion to be able to take up in detail some points which are now passed by.

(b) I hold strongly that true cerebritis or lesion with proliferation of the neuroglia, is not uncommon. It is more evident in the optic trunk, because the connective tissue is there more abundant.

(c) As I have had occasion to say before, a vast number of important changes in the optic disks precede any loss of vision, and therefore are not seen by ophthalmic Surgeons.

have on testing her with types. The pupils are a little contracted. On dilatation, I find the disks whiter than natural, the veins a little larger, the arteries smaller, and decided marks of exudation both on the margins of the disks and dotted closely around them. Mr. Teale kindly verified this observation for me. You see in Jane F.'s case there was no complaint of loss of vision. This most uncertain symptom seldom sets in until atrophy is well forward, as we see also in general paralysis. To base any inferences, therefore, as to the state of the optic disks upon degrees of vision, is simply a waste of time.

Chronic neuritis or softening is not associated with perineuritis. I have only once examined the structure of the optic nerve in the red stage of chronic neuritis, but in that case I did not find any marked proliferation of nuclei from the neurilemma. I found dilatation of the capillaries, varicosity, and breaking up of the fibrils, a good deal of granular matter and nuclei, probably from the interstitial connective tissue. We want, however, many more examinations of the nerves in this state. I have of course examined many nerves in full atrophy after chronic neuritis. The nerve fibres are generally destroyed, a few only perhaps remaining entire; the vessels are often degenerated or thickened, and the rest of the trunk is made up of granular matter, oil globules, "myelocytes," etc. There is, in fact, a degeneration, with very slight evidence of vasculocellular resistance. The causes of chronic neuritis remain very uncertain. It is not due to meningitis, as there is no ischæmia nor acute neuritis with implication of the sheath. I think tumour is always followed by ischæmia, by acute neuritis, or by simple atrophy due to disconnexion from the optic centres, and not by chronic neuritis. Perhaps, however, we may see chronic cerebritis around a tumour or clot propagated as chronic neuritis to the optic nerve, though I have not traced such a process.(d)

Chronic optic neuritis is, indeed, best seen in the two modes of change called "general paralysis" and "locomotor ataxy" or posterior sclerosis of the cord, both of which diseases are allied and connected by processes of intermediate characters. Why the optic nerves fail or are attacked in these cases I cannot tell.(e) There are two theories to explain its occurrence in "locomotor ataxy," etc.—first, that the change is propagated to the eye by nervous continuity; second, that it is due to that resort of the needy, the sympathetic system with its vaso-motor nerves. Now, first to take general paralysis, into which I have made a very full investigation, and have had valuable opportunities for observation; in this disease we generally find post mortem alterations in the papillæ and optic nerves, in the tracts, and in the corpora quadrigemina, because we generally have to examine only extreme cases. But even in the extremer cases the changes are not more, but less, decided as we go backwards, and in a few observations where the optic disorder was recent my sections of the corpora quadrigemina show no marked disorder. On the other hand, it is difficult to give any reasonable explanation of its commencing at the periphery, as it is difficult to explain the origin of other palsies which undoubtedly start from the periphery. In locomotor ataxy I have been able to obtain but very few brains and only one microscopical examination, but M. Vulpian reports in a case of amaurosis with posterior sclerosis "nothing particular in the cerebral peduncles nor in the corpora quadrigemina, which seem quite normal."(f) This coincides with my own autopsy, and is very remarkable. I should notice, also, that both Clarke and Vulpian agree in acquitting the membranes in locomotor ataxy; and this agrees with the absence of perineuritis, as determined by the mirror. In "general paralysis," of course the membranes may be adherent and thickened, but I have seen no reason, even in these cases, to suppose that the optic neuritis travels along the neurilemma. I have never seen perineuritis in general paralysis, and, on the other hand, I have constantly seen chronic neuritis therein without any meningitis of the base. Bouchut speaks of amaurosis in cases of chronic myelitis of the upper spine. I have certainly, too, seen acute neuritis three times in disease of the cervical spine, and here it may be guessed that an "irritation" or a "disturbance of polarity" has travelled up to the corpora quadrigemina. Autopsies, with microscopic observations, will be of great importance in deciding a question which has such wide bearings. I am disposed to think, from the perineuritic ophthalmic appearances in two of my cases, that the inflamed meninges may turn out to be the evil communication. In "general spinal paralysis" (Duchenne) I have never had an opportunity of examining the eyes, nor do I know that any one else has done so. Secondly, as to the sympathetic-nerve theory. It is difficult for me to discuss this favourite hypothesis, as I cannot discover any argument to support it, though, if it be true, it is a most important discovery. In locomotor ataxy, however, the cervical sympathetic is distinctly, almost obtrusively healthy, the wasting of the posterior roots being always arrested at the ganglia,(g) and yet "spinal amaurosis" is common in this disease. In general paralysis I have only examined brains as they have been sent to me by Dr. Crichton Browne and other kind friends, so that I know nothing of the state of the cervical sympathetic in that disease. No evidence of any diseased condition of the sympathetic, however, is given in Westphal's careful essay(h) on the disease, nor in Griesinger's treatises on its pathology. On the contrary, we continually see disease of the cervical sympathetic without any tendency to chronic optic neuritis or atrophy.(i) So that the proofs of the sympathetic theory of spinal amaurosis come to this—that in locomotor ataxy, etc., there is spinal disease; now the spine is closely associated with the sympathetic system, and the eye is also closely associated with the sympathetic system; therefore, etc. . . . "There is a river in Macedon, and there is moreover a river at Monmouth, and there are salmons in both." The causation of chronic neuritis, then, is very obscure, and is probably of another kind than that of acute neuritis; hence my excuse for their separation. Dr. Hughlings Jackson's aphorism that optic neuritis depends upon *coarse* intracranial disease does not apply therefore to chronic neuritis, and it is perhaps convenient to ask farther what is the value of that aphorism—an estimate you ought to make carefully, for all that Dr. Jackson says is the result of scrupulous observation and of almost anxious thought. Thinkers like Dr. Jackson use loose words, not because they correspond to looseness in their own thoughts, but to the deficiencies in contemporary knowledge; and the responsibility they take off the words they throw upon themselves. They like loose words, therefore, not that they may easily slip them on, but that they may easily slip them off, so that there may be room for their thoughts to move at ease within them. Unluckily, however, there are many other people who gladly catch at any expressions that seem at once fine and easy; for which reason I am disposed to deprecate the use of such an aphorism as that of Dr. Jackson about optic neuritis and coarse disease, as I would venture also to deprecate his use of the term "cerebral fever." It fits too many things too easily, and encourages in others the very mental indolence it prevents in himself. In the series of 200 cases I lately presented to the Medical and Chirurgical Society I certainly helped also to show that optic changes were chiefly or entirely coincident with static changes in the centres, but I should hardly know what to call "coarse" disease. A tumour pressing upon the cavernous sinus or severing the connexion between the optic nerves and their ganglia is clearly "coarse disease," but is a belt of cerebritis around it "coarse disease?" A small abscess Dr. Jackson, I know, calls coarse disease, but is a small spot of softening coarse? A rude clot, again, is far coarser than a small patch of meningitis about the chiasma, but the clot leaves the eye uninjured, while the meningitis sets up optic neuritis. Dr. Jackson would not say the coarser the disease the more the neuritis, and yet it should be so if the coarseness were a direct element in its causation. Now a clot, though a coarse disease, is not itself an encroaching disease, and if I may propose a change in my friend's rule, I would say that optic neuritis depends upon encroaching disease, whether coarse or not, and within this I could include not only ischæmia and acute neuritis, but chronic neuritis also.

It now remains for me only to make a few remarks upon

G. Simple Progressive Atrophy.

I have found it convenient to say a good deal already about states of atrophy, and I must not repeat myself. I have shown that a number of atrophic conditions having various modes of invasion have been put

(d) My microscopic experience would lead me to say that whenever irritation is propagated along the optic nerves from inflamed brain or membranes, there is a proportionate degree of proliferation of the connective tissue.

(e) I believe it is because they are vascular and rich in connective tissue, and both the diseases alluded to are "sclerotic" processes.

(f) *Arch. Physiol. Norm. et Pathol.*, January, 1868.

(g) *Vide* Vulpian, *loc. cit.*

(h) *Vide* Griesinger's *Archiv für Pyschiatrie*, 1867.

(i) The changes within the eye in struma exophthalmica are not neuritic or atrophic, but vascular—indeed, in the majority of cases I find no changes at all.

under the head of simple atrophy. Once more—to the ophthalmoscope, I believe, all atrophies either are or tend to become ultimately alike. I do not think that a clean-edged bright atrophy is in itself a denial of foregone acute neuritis, nor do I think that a grey-blurred atrophy is always significant of it. Chronic neuritis may leave a blurred disk behind it to last for weeks or perhaps for months. All atrophies tend to meet in the even-edged form. If there be much sclerosis or development of interstitial connective tissue, we have a dead white opaque nerve; if there be wasting rather, we see a nerve of a greyer white, and with less opacity, so that the cribiform plate may shine through it. But I cannot satisfy myself that these appearances during life can distinguish the acuter from the more degenerative forms of neuritis. The same disease may be accompanied now by a chalky-white reflecting disk, apparently choked with opaque products of connective tissue, and now by a wasted translucent disk, in which mere atrophy without sclerosis seems to be the state of the intraocular if not of the orbital or intracranial parts. On the other hand, simple white atrophy, without any preceding stage of resistance, is not infrequent. It may invade the disk like an arcus senilis, but it generally starts from the outer edge, and thence invades the whole disk. Somtimes both eyes are equally affected, but generally unequally, which is a help in diagnosis. I have pointed out the distinctions between this state and anæmia, and I should do wrong to delay you longer with any full consideration of a state so well described by many writers. Like optic neuritis, it is of slow progress, and depends upon distant changes. Sometimes it comes on long before any further symptoms of central mischief appear. In one case which came under my notice the disks were fully atrophied two years before decided symptoms of brain disease, such as paralysis, betrayed the real seat of the disease. You will therefore always attach great importance to the onset of this process. The pupil is said to be dilated in atrophy; it may be so, but not always. In some cases the pupil still acts under light, and moreover dilatation may be seen with much greater certainty in the atrophy of glaucoma. The field of vision, as I have said, is always lessened laterally before there is much disturbance of central vision; the field, therefore, should always be tested. In rare cases (I have notes of three) white atrophy occurs in one eye only; when this is so for any length of time, I think the mischief must always be before the chiasma.

Finally, I must say that blindness apparently due to paralysis of the optic nerve may, it seems, occur without any change being visible in the disks. I have never seen such a case, but there are several recorded in Mr. Salter's interesting papers (k) Of course, the possibility of some disease behind the eye must be borne in mind; though such disease, if producing blindness, must soon, no doubt, end in causing atrophy from disuse.

I fear that in these lectures I have now trespassed too long upon the columns of the *Medical Times and Gazette*. I must leave my readers to supplement much that is deficient, and to draw many conclusions which naturally result from the facts I have recorded. I have deliberately avoided debatable ground as far as was possible, and I have denied myself the pleasure of following up many interesting questions. In conclusion, let me beg my readers, if they have found interest in the subject, to turn for more details to my article on Medical ophthalmoscopy in the *Medico-Chirurgical Review* for January, 1868, to my paper read to the Medical and Chirurgical Society on February 27, 1868, and more especially to the many very able and attractive papers of Dr. Hughlings Jackson.

Académie de Médecine.—At the last meeting M. Alphonse Guérin was elected into the Section of Operative Medicine, in the place of the late M. Lagneau, by the votes of 51 of the 63 Academicians who were present.

Cholera Pensions.—The law for bestowing pensions on the widows and children of Practitioners dying in consequence of their attendance in cholera cases has been again discussed by the Italian Chamber of Deputies, and, after undergoing modification at the hands of the Senate, now only awaits the royal assent. The pensions are to be 400 fr. where there are no children, and from 600 fr. to 1000 fr. according to the number of these.

(k) *Loc cit.* See also an account of paralysis of the optic nerves after concussion in Mr. Le Gros Clark's recent lectures.

ORIGINAL COMMUNICATIONS.

ON A CASE OF HEATSTROKE.

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An important paper on the above subject by Dr. James I. Levick, of Philadelphia, which has recently appeared in the *Pennsylvania Hospital Reports*, induces me to publish the following case, which had come under my observation at the German Hospital two years ago, and which well illustrates all the principal phenomena of this interesting condition. A similar case, which had occurred about the same time in the General Hospital at Birmingham, was related in the *Medical Times and Gazette* of July 7, 1866, by Edw. Casey, M.B.; but although other cases occurred at that time, as reported in the daily papers, yet, it seems, the subject has not received that attention from other observers which it deserves, not only with regard to treatment, but from its bearings upon one of the most important questions of pathology. Our case was this:—

Work in a very Hot Room—Sudden Access of Coma—Excessive Rise of Temperature of the Body—Death in Eight Hours—Post-mortem: Fluidity of the Blood—Venous Congestion, especially of the Lungs.

F., aged 20, a strongly-built workman in one of the sugar refineries in the East of London, was brought to the German Hospital after 5 p.m. on June 28, 1866. His companions told Dr. Burger, the Resident Medical Officer, that he had been apparently quite well in the morning, but that, at about 4 p.m., whilst engaged in washing the hot sugar forms, he suddenly fell down unconscious, and remained so since. The room where he had been working was exceedingly hot, and even in the open air it was very hot and oppressive on that day. On admission he was unconscious, face pale and livid, limbs loose, pupils contracted, respiration spasmodic and stertorous. Dr. Burger was at once struck with the excessive heat of the skin, and a thermometer placed in the axilla rose to 109·2° F. at 6.10 p.m. The pulse could not be counted. Dr. Burger, recognising the case as one of heatstroke, considered the diminution of the excessive heat of the blood as the first and most urgent indication, and he hit upon the same plan of treatment which, as we shall see, was so successful with Dr. Levick. He applied at once cold to the head, and, assisted by Dr. Lewis, who was then residing with us, he proceeded to wash the patient all over with pieces of ice. The effect of this proceeding on the temperature of the axilla was this:—

At	6.15	p.m. the mercury stood at	109·0°	F.
,,	6.24	,, ,, ,,	108·15°	,,
,,	6.30	,, ,, ,,	108·0°	,,

Since admission there had been frequent evacuations from the bowels of a light yellow fluid, with flakes like coagulated albumen. These discharges had a very offensive odour, the smell of sulphuretted hydrogen being distinct.

At 6.35 p.m., when I saw the patient, he was still in the same state. As the surface became now cooler through the application of the ice, the thermometer was introduced into the rectum, where it still rose to 108·4° Fahr. The patient, to whom nothing could be administered either by mouth or rectum, was then placed in a full bath of 80° Fahr. for fifteen minutes, and water of a lower temperature poured over his head. His pupils became a little wider, but the coma still continued the same. At 7.20 p.m., when in bed again, the mercury rose in the rectum to 105·7° Fahr., and the pulse, which had become much more perceptible, made 150 beats. He remained in the same state, the temperature, however, it appears, gradually abating, for at 10 p.m. Dr. Burger found it 102·4° Fahr. in the axilla. The discharge from the bowels continued, but was, later in the evening, more of a pink colour. Urine, drawn off with the catheter at 10 p.m., was clear, rather dark-coloured, free from albumen. The patient died at 12.10 a.m.

Post-mortem Examination Eleven Hours after Death.—Body all over of a livid colour; muscular rigidity well marked; blood everywhere fluid. Head: The veins of the membranes of the brain were greatly congested; the brain rather moist, with large blood-spots; otherwise nothing abnormal could be found. Chest: The lungs very much congested, and there were many interstitial ecchymoses. The right ventricle of the heart full

of fluid blood, the left one empty and contracted. Numerous small ecchymoses under the pericardium, and there was also extensive ecchymosis under the endocardium of the left ventricle. The edges of the mitral valve were somewhat thickened, but otherwise all the valves were normal. The muscular fibres of the heart presented under the microscope a very fine granulation, and the striation appeared rather rough. Abdomen: The spleen was somewhat larger than normally, not softened: a great number of small Malpighian corpuscles were visible. The liver rather large, of normal consistence. Its cells contain a great quantity of finely granular fat; kidneys of normal size, much congested; the epithelium cells contain very fine granular matter. A great number of small ecchymoses scattered through the mucous membrane of the stomach; that of the intestines was tinged throughout with the same greyish-red colour as the mucous fluid contained in the bowel. The solitary and agminated glands down to the Bauhinian valve were somewhat swollen; the latter, with the exception of two or three near the valve, did not contain any follicles.

Remarks.—It will suffice to point to the sudden access of the symptoms above described in a healthy young man under circumstances notoriously favourable to the development of heatstroke as the principal reason for the diagnosis arrived at in this case. The collapse and the abundant evacuations (a) from the bowels, taken by themselves, might arouse the suspicion of some irritant poison; but, quite apart from there not having been any vomiting (which, however, occurs sometimes in cases of heatstroke), the collapse in that case would present very different features—namely, a considerable lowering of the temperature on the surface of the body. In our case the surface was excessively hot, and this excessive heat of the skin is, according to the testimony of those who have had the greatest experience of such cases,(b) the most constant symptom of this form(c) of insolation or heatstroke. This is also a most important point with regard to the differential diagnosis of this from other kinds of sudden coma. If we ascertain that a person so suffering has been previously quite well, that he had been exposed to great heat, especially in a moist atmosphere, and if he exhibits an excessive temperature above 105° Fahr. soon after the onset of these symptoms, we can almost with certainty pronounce it a case of heatstroke, a conclusion which is of vital importance with regard to treatment. For it would appear that there is only one, but a very effective, remedy against this most dangerous condition—viz., cooling the blood by abstraction of heat from the surface of the body. The most reliable authorities speak of the cold douche as the principal remedy, and the experience of Dr. Levick seems to prove that in some cases even bolder means must be resorted to in order to obtain rapidly a considerable reduction of the temperature of the blood. This Physician had his patients rubbed with pieces of ice—a proceeding which, he informs us, was first carried out by Dr. B. Darrach, of New York, with very happy results; his own success is certainly a recommendation of this treatment, as will be seen from the following short summary of his paper. Out of seven cases in which the above symptoms had been present and which were treated in this way, six recovered, and among them two in whom the temperature in the axilla had risen to 109° Fahr.; the one who died was a man of 65. In one of these cases the rubbing with the ice had to be continued for one hour and a quarter before the patient began to recover his consciousness. Out of twelve other cases admitted previously to those, but in the same month, and treated with stimulants, cold affusions, or the full bath, seven died.

We might perhaps have been more successful in our case if we had persevered longer in our efforts to reduce the heat of the blood, but it must also be kept in mind that nearly two hours had elapsed before any active treatment was commenced, and that the patient had been taken in a cab over a distance of about four miles before admission into the Hospital. Much, no doubt, depends in these cases on the time which elapses before an appropriate treatment is resorted to, and on the rapidity with which the excessive temperature is reduced. It is, of course, impossible absolutely to lay down a form of treatment which will be suitable for all cases; but the principle of treatment in such cases must be the speedy reduction of the excessive blood-heat. Whether this is to be done by rubbing with ice, by cold affusions, by a cold bath, or by a lukewarm bath with cold affusions, must depend upon the general state of the patient, the condition of his circulation, and especially upon the indications furnished by the thermometer. Dr. Obernier recommends also venesection, and the *à priori* reasons upon which he founds this recommendation are very rational and plausible, but the experience of English Physicians who have seen much of sunstroke in India is decidedly averse to it.(d)

It is easy enough to understand why the heat of the blood rises when the body is surrounded by a moist air of high temperature, the cooling process of radiation and evaporation from the surface, as well as from the lungs, being thereby more or less interrupted, whilst the production of heat in the tissues is going on and soon exceeds the loss. But the temperature in these cases continues rising, not only as long as the body remains under these surrounding conditions, but even after the patient has been removed to a place of lower temperature; and it is much more difficult to explain this phenomenon. I will here, however, not enter into a full discussion of the difficult question whether this rise is due merely to the accumulation of heat by a defect in its distribution through the body and of the cooling process which is, under normal conditions, constantly going on, or whether at the same time and by what means an increased quantity of heat is generated in the body. I will only point to some facts in these cases, the careful study of which may help much to the future solution of this question. Of foremost importance in this respect, and a fact of constant occurrence in these cases, is the great acceleration of the heart's action, with probably a considerable diminution of its power. The defective peripheral circulation resulting therefrom,(e) which finds its expression in the pale and livid appearance of the surface, explains in some measure why a lower surrounding temperature seems to have hardly any cooling effect upon the blood-heat. It explains also the evident slowness with which a diminution of the heat of the whole mass of the blood can be obtained in such cases by artificially cooling the surface, and the tendency on the other hand of the extremities spontaneously to get cool when exposed, whilst the trunk remains burning hot. Even this excessive heat on the surface of the trunk is probably in such cases more due to direct conduction from the internal organs than imparted to the skin by the currents of blood running through its capillaries. The rapid and imperfect respiration tends further to increase the accumulation of heat in the body in the same way as the defective peripheral circulation, although in a smaller degree.

This rise of temperature, continuing even after the original cause has ceased to act, and which, in these cases, constitutes the foremost symptom of a condition which may not inappropriately be called heat-fever (Dr. Wood), is the link which connects cases of heatstroke with others very similar as to the symptoms, but of quite a different and rather various origin. The very same symptoms—coma, extreme rapidity of the pulse, excessive blood-heat—have been observed in those curious cases of acute rheumatism of which a considerable number are now on record, and to which in this country Dr. Sydney Ringer and Dr. H. Weber have lately called attention. The same train of symptoms finally supervenes sometimes after protracted high fever in different zymotic diseases; Wunderlich has observed it in tetanus and other neuroses, and since that much-quoted case of Sir B. Brodie's several instances have been recorded, the most recent ones by Dr. H. Weber at the last meeting of the Clinical Society, in which a traumatic lesion of the cervical part of the spinal cord led to the same symptoms. Much as these cases seem to differ from each other at first sight, they all have this in common, that the centres of the nervous system are prominently affected. But whilst in part of them this affection is evidently the result of overheating, either by external causes, or, as in the zymotic diseases and some cases of rheumatism,(f)

(a) Involuntary evacuations from the bowels are also mentioned in some cases of sunstroke reported by Dr. Obernier in his recent work, "Der Hitzschlag" (1867).

(b) *Vide* Dr. W. C. Maclean on Sunstroke in "Reynolds's System of Medicine," vol. ii. page 159; Dr. Levick, *l.c.*

(c) There is another variety, called by Dr. Morehead the cardiac form of sunstroke, in which death takes place very rapidly by syncope. *Vide* Maclean, *l.c.*, page 161.

(d) *Vide* Maclean, *l. c.*, p. 164.

(e) This point has been discussed with much clearness by Liebermeister in his excellent article "Wirkungen der febrilen Temperatursteigerung" (*Deutsches Archiv für klinische Medicin*, vol. i. p. 469, seq.)

(f) The cases of rheumatism with excessive temperature which were related at the Clinical Society in connexion with Dr. Weber's communication showed that the symptoms under discussion may arise in two different ways: in some cases whilst the patient is apparently convalescent and the temperature not unduly elevated, in others as the sequel and gradual increase of high febrile symptoms having lasted for some time, the same as in the zymotic diseases. The causation in the former class of cases is quite as obscure as in some of the cases of a purely nervous origin observed by Wunderlich.

by long-continued febrile heat, (g) originating in chemical changes going on in the blood and tissues, we are obliged in the other cases to assume the central organs of the nervous system to be primarily affected by some other cause, and the undue heat to be only the secondary result thereof. In what this affection consists is at present wholly unknown, and probably the alterations in the nerve tissue are of so subtle a kind as always to remain undiscoverable. The symptoms are those of functional exhaustion or paralysis, and the cases of traumatic origin, as well as the experiments of Dr. Tscheschichin, roughly point to the part of the nervous system which is principally implicated. The question, however, which here interests us most is this: in what way can this supposed affection of the nerve-centres primarily give rise to an excessive elevation of the blood-heat, or cause it to continue when brought on by external causes? Is it simply the result of a defect in the regulating influence of the nervous system on the heat of the body, which is carried on through the pneumogastric and vasomotor nerves, or has the nervous system, as some assume, also a more direct influence on those chemical changes which are the principal source of animal heat? Of this latter function, which would coincide with the influence of the nervous system on nutrition, we have as yet no precise knowledge, and, as its study is surrounded by difficulties hardly to be surmounted, we had better direct our attention to the regulating functions as the starting-point for future research. And much has still to be cleared up even in this direction. The distribution of the heat through the body, the state of the heart and of the peripheral circulation, as well as the respiration, are the chief points to be carefully observed. Much aid may be expected from the employment of the sphygmograph; it might, *e.g.*, thus be possible to demonstrate the relation which, no doubt, exists between the blood-heat and the variations of arterial pressure. As cases of this kind, if carefully observed, are likely to throw much light upon the question of pyrexia, which may be considered one of the principal questions of the day, I have thought it opportune to bring this subject before the Profession, and more especially at this season when cases of sun- or heatstroke are not so rarely occurring even in this moderate climate, and I do so with a hope that in some of these cases life may be saved by energetic and timely measures, and that some of the important questions which I could only just allude to in this paper may be brought nearer their solution.

THE INFLUENCE OF ATMOSPHERIC CHANGE ON THE SKIN IN THE PRODUCTION OF DIARRHŒA, DYSENTERY, AND OTHER DISEASES.

By J. WM. MACKENNA, M.D., &c.

The extreme variability of our climate renders it almost impossible to trace the origin of many diseases to their true source. Those, therefore, who have the good fortune of having lived in latitudes the same as our own, but yet so far removed as to enjoy a steadiness of climate hard even to imagine here, and where the seasons, with their appropriate diseases, follow each other with perfect regularity, must be dull observers indeed if they fail to perceive the intimate connexion existing between one and the other.

An experience of upwards of twenty years in latitudes from 27° to 30° South enables me to offer some remarks on certain diseases, which may be especially useful at the present moment, but which, I hope, will besides induce reasoners to review that accepted theory of miasmatic poisoning which, to persons with my views, has involved the Profession in a hopeless muddle of improbable hypotheses.

Diarrhœa and convulsions being among these, and the origin of them being perfectly manifest, I am enabled to state that these diseases originate in climatic change, or the too sudden or too intense action of heat on the human body. The proof of this assertion is simple and conclusive. Diarrhœas, dysenteries, and convulsions are almost unknown in these latitudes except at certain seasons. That such depend on climatic change is also proved by this—that where cold, however severe, or heat, however intense, is constant, there, although they may have their own specific diseases, diarrhœa and convulsions are unknown as epidemics—that is to say, the attacks arising from the sudden congestion of certain organs of the body do not and cannot exist where sudden elevations or depressions of temperature are unknown.

This is the true theory of epidemic diarrhœa and epidemic dysentery, and if the histories of all the severest of these diseases be examined, they will be found to have arisen from this cause.

The remedy for such a state of things is obvious. The overheated body must be cooled; cold baths, iced drinks, the rejection of all woollen clothing and covering, and simple antacid and aromatic medicine, are all that are required to cure every case, except those of persons already overexhausted or unhealthy.

This short paper will be followed by another enlarging on this subject, and on the origin of typhus, measles, scarlatina, and yellow fever, and with proofs so conclusive as will, I hope, remove some of the obscurity which hangs over the origin of epidemics in general, and especially those which have appeared in recent times, especially cholera and rinderpest.

(g) I do not overlook the importance of imperfect nutrition of the central organs of the nervous system by the altered circulation through them of a blood impure by defective respiration and more or less arrested secretions, as a cause of the symptoms under discussion, or in tending to aggravate and prolong them, but the cases of heatstroke, and in a smaller degree the effect on the nervous symptoms of a diminution of the blood-heat in febrile diseases, show that undue heat may as such and quite directly cause them—a view which has been brought forward with great ability by Liebermeister in the article above referred to.

ON INFANTICIDE.

By THOMAS GREEN, F.R.C.S.,
Consulting Surgeon, and late Senior Surgeon, to the Bristol Royal Infirmary.

Infanticide has for some time occupied a large share of public attention, and it is probable that Parliament will be before long called on to legislate on the subject. Before a new law is passed it is but right to the public and just to those affected by its enactments that prevailing opinions on the subject should be tested, and, if possible, their truth or the contrary ascertained. Better that things remain as they are than new laws passed based on false premises. Errors, like estates, pass by entail. Incorrect opinions become traditions, to be handed from one to another until they are recognised as truth. When an alteration in the law is to be made, the questions involved should be considered anew solely on their own merits, and as much as possible free from the bias of preconceived opinions. Infanticide is a subject which at the present time ought thus to be examined.

Much has been said lately on the frequency and increase of this crime; but to those who have given attention to the subject, it must be evident that in nearly all, if not in every case where a new-born child is found dead, it is at once set down as a case of Infanticide, and hence the frequency and increase of the crime is inferred from the number of children so found.

From the reports of these cases appearing from time to time in the public prints, it would appear that all concerned, from the first person who finds the body, or the police officer who commences the inquiry, up to the higher officials—sometimes coroners and magistrates—all alike conclude that child murder has been committed; even Medical men appear so to think, and thus the minds of all concerned are prejudiced; every nand is raised against the mother, if found; she is considered guilty on the very threshold of inquiry, and the great maxim of English justice reversed, which considers an accused person innocent until proved guilty.(a)

Dr. Lankester, Coroner of Middlesex, has repeatedly and urgently brought the subject before the public, and I believe those who have given attention to his opinions and statements will agree with me in thinking that he must set down as Infanticide nearly all the cases where he is called on officially to determine the cause of death in new-born children.

I believe that exaggerated statements, and statistics not to be relied upon, have been put before the public on this subject, of course calculated to mislead and prejudice them—injuriously so, should they influence those who may be called on to legislate in the matter; and deeply injuriously if they yield to the demand of those who think that penal enactments against the mother are alone required to check the supposed increase of crime.

(a) When the case comes before the higher courts it is different; there the accused has every safeguard against other than a just conviction.

The general impression on the public mind being, as before stated, that when a dead infant is found it must have been destroyed by violence, and as nearly every infant thus found is the result of a secret and illegitimate birth, the conclusion is obvious, that every dead child found, and traceable to a secret and illegitimate birth, must have been destroyed by violence. Before we can with any truth prejudge death from violence in those cases, the all-important question must be answered—Can a secret birth produce a living child? not whether a child has breathed, but whether a child has possessed independent life—that is, whether the vital functions necessary for its separate existence have been carried on.

The matter having been so prominently before the public lately, many of our Profession have thought more of it than formerly. The result of some consideration on the subject, and some limited experience, have left a conviction on my own mind that, as a rule, a woman cannot, in a concealed birth, produce a living child—that is, possessing a separate and independent life—and that, to insure this life to a new-born child, the assistance of a second person at birth is indispensably necessary. This opinion may appear, at first, incredible to some, as it might have done to myself a year or two ago; but what, I beg to ask, is the earnest consideration and unprejudiced opinion of those competent to judge on a matter of deep importance, as affecting life, and on the eve of legislation on the subject?

The questions to be decided are—First, whether, under all the circumstances in which a concealed pregnancy and secret birth must occur, can any woman know what to do when the birth actually takes place? and next, considering the distraction of mind and weakness of body of a parturient woman—it may be, faint from loss of blood and exhausted from hours of acute pain and suppressed suffering—even if she did know what to do, can she properly separate her child in a way necessary to insure its life? If the answer be that in a vast majority of cases she cannot do this, then the new-born child, though it may have breathed on the instant of its coming into the world, perishes from want of that assistance which a second person alone can give. In deciding on this matter there are important physiological questions involved as to the connexion between mother and child during birth and after: there are the circumstances under which a concealed birth must occur affecting the life of the child, and as well the accidents of birth when no assistance is at hand.

These questions can alone be answered with satisfaction, not by the opinion of pure Physicians or Surgeons, not by writers on Medical jurisprudence, nor by Coroners, but by men actively engaged in the practice of midwifery, who alone are competent judges of the requirements for a complete birth, the accidents which may occur, and what is necessary to sustain life in a new-born child. One not unfrequent accident I will only allude to at present—viz. the position of the umbilical cord during and after birth. Few practical men will, I think, dissent from the opinion that when the cord is coiled once, twice, or thrice round the child's neck, and no one at hand to uncoil it, tightened as the child is forced into the world by every pain, this accident alone must cause death in not a few cases.

Though my own conviction on the subject is strong, I bring these remarks before the public more to seek the opinion of men actively engaged in practical obstetrics than to enforce any views of my own. It has happened to me during the past thirty-five years to be called in professionally to five cases of unaided birth in single women. In every case the child was dead, and there was clear proof that no violence had been used. In each case the child died simply and solely because no one was at hand to give the assistance necessary to sustain life. I have also seen two cases of unaided labour in married women. In one case the child was dead, and the other appeared dead, but the use of prompt means restored animation. Those cases, when related in detail, will give a fair illustration of what must happen in nearly every case of concealed birth.

It is not necessary to burden these remarks with many quotations, but reference must be made to some extent to the latest work on Forensic Medicine, and perhaps one of the best books on the subject we possess. Caspar's article on Infanticide, like all the others in his work, is so full and instructive, his facts are so numerous, and his conclusions arrived at after so much cautious consideration, that it may be said with truth a better guide to an accurate knowledge of the various subjects on which it treats is not to be found. Any Medical witness going into a court of law in a case of supposed child murder would do well to read, and read again, Caspar's article on Infanticide.

The prevailing opinion that illegitimate children are born alive and afterwards destroyed arises to a large extent from the use of incorrect terms. In those cases it is said women deliver themselves. The meaning of this expression can only be, that women do all that is necessary for themselves in labour to produce a living child. It requires but little consideration to convince us that this is entirely erroneous; nothing can be more passive, as far as her own act and will is concerned, than a woman in giving birth to a child, be it open or secret, legitimate or illegitimate. In natural labour Nature alone does the work up to a certain point. By a law common to the females of all animals of one class, when the period of gestation is over, an internal and involuntary vital contraction forces the child into the world prepared for life, but still connected with its mother by a vascular cord, requiring the aid of a second person properly to divide it, and as well to give that care necessary to sustain life. The child may breathe on its entrance into the world, but on the treatment of the cord, and the care of the child afterwards, depends whether it become a living child. If no one is at hand to manage the cord, the child perishes from want of that help which a second person alone can give. In preternatural or difficult labours the case is different: Nature either flags or fails to do her work, which is to expel the child; the Medical attendant, by medicine, by hand, or instrument, does it, and in these cases only can it be said he delivers the woman. In natural labour he ties the cord, separates the child, brings away the placenta if necessary, and, as well, protects the mother from the occasional after-consequences of child-birth. Even Caspar uses the erroneous expression, "women deliver themselves."

A few questions may be asked of those most experienced in obstetrics:—How many married women in a thousand, if entirely alone in a first confinement, could properly tie and cut the umbilical cord, and properly separate and manage the child? How many married women in a thousand, even though they have borne children before, could perform the same offices if left alone? From the confusion and fright of all around when a child is coming into the world before the Doctor or nurse arrives, the answer may be anticipated.

The experience of any man is worth placing on record, who has ever known even a married woman do this office for herself and save the life of her child. One more question must be asked: Can a young and inexperienced girl in a first confinement, giving birth in secret to an illegitimate child, and in a state of distraction from shame and terror, weak and exhausted, can she, in this state of mind and body, do what is necessary to separate her child and sustain its life? In coming to a decision in this matter, it is right that the judgment should not be warped one way or the other, either by sentiment or prejudice; but, in simple justice, allowance must be made for what too often happens. A woman is betrayed, seduced, and deserted; by a law of nature, no doubt just and wise, she is fated to give undeniable proof of her transgression, and by a law of man, most unjust and unwise, she is compelled to bear all its penalties, while the man who has ruined her too often escapes free from all its consequences. When the child is born, and her ruin complete, what must be her state of mind?—driven to desperation, in a state little short of temporary insanity, so that she knows not what to do or what she does; or, it may be, crushed and stunned by the weight of her misfortune, the heaviest that can befall a woman; as little able to help her child as she would be to help herself should any accident bring her life into peril; in truth, but little more able to help her child than the child is to help itself.

It may be right to state here what is meant by Infanticide. In dealing with crime, either by legislation or judicially, precision in its description is essentially necessary. Infanticide, I presume, can only mean the deliberate and intentional murder of a living infant. The death of a child either during or after birth from want of the aid of a second person, may be death from concealment—some may say death from neglect—but is totally different from death caused by deliberate and intentional violence.

VARIOLA OVINA has broken out amongst the flocks in Schleswig-Holstein.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

DIARRHŒA AND ITS TREATMENT AT THE LONDON HOSPITALS.

The unusually high temperature experienced during the last few weeks has made its mark on the characters of prevalent diseases. Sunstroke, both in its syncopal and apoplectic forms, has become alarmingly common, and the death-rate has been considerably increased, more especially by diarrhœa among children. Men's habits have also to a considerable extent undergone a change: one meets a neighbour in Indian costume, and rather envies him than otherwise; tepid beer is no longer the universal beverage, and as, in the wisdom of tavernkeepers, a bottle of soda-water or a glass of claret is not to be had under fourpence or sixpence, many have taken to very dilute spirits and water instead of beer. The high temperature renders it impossible to keep fish or meat for any length of time untainted, and London now depends so much on its supplies of dead meat from the country that much of the cheaper varieties of meat at the disposal of the poorest must be in a very unwholesome state before it is consumed. Unsound meat and drink do not fail to take their revenge, and accordingly we find the Hospital out-patients' case-books filled with the records of diarrhœa. One would think that there was nothing simpler in the world than to arrest excessive purging, and that the method to be adopted could scarcely fail to be similar at all places; and such was our impression until we undertook the present research, which has led us to the conclusion that almost every Hospital has its own peculiar mode of dealing with the disorder. Sometimes, indeed, in the same Hospital different Physicians deal with the disorder in totally different manners.

Many cases of diarrhœa have recently presented themselves at St. Bartholomew's, both casually and in the out-patients' rooms. The course of treatment ordinarily pursued is to give them a dose of the haustus aromaticus of the Hospital Pharmacopœia, which consists of half a drachm of aromatic confection in an ounce and a half of cinnamon water. Should, however, the bowels have been in a lax state for some length of time, a few doses are given at bedtime on successive nights of a mixture of grey powder and Dover's powder in equal proportions, from five to ten grains of this compound being the ordinary dose. Should the motions be lumpy, a dose of castor-oil (half an ounce), with five or ten minims of Battley's liquor opii sedativus, is frequently prescribed.

Situated in the centre of a poor neighbourhood, Middlesex Hospital has had quite a run upon it by diarrhœa patients, as many as sixty a day being seen by the Assistant-Physicians or by Dr. Stephens, the Resident Medical Officer. The ordinary prescription is the mistura hæmatoxyli of the Hospital Pharmacopœia. This consists of extract of hæmatoxylon sixty grains; tincture of catechu two drachms; caraway water and boiling water, of each five drachms; to be taken every four hours. Sometimes five or ten minims of laudanum are added to each dose. Chalk mixture, castor-oil and laudanum, and sulphuric acid and opium are sometimes given, but not as a rule. All patients are further directed to go to bed if possible, and to restrict themselves to milk as a beverage.

At St. Thomas's Hospital, between July 4 and 18, 112 patients labouring under diarrhœa presented themselves at the Hospital, and twenty-four pints of diarrhœa mixture were given away by the porter in single doses. A considerable proportion of the patients were children, among whom the disorder has been most common and most fatal. Diarrhœa in children Dr. Gervis always treats with decoction of logwood combined with lime-water. Dr. Barnes, on the other hand, gives kino, catechu, or krameria, instead of lime-water, along with the decoction of logwood, when there is no vomiting. The casual cases are seen by Mr. Whitfield, the Resident Medical Officer, who ordinarily gives a dose of the Hospital diarrhœa mixture, consisting of tincture of rhubarb half a drachm, tincture of opium ten minims, aromatic spirit of ammonia one drachm, and peppermint-water an ounce and a half, combined with a couple of grains of calomel. This is followed, if necessary, by the so-called "brown mixture," which is also used in the wards to arrest diarrhœa; it consists essentially of forty grains of compound chalk powder with opium in water. Occasionally, when the diarrhœa is bad, and there is vomiting associated with it, Mr. Whitfield orders five or ten grains of carbonate of soda with twenty minims of chlorodyne. Sometimes a mild aperient with an opiate is prescribed, and children are directed to receive lime-water or iced water regularly.

At Charing-cross Hospital a large number of people have presented themselves, both by day and by night. For casual patients the hall-porter is provided with a simple astringent mixture consisting essentially of rhubarb and chalk mixture. This compound, indeed, constitutes the basis of the treatment of diarrhœa at this Hospital. Dr. Julius Pollock ordinarily prescribes it when there appears to be any irritant material left in the bowels, and when the tongue is foul and coated. When, however, the flux has lasted for some time, he generally gives dilute sulphuric acid, with tincture of krameria, opium, and cinnamon water. When there is much abdominal pain, he prescribes mustard and linseed poultices or hot fomentations to the belly, and in severe cases insists on the importance of perfect rest and quiet. Dr. Alexander Silver also prescribes rhubarb and chalk mixture, varying the proportions according to the character of the stools and the length of time the disease has lasted. If very recent, an ounce or an ounce and a half of rhubarb mixture with half an ounce of mistura cretæ is ordered immediately, to be followed up by smaller doses; if the disease has lasted longer, the quantity of chalk mixture is increased, and the rhubarb diminished. Should the stools have become slimy and there be much griping, dilute sulphuric acid and tincture of opium, ten or fifteen drops of each in peppermint water, are ordered. It is rare these cases are seen at the very commencement; if, however, they present themselves sufficiently early, castor oil and laudanum are ordered, whilst for children a few grains of hydrargyrum cum cretâ, combined with a grain or so of compound ipecacuan powder, is found to yield the most satisfactory results. The liquor ferri perchloridi, ten or twelve minims to an ounce of water, is sometimes used in the case of weakly children. It not unfrequently happens that the purgation has followed the use of a laxative or cathartic taken for the purpose of removing uncomfortable feelings in the bowels. When such is the case, Dr. Silver usually prescribes the ordinary lead and opium pill of the British Pharmacopœia.

By the kind courtesy of W. J. Nixon, Esq., the House-Governor and Secretary, we are able to state that the number of persons applying for diarrhœa to the receiving-room of the London Hospital from June 29 last to July 27, inclusive, is 5719. This does not include those attending as out-patients with letters of recommendation, nor does it include any of the attendants, etc. During the same period thirteen males and thirteen females have been admitted into the wards for diarrhœa. Dr. Woodman, the acting Resident Medical Officer, states that a considerable number of cases of continued fever (principally enteric), cases of consumption, and Bright's disease, have been included amongst the cases brought for admission, but are not reckoned in the above statement. Of the twenty-six in-patients only one aged woman has died, who was admitted in a state of reaction from choleraic diarrhœa. There was reason to believe that she had granular kidneys. No case of true cholera has applied, but several of those admitted had very severe diarrhœa, accompanied with vomiting, cramps, loss of voice, and temporary suppression of urine. The usual treatment has been, when the tongue was foul or at the outset of diarrhœa, to give castor-oil and laudanum, and enjoin rest in bed, with milk or farinaceous diet. But later on, or when the tongue was clean, aromatic sulphuric acid, with logwood decoction, chloric ether, and paregoric; or, dilute sulphuric acid, with sulphate of magnesia or manganese; or, an effervescing saline, and in two or three cases bromide of potassium. A few cases had chalk mixture. To prevent diarrhœa becoming prevalent in the wards, extra quantities of disinfectants have been used in the water-closets. There has not been any particular prevalence amongst the in-patients.

At King's College Hospital, cases of summer diarrhœa occurring among the out-patients have been treated by Dr. Morris Tonge with purgatives only, if they depend obviously on the presence of some irritating material in the bowel, castor oil and laudanum, or the mist. rhei ammoniata of the Hospital Pharmacopœia, being then given. In diarrhœa depending on other causes, and in cases of the first kind that persist after the matters irritating the bowel seem to have been completely removed by the aperient medicine, astringent mixtures are given, the

most usual form being a mixture containing ten minims of aromatic spirits of ammonia, and from five to ten minims of tincture of opium, with half an ounce of chalk mixture and the same quantity of decoction of logwood, this dose being repeated at intervals varying according to the severity of the diarrhœa. The diarrhœa cases among the adult patients have not hitherto been very numerous, and the results of treatment have not been recorded.

Dr. Duffin treats most of his cases by means of castor oil, sometimes following up its exhibition by chalk mixture. A large number of casual cases have occurred, and have been mostly treated by a mixture containing castor oil, tragacanth, and oil of cinnamon, which may be considered the regular diarrhœa mixture of the Hospital.

At St. Mary's the cases of diarrhœa for the most part come under the care of the House-Surgeon as urgencies or casualties, so that the Assistant-Physicians see a comparatively small proportion of them. On looking over the book kept by them, we found seventy-five admissions for the past week and twelve more by the Resident Medical Officer in the women and children's department. Dr. Broadbent has seen about a dozen cases a week for the last two or three weeks. His treatment in recent cases is castor oil or sulphate of magnesia, with ether, etc., followed by stimulant aromatic tonics; if the purging has been going on for a few days, he usually gives the sulphuric acid and opium mixture at once. Dr. Broadbent has not had any really bad cases in Hospital practice; in private he saw one case fatal in twenty-one hours. Full directions as to diet are given in all cases; in young children he allows only sweetened barley-water for twelve to twenty-four hours, with a little brandy if necessary.

Dr. Lawson considers that the cases of summer diarrhœa which came under his notice were of two kinds:—(1) Those induced by the direct action of the heat on the nervous system, diminishing the supply of nervous force to the mucous membrane, and so, in accordance with recent researches, enhancing the secretion; and (2), those produced by the use of impure water and the consumption of unripe or decomposing fruit. With this idea in view, he has been adopting two distinct lines of treatment for these cases. In the first form he has found the best results from the employment of salicine in from six-grain to eight-grain doses, once, twice, or, in extreme cases, three times a day. In the second form, he has found most advantage from the tincture of perchloride of iron in doses of from ten to fifteen minims in bitter infusion three times a day. Chalk mixture, alone or in combination with catechu, has been of little service; but the salicine and tinctura ferri perchloridi produced the happiest results. The diarrhœa of children he has treated best by stopping the supply of milk and substituting beef-tea, and by administering brandy and the aromatic sulphuric acid in very minute doses.

At University College Hospital we were surprised to learn, seeing that it is situated in rather a healthy neighbourhood, that between 200 and 300 patients had daily attended for diarrhœa medicine. This wonder, however, ceased when we learned that the mixture consisted essentially of dilute sulphuric acid in an aromatic water. The fame of it spread abroad, and patients came for it even from Whitechapel and the south side of the Thames. Indeed, it is said that it was sold in the streets as lemonade. The disappointment will doubtless, therefore, be general now that a small proportion of tincture of assafœtida has been added to the otherwise pleasant draught.

The diarrhœa patients at Guy's are mostly treated by the House-Surgeons at the surgery and out-patient rooms. Few have presented themselves to the Assistant-Physicians—indeed, Dr. Hilton Fagge did not recollect seeing a single case recently; but about twenty or thirty have daily been prescribed for casually. The ordinary treatment is by astringents, the mixture containing chalk, opium, and catechu. In some instances a little Dover's powder is prescribed in the julep ammoniæ of the Hospital Pharmacopœia.

At St. George's Hospital very few have attended—not more than a dozen a day—whilst at Westminster, surrounded by a lower and more filthy population, above forty have been seen every day. These patients are prescribed for by the House-Surgeons, the treatment varying; sometimes it consists of castor-oil and opium, or chalk and opium. Dr. Basham's favourite prescription is sulphuric acid and laudanum, five minims of the former and three of the latter to an ounce of water. The compound rhubarb mixture is also frequently prescribed. It contains tincture of rhubarb and chalk. For children simple chalk mixture is mostly given.

KING'S COLLEGE HOSPITAL.

CASE OF RUPTURE OF POPLITEAL ARTERY AND VEIN—DEATH—AUTOPSY.

(Under the care of Mr. PARTRIDGE.)

Leah A., aged 71, living near Burton-crescent, was admitted into King's College Hospital May 14, 1868, complaining of a great pain in the "ham" of her left leg, and inability to use the limb.

It appeared on inquiry and upon examination that the woman had fallen down, doubling the left leg under her, and that she was unable to get up; she was taken home, and a Medical man was sent for. No benefit was derived from his treatment, and, as the leg was becoming more swollen and much more painful and discoloured, the patient was brought to King's College Hospital.

When the woman was admitted she presented the appearance of one thoroughly brought down with toil and care, and one who was at the time suffering much pain. The left leg was considerably swollen from the hip down to the toes, utterly useless, and giving the poor woman much pain. There was a large, soft, fluctuating swelling to be detected behind the knee-joint, apparently circumscribed, but of considerable extent, reaching from the lower third of the thigh to below the head of the tibia. Much discoloration was present on the inside of the thigh and just below the knee. The foot of this limb was quite cold and entirely devoid of sensibility, at the same time presenting a dusky appearance, whilst the middle and upper part of the leg were exceedingly tender and sensitive of the least pressure. No pulsation could be felt either in the anterior or posterior tibial artery.

The patient was placed in bed, and cotton-wool covered with oil-silk and a bandage was applied to the affected member.

Ordered ℞ ammon. carb. gr. v., spir. chloroformi ʒss., aquæ cinnamomi ʒj. 4tis horis.

May 15, 1868.—Swelling of leg increased, and patient was more feeble. Typhoid symptoms were present—*i.e.*, low muttering delirium, quick small pulse, and bad breathing. The leg was more dusky in colour.

16th.—Respiration more painful and difficult than on preceding day, and the limb became generally dusky, particularly so on the inner surface; whilst delirium of the low muttering type held sway.

18th.—All pain had ceased, and the foot and instep of the left leg had become quite green in colour, and perfectly dead and cold. The limb generally was more dusky in appearance, and the typhoid symptoms more marked. Large quantities of brandy and ammonia were ordered, but these stimuli seemed to have but little effect. The pulse got gradually weaker and more and more intermittent, sordes formed about the mouth, the delirium increased, and the patient died May 20.

Post-mortem Appearances.—The body was found to be moderately well nourished, and, for a person of 71 years of age, exceedingly muscular. The internal organs were healthy. The left leg was greatly swollen and very much discoloured over its whole extent; the foot and ankle were greenish in appearance; no line of demarcation had formed between the dead and living structures. Upon cutting into the limb at the posterior aspect of the knee, it was discovered that a large quantity of blood had been effused into the popliteal space, and also laterally about the joint. This bag of blood extended from the lower third of the thigh to two inches below the head of the tibia. When this mass of coagulum was removed, the artery and vein were found to be torn across exactly behind the joint, the ends being separated quite an inch. The artery had been the subject of atheromatous deposit, but was occluded on the proximal side for nearly three inches by solid fibrin. The distal end was also retracted and occluded, while the ends of the ruptured vein were patulous. The popliteal nerve was discovered stretched, but quite intact; though the whole of the posterior ligament of the knee-joint had altogether disappeared, and nothing was left covering the bare condyles of the femur but the tendinous processes sent out by the semi-membranosus and semi-tendinosus, to strengthen the posterior ligament of the joint.

This case is remarkable in some measure. Here is an old woman who has, in a fall, torn across both artery and vein in her leg, and yet does not apply at the Hospital for a week after the accident. Now, it is a well-known fact that the vessels of elderly persons are much more likely to continue bleeding, owing to loss of natural elasticity of the artery or

vein, than those of persons in youth or in the prime of life. But here, after a great quantity of blood has been effused, the artery gets plugged, and it appears that the vein must have kept up the bleeding. Again, it may be observed that the pressure of a quantity of blood is as good as the pressure of a pad for causing absorption of tissue. For the whole of the back of the knee-joint, in this case, was laid bare, and this can only be accounted for by the pressure exercised by the blood effused.

NAGPORE CITY HOSPITAL.

CASE OF SUCCESSFUL AMPUTATION AT THE HIP-JOINT TWELVE DAYS AFTER INJURY.

(Under the care of Dr. W. B. BEATSON.)

It is probable that in this case the amount of injury done was so great that there was no chance of saving the limb, but had amputation been resorted to in the first instance it is questionable if the termination would have been so favourable. The seat of fracture being at the centre of the shaft, it would have been necessary to divide the bone in its upper third, not far below the trochanters, and even then the flaps would have been formed of soft parts injured by contusion. The sloughing of the integument would have exposed the muscular substance of the flaps; there would have been profuse suppuration, and in all probability purulent infection of the system through the divided bone, necessitating a secondary amputation at the joint. As it was, the delay allowed the extent of sloughing to be defined, and a line of demarcation as it were to be formed, above which there was a certainty of obtaining sound flaps. The limit in front was so high that, had it been wise to divide the femur, the saw must have been applied close to the trochanters; but had abundant soft parts been available, amputation through the joint was the only proceeding which offered the patient a chance of life. The time the fractured portions had lain bathed in pus, the separation of periosteum, the protrusion of the medulla, and the daily increase of irritative fever, all made it certain that osteomyelitis had commenced, and had any portion of contaminated bone been left a successful result could not have been expected. Section of the bone after removal showed that the view taken was correct, as the medulla was found infiltrated with fœtid pus. In performing the operation the anterior flap was, in consequence of loss of integument by sloughing, of necessity made smaller, and the posterior more bulky, than usual. This was at first a disadvantage, as the retention of pus was favoured by it; but the ultimate effect was good, as the cicatrix lies high in front, and is not pressed upon in the sitting posture. The suppuration with which the healing process was attended in this case was somewhat profuse, and at one time it seemed probable that the patient would sink under it, notwithstanding the most active support. At the same period also the condition of the acetabulum gave cause for grave apprehension, as the bone was felt for some days lying bare and bathed in pus; no sequestrum, however, separated, but from its feel I believe the surface of the cavity was cast off by molecular disintegration. In the treatment of the case at this time carbolic acid was found most useful; in watery solution it was injected through the stump twice daily, and mixed with oil it was applied as a dressing to the surface. Although it did not suppress suppuration, I am confident that it greatly diminished the amount of pus, while it completely checked the evolution of fœtid gases.

Jhubboo, cooly, Hindoo, male, aged 22 years, came under my care at the City Hospital, Nagpore, on April 18, 1868. On the 12th he was engaged in breaking down a brick wall, when the whole suddenly fell and buried him in its ruins. On being released and brought to the Hospital he was found to have sustained several contused wounds on the head, a fracture of the left clavicle, and a compound fracture of the left femur, besides minor injuries. The seat of fracture was about the middle of the shaft, and the communicating wound on the outer side of the limb was small. It was therefore thought that the limb might be saved, and it was accordingly put up with a long straight splint. There had, however, been great bruising of the soft parts, and they soon began to take on unhealthy action, the limb became swollen so that the splint could not be borne, and sloughing commenced in the wound and integument of the front of the thigh.

When I first saw him six days after admission the limb was slightly shortened, the foot everted, and the thigh swollen. The skin of the front of the thigh was sloughing, and the wound admitted the finger to the seat of fracture; the bone was found to be broken transversely, and the fractured ends were partially denuded of periosteum. There was no doubt that amputation was demanded, but to this the patient refused to submit. There was very little constitutional disturbance, the skin was cool, the pulse 90, the tongue clean, the facial aspect good.

On the 22nd the sloughing had extended, the communication with the fracture was more patent, but the constitutional disturbance was still remarkably small.

On the 22nd, the sloughs were separating, and on clearing them away, another opening communicating with the fracture was found on the inner side of the limb. He had passed a sleepless night, the foot and leg were becoming œdematous, and there was fever during the day. Pulse 96.

On the 23rd, all symptoms were aggravated; the pulse was 100 in the morning, and 120 in the afternoon. The fractured ends of the bone were felt entirely denuded, and lying bathed in pus, and the medulla protruding from its canal in the upper fragment.

On the morning of the 24th, he was much worse, had passed a sleepless night, and the pulse had risen to 120. He was now willing to submit to amputation. He was accordingly placed under the influence of chloroform, and, assisted by Dr. John Law, of the Madras Medical Service, I proceeded to remove the limb at the hip-joint. This was effected in the usual manner by antero-posterior flaps. The anterior flap was managed by Dr. Law, who followed the knife with his fingers, and grasped the flap so completely that no blood escaped from the femoral artery. This flap had to be made rather short, in consequence of the destruction of the integuments by sloughing, and the posterior flap correspondingly longer. The femoral artery and vein were then tied with silken ligatures, and every bleeding point was carefully secured. Very little blood was lost, but the shock was very severe. He was therefore not removed from the table, and stimulants were frequently given until reaction took place. At 2 p.m. there had been no bleeding, reaction was established. Pulse 126.

On the morning of the 25th his pulse was 126, and respirations 24. He had slept well, and took nourishment freely.

On the 26th the stump was dressed. On pressing it, some dark sanious matter exuded from the outer extremity of the wound. The pulse was 120; the lips and tongue rather dry. Towards evening there was an increase of fever, and during the night some hiccup.

On the 27th, in the morning, the skin was cool, tongue moist, pulse 132, respirations 32. The stump in part united, in part suppurating healthily, while from the outer extremity of the wound there was still a discharge of dark sanious matter. Some sutures in this part were therefore cut out, several loose ligatures removed, and the cavity syringed with carbolic acid lotion. The surface was also dressed with carbolic acid and oil. Towards evening the pulse rose to 140, and the respirations to 40.

28th.—Had passed a bad night, and had four loose motions. A bedsore was also forming over the sacrum. Pulse 120; respirations 36; skin cool and moist; stump discharging healthily. The evening febrile exacerbation was much less; pulse rising only to 120; respirations 30.

29th.—The ligatures came away this morning from the femoral artery and vein; the discharge is free and healthy; the pulse 116; respirations 28; appetite good; he takes abundant nourishment.

May 1.—He is doing well. The last ligature came away to-day. The pulse still ranges from 120 in the morning to 136 in the afternoon.

5th.—He is not so well; restless and more feverish; pulse rises to 138 in the afternoon. The discharge from the stump is decreased in quantity.

6th.—On examining the stump this morning, a sense of fluctuation was found in the posterior flap, and, by exploring the wound with the finger, a considerable quantity of matter was evacuated. At the inner extremity of the wound the finger passed to the acetabulum, which was felt bare of cartilage.

On the 13th he had been daily improving; the cavities in the stump had been daily washed out with carbolic acid lotion; the discharge was much decreased. The acetabulum can be felt covered with granulations, except in the centre, where it has a rough and sandy feel, from disintegration of its surface.

On the 20th he was much improved. Cavities no longer admitted the finger; discharge trifling; pulse 112; respirations 20.

27th.—The stump is now firm, and entirely healed, with exception of a narrow sinus leading to the acetabulum. Pulse 96; he is getting fat.

June 11.—During the last fortnight the last sinus has almost entirely closed, and the stump is firm and sound throughout. He is fast gaining flesh and strength, and is anxious to be allowed to go to his home. Discharged cured.

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Medical Times and Gazette.

SATURDAY, AUGUST 1, 1868.

JOHN SPEAR *v.* JOHN DOIDGE.

An action for damages for alleged Surgical unskilfulness was tried last week at the Devon Assizes, and terminated, we regret to say, in a verdict for the plaintiff. The circumstances of the case were these. A farmer named John Spear, residing at Clovelly, was, in March, 1867, struck by a portion of a threshing machine, by which his right arm was seriously injured. Within two hours after the accident he was seen by Mr. Doidge, a Surgeon at Lifton. According to the plaintiff's story, Mr. Doidge stated that there was fracture of the ulna, and, in answer to a question suggested by Mr. Spear's feelings, declared that there was no dislocation of the radius. The arm was placed in splints, lightly bandaged, placed *in a straight position*, and the patient was sent to bed, where he was kept for thirteen weeks.

In the course of the ensuing night the arm became so swollen and painful that Mr. Doidge was sent for, who removed the upper splint, but still left the arm fixed in the same straight position. According to the statement of plaintiff and his brother, the radius remained dislocated, the former arriving at this conclusion from his sensations, and the latter from the abnormal appearance of the joint. The protuberance caused by the dislocation forward of the head of the radius was (the plaintiff asserts) declared by Mr. Doidge to be "only the cords of the arm hardened up." At length the patient suggested the propriety of having a second opinion, and, after some demur on the part of the defendant, Mr. Good, of Launceston, was called in to meet him. It was then first discovered that there had been a dislocation of the radius accompanying the fracture of the ulna, and, although the ulna was healed, the radius was still dislocated, and (except by means of a dangerous operation) a permanent stiff-joint must remain. Mr. Leamon, of Tavistock (who now took charge of the case, *vice* Doidge), and Mr. Whipple, of Plymouth, then saw the patient, and agreed that there had been a dislocation of thirteen weeks' standing; and on the strength of these Professional opinions, Mr. Spear, through his attorney, demanded £300 from Mr. Doidge as a compensation for his neglect and improper treatment.

Hitherto we have only given the plaintiff's side of the case. We now come to a point regarding which both parties agree—namely, Mr. Doidge's reply to the application from Mr. Spear's legal advisers. Making all due allowance for the irritated feelings of a man who had devoted much time and attention to a troublesome non-remunerative patient, and who was convinced in his own mind that he was deserving of gratitude rather than an action for heavy damages, we cannot help regretting that he should have spoken, or rather written, of being "amused at their extremely cool and modest request," and hinting that they are the originators of the action. Let us strongly urge upon any of our brethren who may unfortunately find themselves in Mr. Doidge's predicament, to abstain from chaffing the plaintiff's attorney, however great a temporary relief such an ebullition of feeling may be, but to content themselves with a strictly formal and Professional reply.

Mr. Whipple and Mr. Fox, of Plymouth, and Mr. Leamon, of Tavistock, having given evidence at the trial corresponding with the view previously expressed by the former of these gentlemen, one of Mr. Spear's late servants was called, who swore that after the accident she saw his arm "in a bending position;" Mr. Good, the Surgeon who first saw the defendant in consultation, also swore that on that occasion the arm was bent, and expressed his belief that the dislocation had been at once detected and reduced by Mr. Doidge, but that, in consequence of Mr. Spear's restlessness, displacement had occurred; and, in short, that the case had been treated as well as circumstances permitted. Mr. Greenway, of Plymouth, concludes his evidence in favour of the defendant with the remark that "one of the most eminent men might have such a case;" and Mr. Delagarde, Senior Surgeon to the Devon and Exeter Hospital, and one of our most eminent provincial Surgeons, gave it as his opinion that if the statements made by Mr. Doidge were to be taken as correct, he "had been sufficiently skilful and careful." It must be borne in mind that, in opposition to the statement of the plaintiff and his brother, Mr. Doidge seems always to have asserted that dislocation was originally present, that he at once reduced it, and that after he had duly set the broken ulna he left the arm flexed upon the chest, and with directions that it should be retained in that position, and to have held that the subsequent displacement was due to the patient's wilfully straightening the arm—a view quite in accordance with the opinion held by our best Surgical writers, namely, that "after dislocations forwards caution must be used in straightening the arm for the first time; for if the ligaments are not perfectly united the action of the biceps upon the radius may reproduce the displacement." (Flower, in Holmes's "System of Surgery," vol. ii. p. 583.)

Mr. Justice Mellor, before whom the case was tried, fairly laid the evidence before the jury without attempting to influence them in either direction. For Mr. Doidge were his own statement, to which we should attach more importance than to that of his patient, who is clearly contradicted in certain points, as, for instance, regarding the position in which the arm was placed; Mr. Good, whose conduct throughout seems most commendable; Mr. Greenway, who has written on fracture and the apparatus for it; and Mr. Delagarde, who is a host in himself. Against the defendant were Mr. Leamon, of Tavistock, who passed the College and Hall in 1819 and 1818 respectively; Mr. Fox, of Plymouth, a Member of the College and the Hall; and Mr. Whipple, Surgeon to the Devon and East Cornwall Hospital, and Member of the College of Surgeons. The jury, after half an hour's deliberation, found for the plaintiff, with the remarkable sum of £162 16s. damages. This, we suppose, was the *mean* of the several sums awarded by the twelve. The intellectual calibre of the class from whom a Devonshire jury is

selected is well known, and last week's intense heat seems to have made them even unusually stolid. Two of their verdicts in cases tried on Friday (the day of the commencement of the trial we have been noticing) were so grossly incorrect that they got a severe reproof from the judge. In one of these cases Mr. Justice Mellor, in passing sentence on an acquitted prisoner, observed that "no person who has heard the evidence can fail to be of opinion that you are guilty," and in another similar case he told the prisoner that he had had a lucky escape; and yet these incarnations of stolidity are permitted to blast for ever the reputation of a Professional man! Of Mr. Doidge personally we know nothing; we were not aware of his very existence till we read this trial in the *Western Morning News*. But we do not think that he has met with fair treatment, and we trust that the case will be further investigated. In conclusion we would say to any one who is called in to a bad fracture in a restless patient, "Never refuse a consultation."

MEDICAL EDUCATION IN GERMANY.—III.

At the conclusion of our last article on this subject we had brought the student to the commencement of his university career, and we now propose to follow him in the pursuit of his studies.

It may at once be remarked that, during the whole time of his university life, he is neither superintended nor controlled in any way, either by professor or authority; he is entirely his own master both as regards his studies and his pleasures, so long as he does not break any of the laws of the university; he is, in short, a *civis academicus*. He is only required to come well prepared for the several examinations he has to pass during and after the period of his studentship, and to bring proof of having entered for those lectures or courses upon the subjects of which he is to be examined. It may be mentioned, however, that, although no further restrictions are placed upon them, yet a certain method is generally adopted and observed by all students in Medicine.

In the first two years, anatomy, physiology, the several branches of natural philosophy, logic, and psychology, are the subjects which occupy the student's whole time. During the winter session he is employed for from two to four hours daily in the dissecting-room, under the direction of the demonstrator, who also not unfrequently performs the duties of a prosector—the professor of anatomy working in an adjoining room, and making several times a day the round of the dissecting-room in order to superintend the labours of each pupil. From their dissections they are generally called the anatomical lectures, which are given daily both in the winter and summer. In each winter course the professor goes through the general anatomy of the whole body, and then gives special courses upon the several systems separately, or upon topographical anatomy. In the summer session comparative anatomy and physiology are the most prominent subjects. The more industrious students, or those who desire to make physiology a special study, enter the laboratory for practical work, and are here brought into direct contact with the professor. The laboratory is not only open for students, but also for Physicians engaged in special researches who are not possessed of the appropriate instruments and apparatus, which are sometimes numerous as well as expensive. These laboratories are, in fact, the gathering places for all those who intend to pursue a more scientific career, and who thus form the stock from which future professors spring. They are, moreover, governmental institutions, and are provided with every possible means for experimental research, and hence form the chief attractions to foreign workers. What has been said of physiology is likewise applicable to pathological anatomy, including microscopy and pathological chemistry. Some students, however, also enter, either at the same time or subsequently, the chemical laboratory; others, again, work practically with the professors of botany or zoology, according to their special inclinations.

From what we have said, it will be evident that the student during these two years has no time, even if he desired it, to attend courses on Medicine or Surgery, or to enter the wards of a Hospital, his whole time being occupied with studies which are preparatory to this end.

After the termination of the second year, the student generally passes an examination, which is called "Tentamen Physicum," the subjects of examination being anatomy, physiology including microscopy, chemistry including pathological chemistry, experimental and descriptive natural philosophy. The examining board consists of at least four members annually elected by the Minister of Education, and is presided over by the Dean of the Medical Faculty. Without a certificate of having passed this examination, the student is not admitted to any further examination. When, however, he has passed it, the real study of practical medicine begins. General and special pathology, or the theory and practice of medicine, surgery, midwifery, therapeutics, materia medica, the art of compounding and prescribing medicines, and, lastly, clinical lectures at the bedside, are the subjects in the study of which he is now engaged. But, besides these, special courses on auscultation and percussion, on operations on the dead body, on the use of the laryngoscope, ophthalmoscope, and on practical obstetrical operations, are given. One of the most important courses of lectures which every student is required to attend is that of public health and forensic medicine. These are attended not only by medical students, but also by those engaged in the study of jurisprudence. The lectures are combined with practical demonstrations and *viva-voce* examinations, in order to train the student to perform post-mortem investigations for legal purposes, and to give evidence in courts of justice. As this subject is now attracting more attention in this country, it will not be amiss to make a few remarks on the mode in which we have seen Professor Casper training his pupils. A body having been placed in a certain position, and one or more wounds inflicted, a student is requested to describe accurately the legal questions connected with the circumstances under which the body was found, and to draw the conclusions warranted by the state of affairs, and finally to perform the post-mortem examination. The student acted, under the guidance of Casper, as if he were giving evidence in a court, and, his companions objecting either to his reasons or conclusions, an animated discussion arose until checked by the presiding professor, who gave his decisive opinion.

One lecture, which is likewise obligatory, must be mentioned—viz., the history of Medicine and of ancient and modern epidemics—for which subject a special chair exists at every German university. These studies, of which we have spoken above, are scarcely ever pursued entirely at one university, the general practice being that every student visits those universities in which professors of special renown are teachers. To them they resort, in order either to hear their lectures or to work in their laboratories. No university professes to stand in any way higher, or to train better pupils, than others—all striving only to advance the cause of science by the excellence of their teaching.

The last two years, then, are almost exclusively occupied by clinical or other practical work. Under the term clinical we include pure Medicine, Surgery, and Midwifery, as taught by the professor at the bedside. But it must be remembered that there are special cliniques—as, for instance, for syphilis, mental diseases, diseases of the eye, ear, throat, etc.—all in connexion with the university. The students are clinically divided into two classes—the one generally is composed of the

senior men, who are called "practicants;" the other containing the junior men, who are called "auscultants."

For the purpose of clinical teaching, the patient, if his state admits it, is conveyed in his bed into the theatre or lecture-room; one of the practicants is called by the professor and requested to examine the patient; on this occasion a complete examination of the practicant takes place on all questions relating to the case before him; here he has to show his knowledge of anatomy, physiology, pathological chemistry, therapeutics, and of all means of physical examination; the professor then recapitulates all material points, and illustrates the case by his own experience, and by referring to the literature of the subject. These clinical lectures being given daily, the case is closely watched until either recovery takes place or death occurs; in the latter case the post-mortem examination is made by the professor of pathological anatomy in the presence of the clinical professor and his pupils. After each clinical lecture the professor and the students make the round of the wards in order to see the patients who have been examined on previous occasions, to make his remarks, and to direct the treatment wherever he considers it necessary. In the same manner the teaching is conducted in the surgical and obstetrical wards, where the students, either in separate courses or during the daily visits, are instructed in bandaging and the use of instruments.

In the smaller university towns the pauper practice is carried on by the practicants of the clinique under supervision of a clinical assistant, and, if necessary, of the professor.

(To be continued.)

THE PROVISIONING OF PARIS.

As a sequel to his former article in the *Revue des Deux Mondes* (vide *Medical Times and Gazette*, June 13, page 657), M. Maxime du Camp contributes a second upon the "Halles Centrales de Paris," a short abstract of the more interesting facts contained in which we now proceed to furnish. Indeed, the subject is one of considerable interest just now to ourselves, when so much attention is being paid to the question whether it is not desirable to establish additional markets in our metropolis. Paris has not only her vast *halles* of which we are going to speak, but these supply an immense number of local markets distributed over every part of the town, enabling the inhabitants of these localities to purchase at a cheaper rate than they could do from shops. Indeed, we believe much of the greater economy of living in France arises from the excellent markets which are, as it were, at every one's door.

The origin of the *halles* dates as far back as 1278, when Philip the Bold, taking compassion on the vendors exposed to the weather while selling their wares in the cemetery of the Saints Innocents, caused covered stalls to be erected for their use. These erections increased gradually in number until they became the rendezvous of all the buyers and sellers of Paris; and, according to an old etymology, they received their name of *halles* or *alles* because *chacun y allait*. At that period, however, the articles sold in them little resembled those at present disposed of, sellers of cloth, articles of clothing (old and new), and the various household objects being those who predominated, although around these vendors of eatables also grouped themselves. The *halle*, in fact, then had more the appearance of a bazaar than a market. At that time the various objects of consumption were sold in various quarters of the town appointed for them. These all gradually became agglomerated without accommodation for them increasing, so that the markets flowed over into the adjoining streets. In 1785 the celebrated cemetery of the Innocents was suppressed and its contents removed so that a vegetable market might be built on its site, and Napoleon caused designs to be made for constructing the *halles* on a grand scale. The funds intended for this purpose were soon swallowed up in war, and the Bourbons on their restoration felt little interest in the *gens des halles* from whose violence they had so often suffered. Money again was voted for the purpose towards the end of Louis-Philippe's reign, but this was also diverted by the panic of 1847 and the revolution of 1848, so that it was not until 1851 that the first measures were really commenced. Even then the first buildings erected, having military as well as commercial objects in view, were stigmatised in popular language as *le fort de la halle*, and have since been replaced by more appropriate structures. In fact, the reign of glass and iron had commenced for large structures, and these have been adopted for the present *halles*, resting on brickwork walls. Owing to the slowness with which the large property covering the required space has been obtainable, the edifices are not even yet completed; and, as seems to be the fate with all modern buildings, it is already declared that, vast as the original idea seemed, the erections when finished will prove too small for the business to be transacted within their walls. The *halles* are built as separate, though adjoining, pavilions. Ten out of the fourteen are now open. Beneath each *halle* are vast cellars termed *resserres*, used as magazines. These are constructed of stone and brick, and in them sellers may deposit (by payment) all unsold goods. Here, too, the slaughtering of poultry is performed, and here are kept live rabbits and poultry, butter, cheese, and eggs, together with live fresh-water fish, having basins provided with running water. Enormous rats, as might be supposed, also abound in these regions only illumined by gas; and, in spite of every care with respect to cleanliness and abundant ventilation, a close and mouldy smell pervades them. The *halles* when completed will have cost sixty million francs, and cover 70,000 square metres of surface. They are surrounded by very broad approaches, and are in communication with the railways and rivers. The cabarets which disgraced the old markets, and were the scenes of riot and drunkenness, are all expelled, quiet and order now everywhere prevailing. "They are now a place of business, severely superintended, a reservoir where the Paris population may purchase in complete security every necessary of subsistence." The fulfilment of the multitudinous regulations is enforced by means of forty "sergents de ville" and a company of the "garde municipale."

At least 6000 vehicles arrive every night, besides 800 beasts of burden, to say nothing of innumerable hand-barrows, porters' baskets, etc. For all these 22,000 metres of standing room have been set apart, each vehicle paying from 25 centimes to 45 centimes, and every basket or bundle of articles 10 centimes. Like all other official business in France, these market arrangements entail an enormous amount of writing, as every owner of a cart or basket, etc., must have his "bulletin," and every transaction between buyer and seller is registered. In 1867 there were 3,220,900 bulletins issued, which secured to the owners of the vehicles their places and their goods being guarded. These brought 584,458 francs to the municipality. All general traffic around the *halles* is prohibited between the hours of 3 a.m. and 10 a.m. The internal service of the market is executed by 481 porters, or *forts*, as they are called, receiving from 1500 francs to 3000 francs per annum. They are under rigorous discipline, and have been well tested as regards probity and diligence. Their strength, adroitness, and agility are quite remarkable, the heaviest burdens in their hands seeming as nothing. They have to unload the vehicles, and are responsible for their contents. Every description of article has its inspector, who will not, when they have been deposited, allow even their owners to tamper with them. The prices charged for places in the markets vary according to the different provisions; thus, butchers are charged 3 francs per diem, fishmongers 1½ francs, and poulterers 1 franc. There are

also 600 sellers standing on the footways, with no shelter but umbrellas, who each pay 15 cents. Water is not spared in the establishment, 2,800,000 litres being supplied daily. and 700,000 cubic metres of gas are consumed per annum. The different pavilions are known only officially by numbers, although bearing other popular designations derived from the markets which they have supplanted. Business commences at stated hours in the early morning, and it is at the earliest hours that the *religieuses*, soldiers, cooks for schools and colleges and the smaller restaurants come to purchase. Watercress, of which enormous quantities are now consumed in Paris, is one of the first articles sold. The fish is sorted out by sixteen special agents, who exhibit great skill in arranging it so as to show it well off without concealing defects. It is sold by auction by thirty-six criers, the names of purchasers all being entered. All goes on with the greatest order, but with remarkable celerity, as fish is an article that must be sold rapidly. When any remarkable specimen shows up, as a monster salmon or sturgeon, the market exhibits excessive excitement among the competitors. All sales are rigidly inspected, all fish not fit for food being instantly seized. The fresh-water fish is kept living until sold. In 1867 there were sold 18,576,287 kilos. of salt-water fish, and 1,652,382 of fresh-water, the former fetching 16,441,007 francs, and the latter 1,925,905 francs. Of these quantities 3,671,187 kilos. of salt-water and 1,027,163 of fresh-water fish came from abroad. Oysters do not sell well at the *halle*, as the buyers and sellers are in a kind of league for the supply of this dainty, which is so rapidly rising in price. In 1844 oysters were 12 francs per 1000, and in 1867 40 francs. This does not arise from their scarcity alone, but from the fact of their being sent largely into the interior, into Germany, and even to Russia. The Ostend —*i.e.*, the Essex oyster, has almost disappeared from the Paris markets. In 1867 there were 26,750,775 oysters consumed in Paris, each oyster now selling at 10 cents.

Butter, eggs, and cheese constitute an enormous department. Every *motte* of butter is weighed in the market, and in 1867 there were 11,461,414 kilos. sold for 30,109,935 fr. Butters are, like the wines to which we formerly alluded, submitted to a process of admixture in the cellars of the *halle*. Portions of various kinds, after being softened in tepid water, are forcibly worked up together on long tables, and then coloured with a tincture of annatto (*Bixa Orellana*), for which a preparation of carrots and marigold is often substituted. This procedure, being performed openly under the eyes of the authorities, is not regarded as a sophistication. Of cheese only 4,317,510 kilos. were sold in 1867, bringing 2,644,127 fr.; but of eggs there were disposed of the enormous number of 244,141,155 at 17,128,993 fr. The sale of these articles is an elaborate business. There are sixty-five special *employés* called *compteurs*, whose duty it is to examine the numbers and the quality of every egg—a serious task in some seasons, when each egg has to be held up in the dark cellars before lighted candles. One-half of these *employés* have to go round to the fruiterers and milk sellers who may derive their eggs elsewhere in order to examine them. All eggs pronounced as old or doubtful are given up to the gilders, or to make birds' food, while the spoiled ones are destroyed. London takes 52,000,000 French eggs, and as many as thirty-two producers have ceased supplying the Paris market in order to attend to the London market. In the poultry pavilion is another class of special *employés*, called *gaveurs*, whose business it is to feed the live pigeons with vetch seed, which they force with tepid water from their own mouths into the beaks of the pigeons. This has to be done with extreme rapidity, for they are only paid 30 cents per dozen, finding their own seed. During 1867 there were sold 14,681,203 head of poultry or game, but much of this consumed in Paris is sent through shops or private persons on payment of a higher octroi. During the game season 1867-68 there were brought into Paris 3,114,295 head, of which 1,110,756 were *larks*, 541,024 partridges, and 270,144 hares. Pheasants seem to have been a rare article. In Pavilion No. 8 vegetables and flowers were sold to the value of 3,331,132 fr., all here being sold retail, as in Pavilion No. 12, where fruits and the municipal bread are sold, as also ready-cooked meats termed *arlequins*. The remains of the tables of the rich, clubs, great hotels, and restaurants are collected daily mixed up all together. These are brought to the *resserre* or cellar of the *halle* to be dealt with. All presentable titbits are picked out, dressed up or *paré*, put on a separate plate, and meet with a rapid sale, even persons well off, of penurious habits and epicurean tastes, often thus getting a treat for a few sous. When all the delicate morsels have thus been fished out, savoury messes are prepared for pet dogs, which form a very regular class of customers. Another regular collection is made of crusts of bread from the servants of schools, lodging-houses, etc., by the *boulangers en vieux*, who afterwards sort them out. Good-looking pieces are toasted and served for soup, and the others are powdered and sold for cutlets, of which such numbers are consumed, covered with bread crumbs. The worst are mixed with honey and spirit of mint, to form a popular remedy for the toothache.

The *halles* thus constitute the great larder of Paris, supplying the 55 urban markets and 23,643 establishments where prepared food is sold. Almost all the local or urban markets have been rebuilt and greatly improved, and new ones are opened as they are required. For those who have not time to go to market there are the services of 6000 licensed costermongers, popularly called *marchands des quatre saisons*. They are forbidden to hawk within a zone of 100 metres around each market, must not stand in the streets, and are compelled to follow a fixed itinerary. The police regulations, however, press less heavily upon them than the usurers. The costermonger borrows his barrow and 20 francs to buy with, and every evening has to return 22 francs—1 franc for the barrow and 1 franc as interest.

Besides the elaborate inspectorship within the *halles*, there are 28 *employés* termed *flaireurs*, whose duty it is to visit all places whatever where food is consumed. Their task is an endless and onerous one. Always afoot, they make seizures varying from 300 to 600, according to the season, in the 8000 establishments visited per month, a detailed report being sent in to the prefect. The ingenuity displayed in a search for illicit gain is sometimes marvellous, and warnings, fines, and imprisonments seem alike powerless to stop frauds. Even large proprietors have been detected in this nefarious work, and it is not long since one of these was fined 20,000 francs. M. Ducamp believes that the law is too indulgent in not assimilating sophistication with robbery, and punishing it in the same way. The affixing placards to the shops of the tradesmen is of little avail, as these are soon torn down. The Turkish plan of nailing the ear of the malefactor and leaving him thus exposed to the derision of the bystanders would seem more effectual; but the deterring effect of this seems questionable, since M. Ducamp says that one day he counted forty-three such delinquents so nailed up in a Turkish bazaar.

Besides the articles of food disposed of in the *halles*, large quantities are addressed to shops and private persons. During 1867 the *octroi* for all articles of food or drink at the barriers amounted to 67,899,238 francs, and adding to this 5,850,700 from the markets, we have a total of 73,749,938 francs. If this were distributed equally over the inhabitants of Paris, each soul would pay 40 francs 40 cents. With all this abundance, prices are rapidly rising, and much distress exists. In face of the complaints made, however, it is to be observed that, while there are only 1201 bakers and 1574 butchers, there are also 11,346 cabarets, besides 644 liquoristes and 1630 cafés and breweries.

THE WEEK.

TOPICS OF THE DAY.

Before these pages are in our readers' hands the meeting of Fellows of the College of Physicians for the election of Members into their body will have taken place. Whatever may be the result of that meeting, it seems tolerably certain that things are ripe for a reform in the mode in which the Fellows of the College are selected and elected. The feeling that the present method opens the door to injustice, caprice, and favouritism is by no means confined to Professional circles outside the College conclaves. It is shared, we know, by a large number of the most distinguished of the Fellows, and it is from them, we hope, will proceed an ample and satisfactory measure of reform. If it be deemed that an examination test for Physicians in active practice, and occupying positions of greater or less mark in the eyes of the public, is not the most desirable mode in which a claim on the Fellowship can be substantiated, at least let the election be made in reality, as well as in appearance, by the general body of the Fellows. Let each Member's name be fairly submitted to them according to his seniority in the list, and let none be excluded from his chance of the Fellowship, it may be, through the mistakes or prejudices of the members of a small committee.

The meeting at Oxford of the British Medical Association is likely to be a very brilliant one. The unrivalled attractions of the collegiate city, the professional renown of the new President and of the Presidents of Sections, and, above all, the sultry weather, which makes ravishing the mere thought of the cool College quads and the shade of Addison's Walk, will bring together a large number of pale metropolitan and rubicund provincial celebrities. The list of contributors of papers is a very long one, but it contains many of the best names. The President's *conversazione* in the Museum is likely to be a very great success. The attractions of the building and its contents will be heightened by the recollection of how much of its unique beauty and fitness for its purpose is due to the love and reverence for science, the good taste and public spirit of the entertainer, Dr. Acland.

The "herbarising dinner" of the Apothecaries' Society was held on Wednesday at the Crystal Palace, and was, as usual, an improvement on a dinner of herbs. About 180 Medical men were present. The meeting was signalised by the presence of many visitors, amongst whom Drs. Arthur Farre, Richardson, and Wegg, and Messrs. Curling, Cock, Campbell De Morgan, and Solly. The Master, Mr. Cooper, in proposing Dr. Richardson's health as the President of the Medical Society, referred in cordial terms to his candidature for the Universities of Edinburgh and St. Andrews, and expressed a hope for his success as the first Medical representative of a constituency chiefly composed of Medical men. The toast was received with enthusiasm, and, if we may judge from the expression of Professional feeling, Dr. Richardson's candidature will meet with the unanimous support of all of the Profession who are not already pledged. In returning thanks, Dr. Richardson alluded to the references recently made by Mr. Disraeli and Mr. Gladstone, in the House of Commons, to Faraday, as having achieved a higher position and fame than Brougham, or even the greatest statesman of the age, and said that as the prospect of political success increased he could not but feel regret at leaving even partly and for a time the work of science. He added, however, that if it were the wish of the Profession that he should represent it he was prepared to make even so great a sacrifice. We hear that Dr. Richardson's Committee will probably be strengthened by the addition of the names of many leading Medical men, and that his address will soon be in the hands of the electors.

It is announced in the last *Gazette* that Dr. Oscar Clayton has been appointed Surgeon in Ordinary to H.R.H. the Duke of Edinburgh.

The Social Science Congress is to take place at Birmingham on September 30. The following are the questions to be discussed in the Health Department:—1. Can the public Hospitals and Dispensaries of this country be so administered with regard to the system of giving advice gratis as to conduce more to the welfare of the community? 2. What ought to be the functions and authority of Medical officers of health? 3. What is the relation of the water supply in large towns to the health of the inhabitants? We wish heartily that the Association could arrive at some satisfactory solution of the first question. Out-patient seeing this hot weather is certainly not conducive to the welfare of the Doctor, of whatever advantage it may be to the patients.

The list of Medical candidates for seats in the new Parliament is lengthening. Sir Charles Locock is mentioned as likely to come forward in the Conservative interest, and Dr. Walshe is said to be willing to become a candidate. We wish very much that the latter had presented himself for the representation of the University of London. We believe he would have obtained a large number of votes.

An inquest has recently been held by Dr. Stedman, coroner for Guildford, on the body of a female child, aged 12 years, whose death was supposed to have been caused by cantharides given to her by two boys for a nefarious purpose. It turns out, however, that the child's death resulted from scarlatina, and the post-mortem examination revealed no evidence of inflammation of the stomach, bowels, or urinary organs. Still there was sufficient proof that portions of Spanish fly, concealed in gooseberries, had been given to the child by the young miscreants, one of whom is a Doctor's boy, and had stolen the poison from his master's surgery. Scarlatina is very prevalent in Guildford. Ten deaths from this disease occurred there last week. There are loud complaints of the bad drainage in the town, the wells poisoned with cesspool contaminations, the want of water, and the filthy state of the river. It would seem that the recent epidemic of typhoid was not a sufficiently severe lesson.

Twenty-two cases of sunstroke have been reported during the past week, out of which twenty were fatal. A telegram states that within three days there have been 300 deaths from the same cause in New York.

The Medico-Psychological Association holds its twenty-third annual meeting at the Royal College of Physicians on Tuesday, August 4. Dr. W. H. O. Sankey succeeds Dr. Lockhart Robertson as President. The Honorary Secretary is Mr. Jonathan Hutchinson.

The new nomenclature of the College of Physicians has just made its appearance in "final revise," with alphabetical index complete. We shall take an early opportunity of noticing its leading characteristics; but we may say thus much now, that the work, in its typographical and general arrangements, reflects very great credit upon its able editor-in-chief, Dr. Sibson, the Secretary of the Nomenclature Committee, and those who have assisted him in the Medical and Surgical branches.

During the present hot weather, the Judge Ordinary of the Divorce Court has set the example of appearing without his wig. He said "There are limits to human endurance"—an aphorism of which the existence of his Lordship's Court furnishes the best proof.

THE VACCINATION ACT AT SHEFFIELD.

A Mr. W. Fox, who is said to be a "herbalist," and likewise a member of the Sheffield Board of Guardians, was summoned before the borough magistrates to show cause why he had neglected to have a child of 16 months vaccinated. The case excited considerable interest, and the court was

crowded with "prominent agitators against compulsory vaccination". Mr. Earle, the officer appointed by the Board of Guardians to carry out the provisions of the Vaccination Act, had served a notice requiring Mr. Fox to have the child vaccinated. This order had not been complied with, and was followed by a summons. The conduct of the case, which in some respects was rather comic, was remarkable for the number of technical points raised. The age of the child and paternity of the defendant were proved. It was argued that, according to the 31st section of the Vaccination Act, the justice who signed the summons must be the one to hear the case. But this point was rebutted by reference to Jarvis's Act. The prosecutor was obliged to put in his appointment. Mr. Kemp, the Surgeon, deposed to the fitness of the child for vaccination, and was subjected to a severe cross-examination, in which the following passage occurs :—

Mr. Fox : Now, sir, you say vaccination prevents small-pox, and does not transmit any other diseases. Are you willing to guarantee those parties or those parents whose children you vaccinate against any injury?

Mr. Kemp : Yes, I should have no objection to do so.

Mr. Fox : To guarantee them from injury to their life or to their offspring by vaccination, and to pay their Doctor's bills, and if death ensues in consequence to bear the funeral expenses? (Laughter.)

Mr. Kemp : Yes, I am willing to undertake all that. (Renewed laughter.)

Mr. Fox : Well, you will do what a great many Medical men won't do. (Laughter.)

Mr. Kemp : Indeed! (Renewed laughter.)

Mr. Fox : Then if you vaccinate my child I should be glad for you to keep those terms.

Mr. Kemp : I shall be very glad to take those terms. (Great laughter.)

Two witnesses were called for the defence, who swore to the ill effects of vaccination. A tailor had five children; those vaccinated all had small-pox; a printer had a child, which died after vaccination; and so forth. After a tedious hearing, the magistrates ordered the child to be vaccinated within seven days.

THE VOLUNTEER MEDICAL ARRANGEMENTS AT WIMBLEDON.

It is folly to overlook the fact that the Volunteer system has sustained a severe check. It is universally admitted that no greater failure has been witnessed than the review of last Saturday, which, following as it does closely on the heels of the disorganisation of Windsor, has left an extremely unpleasant impression on the public mind. We are not concerned with the military organisation of the Volunteers, but we feel it our duty to speak of that which more immediately belongs to us, the Medical arrangements of the camp at Wimbledon. Not long ago we had to narrate the endeavours made by the Volunteer Surgeons to obtain a proper organisation; they failed. This year again the camp was put in charge of Surgeon-Major Wyatt, much to the vexation of the Volunteer Surgeons, who protested, but in vain. As proof of the willingness of the Volunteer Surgeons to serve to the utmost, Dr. Sheppherd, of the Victoria Rifles, was on the ground with a Hospital tent and supplies of his own, and was liberally patronised both by the Volunteers and the Guardsmen. Next year Dr. L. Murray, of the London Scottish, proposes to do the same. The diseases which had to be treated were simple enough; diarrhœa was somewhat prevalent, there were a few cases of slight sunstroke, and one, at least, of erysipelas. To our mind, however, the diseases treated by the Surgeons are less significant than the symptoms evinced by their own body. Were Great Britain to be involved in a war which would necessitate the calling out of the Volunteers, this war would, no doubt, be sudden, and the time allowed for the organisation of any Medical service would of necessity be brief. Recent wars have shown the immense value of a properly organised Medical staff, but were the Volunteers to be called out, their Medical officers, destitute of a head or central body, would be utterly useless. That every Surgeon should be at liberty to set up a tent for himself, to come or go, to treat or leave untreated whatever cases he may come across, bespeaks a greater amount of disorganisation or want of organisation than we were altogether prepared for. Let us hope that, before another Wimbledon meeting, things will have begun to mend.

We may add, although not exactly *apropos* of what has just been said, that Moule's earth-closet system has this year been universally adopted in the camp, and has succeeded most admirably.

FEMALE NURSES IN MILITARY HOSPITALS.

The first result of the Committee of Inquiry into the System of Female Nursing in Military Hospitals, which met some few weeks ago at Netley, is embodied in the following announcement extracted from the *Gazette* of July 21 :— "Staff—Mrs. Jane Shaw-Stewart has been permitted to resign her appointment as Superintendent-General of Nurses at the General Hospital at Netley." It is not likely that the outside public will ever be favoured with the sight of the evidence taken by the Committee or with any information as to what the recommendation of the Committee founded thereon may have been. But we believe that we are justified in stating that the opinion which we have for some time held and have already expressed in these columns—that the system of female nursing in military Hospitals would never have a fair trial under the circumstances in which it was initiated at Netley—was fully confirmed. We trust that the successor of the late Superintendent-General may be elected solely on the grounds of personal qualifications, and we should be glad to learn that the appointment had been given to the widow of some deserving Medical or military officer possessing the necessary tact and knowledge, to whose income the salary attached to the office would be an acceptable addition. We believe that we are only expressing the sentiments of military Medical officers when we say that, while they fully appreciate the assistance to themselves and the benefit to the sick which may be obtained from intelligent and well-trained female nurses, they and the sick under their charge would rather never see a female nurse in the Hospitals than have such advantages nullified by disturbing influences such as have hitherto existed in the Royal Victoria Hospital, Netley.

FROM ABROAD.—VACATION OR NO VACATION—A GERMAN VIEW OF A FRENCH FUNERAL—M. COLIN ON VACCINE VIRUS.

A discussion has arisen at the Société de Chirurgie which to a John Bull capacity is simply wonderful. It is the custom of the French academies and Medical societies to continue their meetings and discussions without intermission throughout the year, and, as a consequence, one of the most tedious, tautological, profitless, resultless, contradictory, unpractical, and unsatisfactory discussions that have ever taken place at the Académie de Médecine—that on tuberculosis—still winds its slow way along in the dog days with the thermometer at fever heat. No wonder the combatants have lately become a little personal and out of temper; yet, take them all in all, their power of endurance is something marvellous, if not enviable. However, some of the members of the younger Society, the Société de Chirurgie, have thought that even France might advantageously take a lesson from other countries, and shut up her scientific shops for a month or two. Of course the only idea that would strike John Bull on the subject would be one of wonder that this had not been done long ago. However, the matter is not so easily disposed of, for it turned out that the motion, on July 22, proposing this innovation led to one of the hottest discussions of the season, and, after being manipulated by means of a series of

dodges worthy of our present House of Commons, has only arrived at a stage fitting it for a "future decision." One is curious to know the arguments which the fierce opponents of the change —MM. Marjolin, Giraldès (in spite of his imputed anglomania), Verneuil, and Chassaignac—brought forward, but these have been but imperfectly reported. However, we gather that the matters at issue are of far graver import than we could have imagined. Private and general interests are, it is said, alike imperilled by the innovation. The past, the present, and the future of the Society must be considered, as also must the interest of science and its followers. The example of the Academy of Medicine and the Institut is held up for imitation. Of course no French question can be approached or settled without reference to sentiment and ideas. In this case it is the good of mankind, for the traditions of French courtesy and hospitality can never consent to closing the doors of the learned societies in the face of the foreign *savants* who resort to Paris at this time of the year. Then there is an invocation of "the great principles of liberty," whatever these may be in relation to this matter. Our advice to our *confrères* is to talk less and walk more.

In one of his letters from Paris, only recently published in the Vienna Medical *Wochenschrift*, Dr. Schlesinger gives the impressions made upon him by a grand French funeral, he having been one of the guests invited to the obsequies of Velpeau, which, it will be recollected, took place during the sitting of the Medical Congress:—

"This funeral was the most brilliant, pompous, and spectacular that I ever witnessed, the theatrical-like arrangements commencing in the very residence of the celebrated deceased. The invited persons had to inscribe their names on a large sheet of paper, which lay in an antechamber, in which a large number of richly laced lacqueys were posted. A *valet-de-chambre* then threw open the folding-doors of a large salon, and vociferated 'M. le Conseiller Privé Langenbeck,' 'M. le Professeur Virchow,' 'M. le Dr. Schlesinger.' In this way the name of every visitor, high or low, was announced, or rather screamed out. In the salon and in a long suite of highly elegant rooms were to be seen, besides the members of the family of the deceased, academicians, members of the Faculty, rectors, professors, and other persons of dignity. The tone of conversation kept up gave not the slightest idea that one was in a house of mourning. Chevreuil, in his tight and variegated official costume, demeaned himself very much as a master of the ceremonies or a dancing master. A long and grand procession moved on to the church, which was splendidly hung throughout with black cloth and silver emblems. The ceremony that followed will always remain impressed on my memory. The incessant music and intonation of the choir, orchestra, and organ; the continual commanding, manœuvring, and drumming of the National Guard posted within the church; the running hither and thither of the guests; the shifting to and fro of the mourners; the waving about of the numerous dignified ecclesiastics; the obtrusive collection of alms; the comic pathos of the church servants, constantly strutting about in their party-coloured costumes; the piquant coquetry of the veiled ladies; the striking appearance of the coffin raised up on the catafalque; and its sudden disappearance thence by the agency of machinery—all this assemblage of theatrical circumstances and persons reminded one much rather of 'Don Sebastian' or 'Robert le Diable' than of a religious or mourning ceremony. With such an excess of splendour and parade, what an utter absence of all sacredness and dignity! At the romantically placed cemetery of Mont Parnasse the same heartless unsolemn character marked the proceedings. A large crowd of men, amongst whom neither grief nor sympathy was perceptible, surrounded the grave, and a Doctor of no great note, drawing out a manuscript from the side pocket of his coat, read a biography of the deceased. Then followed a second, who did likewise. Both sketches were devoid of elevation or warmth, utterly spiritless productions, just on a level with the ordinary necrological notices of the journals. And what tasteless work was it to produce at the grave of this epoch-making man, as the best that could be done, two almost similar biographies, and to read them! If from neither mind nor heart could issue out a word of improvisation or inspiration, if all must be so mechanical, at least one of the readers might have undertaken the biographical part of the subject, leaving to the other the exposition of the great influence which Velpeau had exercised on French Surgery and on Surgery in general. For my part, I verily believe these orations were among the articles supplied by the *pompes funèbres*. My general impression was this. At the funeral celebrations of ten great German savants and Physicians you would not see a tenth part of the costly pomp and splendour here displayed, but at the funeral of a poor German schoolmaster you would witness ten times more sacredness and dignity than in this ecclesiastico-theatrical exhibition. Let us, therefore, live in Paris, but die in Germany."

Notwithstanding the academical approvals which have been bestowed on M. Chauveau's researches on the virulent powers of the vaccine virus, M. Colin maintains that they are utterly untrustworthy. From his own experiments, he maintains that the supposed separation into plasma and solid corpuscles by means of the diffusion process does not occur. In M. Chauveau's procedure, in fact, the greater portion of the plasma remains with the globules and granules at the bottom of the tube, a portion of very diluted vaccine virus remaining at the upper part. In inoculating with this latter we use little else than water containing a little plasma, and in employing that from the lower portion of the tube we use the virus nearly intact, and in no wise prove on which of its elements its virulence depends. Thus (1) the method of diffusion employed for the separation of the elements of virulent liquids is defective; (2) it does not furnish the results which have been announced; (3) the distinction which has been made between the plasma and the solid corpuscles of virulent liquids, in regard to their contagious properties, has not been demonstrated; (4) there is no proof whatever that the virulence is exclusively attached to the solid corpuscles of vaccine virus, variolic pus, or the liquid of glanders.

PARLIAMENTARY.—VACCINATION (IRELAND) BILL — SANITARY ACT (AMENDMENT) BILL—SALE OF POISONS AND PHARMACY ACT (AMENDMENT) BILL—METROPOLITAN FOREIGN CATTLE MARKET BILL—THE LIABILITY OF RAILWAY COMPANIES—PROMOTION IN THE ARMY MEDICAL SERVICE—POOR RELIEF BILL—BABY FARMING.

On Thursday, July 23, in the House of Lords,

The Vaccination (Ireland) Bill was read a third time and passed.

On Friday,

The Sanitary Act (1866) Amendment Bill was read a third time and passed.

The Commons' Amendments in the Sale of Poisons and Pharmacy Act Amendment Bill were, with some exceptions, agreed to.

In the House of Commons, after a prolonged fight, the Government withdrew the Metropolitan Foreign Cattle Market Bill.

On Saturday, during the discussion on the Regulation of Railways Bill, a set of clauses was proposed by Mr. Leeman to limit the liability of railway companies under Lord Campbell's Act. They proposed that £400 should be the maximum compensation recoverable by a first-class, £300 by a second-class, and £200 by a third-class passenger, and the scheme included a complete scale of insurances to be effected by passengers with the railway companies. Meeting, however, with but little encouragement, he did not press them.

Mr. O'Beirne asked the Secretary of State for War whether his attention had been directed to the slow and unsatisfactory promotion from the rank of Assistant-Surgeon in the Army Medical Department; and whether he was of opinion that measures should be taken to assimilate the system of promotion in that branch of the service to that which exists in the Indian Medical service, where it was obtained after a period of twelve years.

Sir J. Pakington could not help taking exception to the first portion of the hon. member's question. The hon. gentleman could, he imagined, have scarcely been aware of the fact that last year no less than sixty-five Assistant-Surgeons were promoted, while in no year during the preceding ten

years had the average of promotions exceeded forty. Instead, therefore, of the promotion being "slow and unsatisfactory," it had never been more rapid or more satisfactory than it was at the present time. With reference to the latter portion of the hon. member's question, he might remind the hon. gentleman that the whole of this subject was carefully considered by a select committee as lately as 1866, and under the circumstances he did not see that any measures such as those suggested by the hon. gentleman were required.

On Monday the Poor Relief Bill passed through committee, and was reported with amendments.

In the House of Lords, on Tuesday, the Earl of Shaftesbury put a question on the subject of "baby farming," and in reply the Duke of Marlborough said it was not necessary to institute any inquiry into the subject, because the system was well known. Its repression was a matter of police, and he hoped that in the recess Government would be able to devise a measure for dealing with its abuses.

In the House of Commons the Poor Relief Bill was read a third time and passed.

The Lords' reason for disagreeing to one of the Commons' amendments to the Sale of Poisons and Pharmacy Act Amendment Bill was taken into consideration, and it was determined not to insist on the Commons' amendment.

MR. LE GROS CLARK'S FIFTH LECTURE

AT THE

ROYAL COLLEGE OF SURGEONS,

ON THE PRINCIPLES OF SURGICAL DIAGNOSIS, ESPECIALLY IN REFERENCE TO SHOCK AND VISCERAL LESIONS.

June 10, 1868.

Intracranial hæmorrhage frequently accompanies head injury. It may occur without any fracture at all. When the blood is small in quantity and diffused, it may not do much mischief; but when circumscribed it gives rise to alarming symptoms. Signs of compression coming on some time after the receipt of the injury are diagnostic of reactionary hæmorrhage. Unfortunately there are no precise indications of the locality of the extravasation when there is no fracture. Hemiplegia of one side may point to the opposite hemisphere, but though hæmorrhage is often at a point opposite to that struck, it is not always so, nor is that a rule which can be depended upon. Blood may be effused in the base of the skull without giving rise to the symptoms which it causes elsewhere. Probably the pressure here is more readily diffused, or the extravasation slower, or the direction of the pressure such as not to involve the centres of motion and sensation. Lacerations of the dura mater in these cases of hæmorrhage are not unfrequent in the base of the skull, while in the vault they scarcely ever occur. Hæmorrhage is less common, according to Mr. Clark's experience, into the cavity of the arachnoid than into the subarachnoid space. Reactionary hæmorrhage especially occurs in that situation.

The diagnostic signs of concussion and compression are no doubt distinct enough, yet compression rarely exists as a consequence of violence without concussion, and both are complicated with shock. If the patient can be roused, if the breathing is calm, the pulse feeble, and the pupils contracted, and reflex action excitable, we may conclude the case to be one of concussion; but often the diagnosis is less simple, and it must be remembered that the disturbing effects of concussion of the brain may be such as to produce irreparable organic change in its structure without appreciable laceration or contusion of any part. The milder form of concussion presents the general characteristics of shock, with slight cerebral disturbance. In fatal concussion, if the existence of such a state be admitted, death occurs from shock, the symptoms of which are united with those of suspended function of the brain. Whether in such a case the brain would be found devoid of material injury the lecturer was not prepared to say, for he had never witnessed a post-mortem after speedy death where there was not palpable lesion of the brain; but he thought such an occurrence quite possible, especially if the heart were feeble.

The symptoms of traumatic compression, when well marked, are those of apoplexy—full pulse, dilated pupils, stertor, relaxed sphincters, etc.—and are very different from those of concussion. The compression is not accompanied by those symptoms of shock which characterise the milder injury, for the pulse is well filled and the temperature for a time maintained. It is as if the force had been expended on the fissured skull and lacerated brain too exclusively to arouse the sympathy of the organic nerves.

The temperature in severe head injury seems to be no measure of the lesion sustained by the brain. In two cases of simple concussion, half an hour and an hour after the accident respectively, it was found to be 93·5° and 96·2°; yet both these recovered without any reaction above the normal standard. In a case of hæmorrhage into the brain the temperature was 99·2°, and never sank below that point. In another remarkable instance of fractured base with lacerated brain, speedily fatal, the temperature fell as low as 87·4° an hour and a half after the injury. Mr. Clark is not aware of any lower recorded temperature than this. The patient lived for nine hours, and the temperature scarcely attained, even just before death, 90°. In spinal injuries the temperature has been found a more uniform guide of the amount of injury and the length of time before reaction.

Wounds of the brain are of different kinds, and are usually fatal, immediately or remotely; but occasionally recovery occurs even after slight loss of substance. The exact position of contusion cannot be determined; we can only suspect that it is either near the seat of injury or opposite to it. The middle lobes of the cerebrum are, however, much the most frequently contused, and the posterior lobes least so. This depends on the physical relations of the different portions to the skull. The effect of transmitted vibrations would be greater on the part just beneath the vertex, and resting below on the most irregular part of the base of the skull, whereas the transmitted shock would be broken and diffused by the tentorium. When the contusion is extensive, general or partial convulsions are often to be observed, unless coma is present. If the patient is conscious, he complains of pain in some part of the body. It must not be forgotten that the upper surface of the brain may sustain considerable injury without immediate symptoms. The tendency of these lesions is to heal like other parts; but the reparative hyperæmia is almost uniformly fatal in consequence of the delicacy of the organ, the absence of any vent for disorganised tissue and hyperplastic products, and also of the facilities for further extravasation. General febrile action accompanies the local hyperæmia, and paralysis, coma, etc., usually come on. Abscess is marked by a rigor, and necessarily accompanied or followed by coma. But circumscribed traumatic abscess is very rare as an immediate sequel to injury to the head. It may occur, however, at a considerable interval after such an injury; and in cases where the original accident was trivial and soon forgotten, the diagnosis may be involved in considerable difficulty.

Occasionally in head injuries an antecedent condition is mistaken for a consequence. Just as patients so often ascribe a fracture of the patella to a fall upon the knee, when really the fall occurred because of the fracture, so in some cases apoplexy occasions a fall to which the subsequent paralysis is referred.

The localisation of lesions of the encephalon is very difficult, because the effects of these lesions are masked by those of the general concussion. Affections of the special cranial nerves are the only means of saying even whether the lesion is on the upper or the under surface. Extensive paralysis, occurring after injuries, indicates the extension of the mischief to the corpus striatum or optic thalamus. Then the amount of facial paralysis is slight, but when the trunk of the facial nerve is injured the facial paralysis is universal and complete. No particular connexion has been observed between aphasia and right hemiplegia. In some instances difficulty both in articulation and in the selection of words to express ideas was noticed, but this existed without hemiplegia, or with it indifferently on either side. In one case, however, in which the patient survived a severe injury only eight hours, though no paralysis was noticed, the patient talked thickly at first, and afterwards could not speak, though intelligent, and after death there was considerable contusion and extravasation of blood on the upper and anterior part of the left anterior lobe of the cerebrum.

A Respite for Three Years.—The limit of age for French Hospital Surgeons, which is at present 60, is in future to be extended to 63 years. That of Physicians is to remain at 65, as at present. The *Union Médicale* states that this prolongation of the period has arisen from the fact of its having been found that the supply of properly educated Surgeons has run short of late.

THE MICROSCOPE, SCALPEL, AND BALANCE.

A few years since, the existence of starch granules as normal constituents of animal tissues was looked upon as a fact of a very questionable order. Now, however, it is well established, and among the more recent additions to our knowledge of the distribution of starch granules, our readers will remember the remarkable discovery of M. Dareste, that starch forms a large proportion of the substance of the yolk of eggs. M. Dareste has demonstrated the presence of the granules by means of the microscope, and those who are desirous of confirming his discovery should employ the method of preparation which he now describes. The yolk is first *rapidly* washed with ether to remove the fatty matter; next it is washed with water to remove the albumen, sugar, etc.; finally the residue is treated for some months with acetic acid. This gives rise to a fine precipitate, which contains numerous starch granules.

M. Ch. Rouget comes forward once more with a memoir on the structure of the touch corpuscles and the corpuscles of the conjunctiva. He states that he has arrived at results quite different from those of Kölliker and Lüdden. On examining the conjunctiva, previously deprived of its epithelium by maceration in dilute acid, M. Rouget discovers, in groups, numbers of small rounded bodies which are attached, like seeds, to nerve tubes with a double contour. The nerve tube which forms the peduncle is, as it were, rolled round a spheroidal mass of granular substance. This latter is highly refractive, and contains oval nuclei. If, he says, we suppose the nerve tube unrolled, then this central mass would present itself as an expansion of the axis-cylinder of *Purkinje*. M. Rouget totally denies the existence of the capsule described by Krause and Lüdden. He asserts that in some cases the nerve tube is coiled round the central mass as many as nine or ten times.

The question of the respective functions of the unipolar and multipolar nerve cells has been partly taken up by M. J. Chéron, who, in a recent contribution on the structure of the ganglia in cephalopoda, states it to be his conclusion, from various experiments, that the multipolar cells are those alone engaged in reflex actions, whilst the unipolar cells have no such office, but appear rather to be centres of nervous force.

The existence of copper as a normal constituent of the body has been often asserted and as frequently denied. Quite recently, however (*Comptes Rendus*, lxvi., No. 12), M. Chevreul calls attention to a letter received by him from M. Nicklès, in which the latter points out the source of the copper which has been discovered by so many investigators. "The error," says M. Nicklès, "results from the use of a Bunsen's burner with a copper tube in the incineration of the organic matters." We believe that M. Lossen's experiments fully corroborate M. Nicklès' opinion.

Among the essays sent in for the French Academy's prize in experimental physiology is a memoir by M. G. Collin on Trichinæ and Trichinosis. The facts adduced are not strikingly novel. He has, however, determined a point of some interest in proving that in cold-blooded animals the trichinæ, though liberated from the cysts by the action of the gastric juice, yet never enter the blood, but are ultimately expelled through the cloaca. In birds they may enter the blood, but they never find a resting-place in the muscles. Mammals only seem to be the "hosts" in whose muscles the trichinæ can form a suitable resting-place in which to encyst themselves.

M. Lagneau has just presented to the Academy of Sciences an important memoir on Syphilitic Affections of the Nervous System. In commenting on the nature of the work, M. Cloquet said that it was nearly all original matter, and was of a very high value. The author has examined the influence of syphilis as it is exerted successively in the various parts of the nervous system. He concludes from his inquiries that syphilis may give rise to all the neuroses, and especially to paralysis, alteration of sensation, and epilepsy.

The character of the sexual organs in cross-breeds—animals which are the offspring of a male and female of different species—has a high interest for those who are investigating the origin of species. The subject has just been taken up by M. Arloing, of Lyons, who has made careful examination of the sexual organs of the leporides, the offspring of the hare and the rabbit. M. Arloing states that, while the offspring of the horse and ass rarely exhibit zoosperms or ova, he has found these bodies most abundant in the sexual organs of the leporides. The estimation of the proportion of fat in milk and of albumen in urine by means of what is called the opacity test forms the subject of an instructive memoir by Herr Vogel in the *Transactions of the Academy of Sciences*.

ASSOCIATION OF CERTIFYING MEDICAL OFFICERS OF GREAT BRITAIN AND IRELAND.

The several extensions of the "Factory Acts" have called into requisition the services of a large number of Medical men—we believe about eight hundred—to certify to the age and physical ability of children and young persons employed in manufactories, and to report upon accidents occurring amongst them in the pursuit of their labours. This fact of the existence of so many Medical men having a like function in carrying out the sanitary and preventive provisions of the several Factory Acts, and having likewise common interests with reference to the State and the public, and a common field for observation and study in noting the effects of various kinds of labour on the physical, moral, and material well-being of the operative classes, suggested the propriety of their meeting together in an association for mutual advantage and the promotion of those branches of social science with which especially they are brought into contact.

With a view of forming such an association, a preliminary meeting was called in Birmingham, and was held on June 19 at the Great Western Hotel. The meeting was eminently successful, and was attended by some fifty certifying Medical officers, who had travelled to it from various parts of the kingdom, even from Wales and Ireland. Doubtless a still larger number would have been present, had the courteous example shown by Mr. Inspector Baker, in furnishing a list of the Medical officers in his division of the United Kingdom, been followed by his colleagues in the Factory Office. As it was, the absence of such a list for one half of the kingdom was an obstacle to the issuing of invitations to attend the preliminary meeting to those gentlemen engaged in that portion of the country, but it is hoped that in the interval before the next meeting the Factory Medical Officers in Mr. Inspector Redgrave's division will forward their names, and also those of their colleagues whom they know, to the Secretary, so that in future the Association may attain the position it aims at, as *inclusive* of all such Medical men in Great Britain and Ireland.

Dr. Arlidge, of Newcastle, Staffordshire, was chosen chairman of the meeting, and opened the proceedings by delivering an address setting forth the purposes of the proposed Association.

The following officers for the ensuing year were elected:—*President:* J. T. Arlidge, M.D., M.B. Lond., Physician to the North Staffordshire Infirmary. *Vice-Presidents:* Furneaux Jordan, Esq., Surgeon, Queen's Hospital, Birmingham; C. D. Purdon, A.M. and M.B. T.C.D., Belfast. *Treasurer:* Dr. Waters, Coventry. *Secretary:* G. M. Stansfeld, Esq., Redland, Bristol. *Members of Committee:* T. B. Garstang, Esq., Bolton-le-Moors; J. B. Bolt, M.D., Bury, Lancashire; T. J. Dyke, Esq., Merthyr Tydfil; W. Roden, M.D., Kidderminster; R. C. Brown, M.D., Preston; P. Downs, M.D., Stockport; E. T. Dehane, Esq., Wolverhampton; H. Terry, jun., Esq., Northampton.

To the Committee more particularly was entrusted the future development of the Association, and large executive powers, as set forth in the following resolutions, were given them.

The following resolutions were put from the chair, seconded, and carried unanimously:—

1st. "That an Association be formed to be called 'The Association of the Certifying Medical Officers of Great Britain and Ireland.'

2nd. "That all elections of officers be conducted by ballot, and that the majority of members present elect."

3rd. "That the officers of the Association be a President, two Vice-Presidents, a Treasurer, and a Secretary, and that the affairs of the Association be conducted by them, with the addition of eight other members, chosen to co-operate with them as a 'General Committee,' and also as a 'Standing Committee' for all other purposes as hereafter set forth."

4th. "That all officers and members of Council be elected annually at a 'general meeting,' duly called by notice issued

at least ten days beforehand, to be held on the Wednesday in the first week in June."

5th. "That there be an 'annual subscription' of five shillings, due in advance, and to be paid on or before the next ensuing 'annual general meeting.'"

6th. "That the Committee be entrusted with the arrangements necessary for holding the annual general meeting, and be empowered *per se*, or at the request of at least ten members sent to the Secretary in writing, to summon a general meeting at any other time than such annual meeting as appointed."

7th. "That the Committee be required to watch any measures introduced into Parliament relating directly or indirectly to the provisions and purposes of the several 'Factory Acts,' or of the 'Labour Regulation Act;' that they report on such proposed or enacted measures; and that they make representations or suggestions either to the factory inspectors, to the member introducing the Bill, or to the Home Secretary, or other persons, as the case may require."

8th. "That they further receive and consider any communication or suggestions relative to the enactments referred to, to their practical operation, defects, or abuses, received through the medium of the Secretary from any member of the Association; and further, that they assist by advice or instruction any member seeking it in the discharge of his duties."

9th. "That they prepare an annual report, and present it at the annual general meeting, together with one drawn up by the Treasurer, showing the receipts and expenditure of the Association."

10th. "That short papers on matters of interest to the Association be read and discussed at the annual meeting."

11th. "That the Committee do meet twice a year."

12th. "That the place of meeting each year be fixed at the preceding annual general meeting, and that *three* members of the Committee form a quorum; and further, that a report of the proceedings at the annual general meeting be printed in whole or in part, at the discretion of the Committee, and circulated."

After the meeting an excellent dinner was attended by almost all the members present at the meeting. Mr. Inspector Baker and Dr. Rumsey, of Cheltenham, were also present. A letter was also received from Dr. Headlam Greenhow, regretting his inability to attend, but highly approving the objects of the Association.

Mr. Stansfeld, the Secretary, reported that, with exceedingly few exceptions, all those who had replied to the circular letter of invitation had agreed to join the Association, and that favourable replies were daily coming in.

REVIEWS.

Mechanical Therapeutics: a Practical Treatise on Surgical Operations and Appliances. By Philip S. Wales, M.D., Surgeon U.S.N. Philadelphia: Henry C. Lea. 1867. Pp. 673.

Bandages and Splints. By Wm. Fairlie Clarke, M.A., F.R.C.S. (Exam.), Surgeon to the West London Hospital, etc. London: Henry Renshaw. 1868. Pp. 106.

Dr. Wales's treatise is a very comprehensive one, and testifies to great industry on the part of the author, who has compiled from various sources and carefully arranged his descriptions of the most useful apparatus of ancient use and modern construction. Side by side with the instruments and splints, bearing the names of many British and Continental Surgeons, are described the many ingenious appliances devised by the author's own countrymen, and included among the latter a compressor for tracheal aneurism and a useful splint for fractured lower jaw, which show that Dr. Wales himself has added to the resources of modern Surgery.

The first part of the treatise, on the "Apparatus of Dressing," might, we think, be much condensed, and the first three chapters entirely omitted. It treats of small instruments and ordinary dressings. The sixth chapter of Part I. is a comprehensive account of general and local fumigation, and will repay perusal. The seventh and eighth are devoted to bandages and bandaging. The objection to this section is its great length, and the inclusion of descriptions of a number of complicated arrangements which are rarely, if ever, applied at the present day. The tendency of modern Surgery is towards simplicity in after treatment and dressings, and a rejection of cumbrous apparatus.

Part II, on "Mechanical Bandages and Appliances," gives full and clear descriptions of a great number of instruments, most of which are of greater interest to those engaged in Orthopædic Surgery than to general Practitioners. Fractures are treated of in Part III., and we have here two excellent chapters on a subject to which great contributions have been made of late years by American Surgeons. The comprehensive treatise of Hamilton is now recognised on both sides of the Atlantic as one of the most valuable text-books on injuries of bones and tendons, and many important articles have been written by Packard, Bond, Rhea Barton, N. R. Smith, and others. Dr. Wales has given a very readable compilation of nearly all that has been done by American and Continental Surgeons for the repair of these common and troublesome injuries. We say "nearly all," as no mention is made of a very useful apparatus for fracture of the radius near the wrist-joint, which is known in this country as "Gordon's splint." This part of Dr. Wales's work and the three following chapters on dislocations are likely to prove of great service for purposes of reference when the Surgeon has to deal with some difficult fracture either of the patella or of the lower jaw, or again of the clavicle, in which all ordinary means have failed to restore the position and produce rest of the injured part.

The remainder of the work is given up to "the minor operations of Surgery," and treats, among many other subjects, of cauterisation, acupuncture and electro-puncture, vaccination, and catheterism. Included in this section is a good chapter on the dressings of wounds, and also a short, and by no means complete, chapter on anæsthesia.

The volume is profusely illustrated, and contains a good index. Though too prolix in many parts, and wanting in allusions to some recently devised appliances, it will, we have no doubt, prove a serviceable addition to the Surgeon's library as a work of reference on many points of treatment which frequently require long and wearisome consideration.

Mr. Clarke's little work on bandaging and splints is intended to form a supplement to his well-known "Manual of the Practice of the Surgery." If students require any written instruction on what they see in the wards and out-patient department of the Hospital, Mr. Clarke's book is just the one we should recommend. The descriptions of the various splints and bandages required in ordinary practice are well and clearly written, and are derived, not from published sources, but from the experiences of the author himself, who has had great opportunities of acquiring some practical knowledge of these points. The engravings are very unequal as to merit, and some fail to give any clear idea of the points intended to be diagrammatically illustrated. It is difficult to conceive why Fig. 4 should be alluded to as a representation of a graduated compress.

The Diseases of the Ear; their Nature and Treatment. By Joseph Toynbee, F.R.S., etc. With a Supplement by James Hinton, M.R.C.S, Aural Surgeon to Guy's Hospital. London: H. K. Lewis. 1868.

We hail with much pleasure the appearance of a new edition of Toynbee's classical work upon the diseases of the ear—a work which, on its first appearance, might almost be considered to have inaugurated a new era in the study of this special class of affections.

The mantle of the master has fallen upon a worthy successor, and in the hands of its present accomplished editor the volume will maintain its high position as the first text-book on this subject. We almost wish that Mr. Hinton had been less modest, and, instead of confining his own additions and corrections to a supplement, that he had incorporated them with the general contents of the volume, as there is some danger of important suggestions being lost when placed at the end of the volume, especially as no mention is made in the text that additional information on any particular point may be found at the end. The subject-matter of the body of the volume is now so well known, that we will content ourselves with directing the attention of our readers to the recent additions to Aural Surgery, which are described in the supplement.

The means at our disposal for determining the relative conditions of the conducting media and of the central nervous portions of the organ have been much increased by a study of the physiological effects produced by the closure of the external meatus, whilst sound is conveyed through the osseous parietes to the auditory nerve. It is a well-known fact that, when the external meatus is closed, a sound produced by the

individual himself or conveyed directly to his head is greatly increased in intensity. Several theories have been advanced to account for this fact, the most probable of which explains the phenomenon by supposing that the sonorous vibrations are prevented from escaping through the external meatus, and are reflected back again upon the internal auditory apparatus. In accordance with this view we find that the effect is markedly diminished in diseases of the auditory meatus and tympanum, in which the passage of the wave, both outwards and inwards, is interrupted, whilst, as a general rule, no diminution in the effect is produced in cases in which the disease is more deeply situated. The few exceptional cases are those in which increased tension exists in the fluids of the labyrinth.

Under the title of molluscous or sebaceous tumours, Mr. Toynbee described a form of tumour consisting of closely packed layers of flattened epithelial cells, presenting a flaky appearance, and leading to caries of the petrous bone, and not unfrequently causing death by meningeal irritation or by giving rise to cerebral abscess. We are surprised to find that the editor has quoted largely from a paper by Mr. Toynbee without making any mention of the labours of Continental pathologists, and more especially of Virchow's admirable paper on this subject. No one who reads the account of several of the cases here given can doubt that the tumours are really the cholesteatoma or Perl-geschwulst of German writers (the latter name being only applied to the firmer and harder varieties), which appear to have a similar mode of origin, and to consist of concentrically arranged epidermal scales, with a large quantity of degenerating fatty matter.

Mr. Hinton directs attention to a subject which has not been hitherto studied as much as it would appear to deserve —viz., the influence of hereditary syphilis upon the organs of hearing. The author states that more than one-twentieth of the aural patients at Guy's Hospital suffer from this affection. They appear to have invariably suffered from impaired vision before the deafness commenced, which is usually first noticed about the period of puberty. He continues—"I know no other affection except fever which, in a person under 20, brings on a deafness so rapid and so nearly complete. In the course of a few weeks a girl, previously hearing perfectly well, will, without pain or known cause, become unable to distinguish words." The pathological changes leading to this condition have yet to be determined, Mr. Hinton having only had the opportunity of dissecting one case. With regard to treatment, our knowledge is equally unsatisfactory. The usual anti-syphilitic remedies, perchloride of mercury and iodide of potassium, do not seem to produce good results; the internal administration of hydrochlorate of ammonia in scruple doses and the injection of iodine vapour into the tympanum have proved of value. The volume, as a whole, has been well and carefully edited, is well printed, and illustrated with numerous woodcuts.

Etudes sur la Localisation dans le Cerveau de la Faculté du Langage Articulé. Par le Dr. Albert Carrier. 1867. Paris: Baillière. London: Williams and Norgate.

Aphasia is a subject which during the last few years has attracted so much attention that we gladly welcome any addition to our knowledge of the connexion which is maintained to exist between this mysterious symptom and disease of a special part of the brain. Although Dr. Carrier's essay disappoints us in not containing any great amount of original matter, it is well worth the study of those who take a special interest in the affections of the nervous system. It begins with an excellent historical sketch of the different views that have been held from the time of Gall, who conjectured, although he failed in proving, that the faculty of articulate language was seated in the anterior lobes of the brain, to the present day. This part is followed by an abstract of all the known anatomical details bearing on the question at issue; in the third division he attempts "to explain certain symptoms of aphemia;" then we have reports of fifteen cases, most of which have been previously published; and the essay concludes with a notice of a few cases which are apparently opposed to M. Broca's now generally accepted view that aphasia (or aphemia) is always associated with lesion of the posterior part of the third frontal convolution of the left anterior lobe.

In attempting to trace out with accuracy the leading points in the history of this subject, we come upon a diversity of statements which illustrates the difficulty of arriving at the exact truth, even in inquiries regarding facts occurring in our own time. It is universally admitted that Bouillaud, in 1825, placed the organ of the manifestation of thought by speech in the two anterior lobes of the brain. The next step of importance was taken by M. Marc Dax, of Sommières, who, according to Trousseau (English edition of "Clinical Lectures," vol. i. p. 241), "in 1836, at the Medical Congress of Montpellier," read an essay entitled "Lesions of the Left Half of the Brain, coinciding with the Loss of Memory of the Signs of Thought," in which he showed from clinical observations that where there was loss of memory of words the lesion was always seated in the left hemisphere exclusively. This essay seems never to have been printed till nearly thirty years after it was read, but, in consequence of the interest which aphasia was then exciting, it was published on April 28, 1865, in the *Gazette Hebdomadaire*, as we learn from a note added by Trousseau's translator, Dr. Bazire, and from a statement by Dr. Reynolds in his "System of Medicine," vol. ii. p. 442. Yet, strange to say, Dr. Carrier seems to express a doubt regarding Dr. Marc Dax's claim to this discovery, and describes his essay as "un mémoire qui ne fut ni lu au congrès de Montpellier, ni publié par la suite comme on l'a prétendu" (p. 23); and it must be admitted that there is something very strange in the fact of a memoir containing so important a discovery, and read before a Medical Congress in a university like Montpellier, being allowed to remain dormant and apparently forgotten for nearly thirty years. We have entered somewhat in detail into this point, because, if Dr. M. Dax actually did read his memoir in 1836, he anticipated in its most singular part the subsequent discovery at which M. Broca arrived from independent personal observation. This discovery, which, whatever may be the true state of the case in regard to Dr. Marc Dax's essay, is unquestionably due to M. Broca, must be regarded as dating from a remarkable discussion which incidentally arose, early in 1861, at the Anthropological Society of Paris, concerning the localisation of the cerebral functions, in which Drs. Gratiolet, Aubertin, and Broca took the most active part. Gratiolet maintained that all attempts to establish a localisation had utterly failed. Aubertin held the opposite view, quoting numerous cases recorded by Bouillaud, Rostan, Lallemand, etc., which tended to prove that the anterior cerebral lobes were the seat of the faculty of speech. M. Broca hesitated in opinion, and towards the close of the discussion Dr. Aubertin referred to the case of a man, fifty-one years old, who had lost the power of speech for twenty years, during which time he had been a patient in the Bicêtre, and declared that he was prepared to renounce the doctrine of Bouillaud if the autopsy of this patient did not reveal a lesion of the anterior lobes. M. Broca, under whose care this patient then was, and who till then had not committed himself definitely on either side, accepted Dr. Aubertin's challenge, and pledged himself to adopt the conclusions to which the autopsy might lead. The patient died on April 17, 1861, when it was found that *the lesion was seated in the left frontal lobe.* M. Broca at once declared his adhesion to Bouillaud's views, and zealously devoted himself to the more minute investigation of a subject with which his name will be ever associated. His next autopsy of an aphasic (if we may venture to adopt a convenient name invented by Professor Gairdner) took place in the November of the same year, and in this case the result pointed to a very limited part—namely, the *posterior portion of the third frontal convolution of the left anterior lobe*—as the seat of the faculty of articulate speech. On these two isolated cases M. Broca ventured to propound this remarkable localisation. In 1863 Dr. G. Dax (the son of Dr. Marc Dax) sent a memoir to the Academy of Medicine in which he attempted to prove that the faculty of speech must be localised at the point of union of the middle with the frontal lobe of the left hemisphere—a position which differs very slightly from that assigned by Broca, but is less definite. Dr. Carrier refers to the cases recorded by M. Charcot and Vulpian, Jules Falret, Magnan, Hughlings Jackson, Lancereau, and others, as supporting Broca's doctrine, and maintains that at the present day "it must be regarded as victorious against all the attacks to which it has been subjected." Those who wish to know what may be said on the opposite side of the question should read Trousseau's lecture "On Aphasia." From the same cases which Dr. Carrier adduces as favouring M. Broca's views, Professor Trousseau shows—(1) That aphasia may exist without damage to the third frontal convolution of the left side. This is proved by a case recorded by Dr. Charcot, the value of which is admitted by M. Broca himself, who took part in the autopsy, and allowed "that it invalidated the anatomical law which he

had laid down." Yet Dr. Carrier, in noticing Dr. Charcot's cases, asserts that *partout et toujours* the lesion was on the indicated spot. (2) That aphasia may be caused by lesions of the left hemisphere, altogether independent of the frontal lobe. (3) That, on the evidence of three cases, lesions which on the left side produce aphasia do not cause it when seated on the right side. "Is it possible to admit," asks Professor Trousseau, "that, in an organ so exquisitely symmetrical as the brain, there may be in one of the hemispheres a portion discharging a function which does not pertain to the other hemisphere? Analogy and common sense would protest against such a conclusion" (p. 253). We are quite willing to do full justice to the claims of M. Broca, but we cannot go so far as Dr. Carrier. We hold rather with Trousseau's conclusion that the numerous cases which have been collected seem to establish, not that aphasia is necessarily produced by a lesion of the third left frontal convolution, but that it is produced by a lesion of the *left cerebral hemisphere*, and never by a lesion of the *right*, as Dr. Marc Dax had shown in 1836 (if, indeed, he did read his memoir in that year); and further, that in the great majority of cases of aphasia, but not invariably, the lesion is situated in the posterior part of the third left convolution, as M. Broca was the first to point out.

In the second part of his essay, Dr. Carrier notices the observation of Gratiolet, that the frontal convolutions on the left side are more rapidly developed than those on the right, the opposite holding good in regard to the convolutions of the posterior lobe—a very important observation, which may tend to explain the fact previously remarked by Broca and Barkow, that the number of frontal convolutions on the left side is greater than the number on the right.

We must refer our readers to the work itself for Dr. Carrier's attempt to explain the most singular point in relation to aphasia—viz., its almost invariable association with disease of the left side of the brain—by the application of the facts of cerebral development which we have just noticed. The only fault we have to find with our author is that he is somewhat too strongly imbued with a spirit of partisanship.

GENERAL CORRESPONDENCE.

PARLIAMENTARY REPRESENTATION OF THE UNIVERSITIES, ETC.

Letter from Dr. Tuthill Massy.

[To the Editor of the Medical Times and Gazette.]

Sir,—As a graduate of the University of Glasgow, I think, with Dr. Martin, of the University of Aberdeen, that we should reserve our votes for a Medical representative, and not entrust our interest to lawyers, who are merely seekers for themselves of position and title. The Medical Profession should have a due share of the loaves and fishes. A list has been forwarded to me of a number of Medical men who have, without any expectation of a Medical candidate, promised their votes to the law candidate.

Now, may I ask the law candidate, through your Journal, permission to withdraw those promises in case a brother Practitioner should come forward—one acquainted with the interests of the sick public and the Medical Profession?

I am, &c.

Brighton, July 25. R. Tuthill Massy, M.D.

THE OLDEST COUNTY INFIRMARY.

Letter from Mr. Henry Rundle.

[To the Editor of the Medical Times and Gazette.]

Sir,—I notice in to-day's *Medical Times and Gazette* a letter from Dr. Washbourn, stating that the Gloucester Infirmary was opened in 1755, and (quoting from your notice of the opening of the Royal Hants County Hospital, in your issue of the 18th instant) that the Hants County Hospital was not opened until 1759, thus giving the seniority to Gloucester. It is true the present County Hospital, Winchester, was not finished until 1759, but a house in another part of this city was opened as a Hospital on St. Luke's-day, 1736, and the patients were removed to the present building in November, 1758. I find the following statement recorded of the patients relieved by the Hospital during the first year of its existence, ending October 18, 1737. In-patients admitted, 251, of which number were cured 165; out-patients on the books, 80.

The "Royal Bristol Infirmary" claims to have been "instituted in 1735," but the present Secretary states that there are no documents to show that it was in operation at so early a date. A plan had been commenced at Cambridge by Dr. Addenbrooke, who left a sum of money in 1719 for founding a Hospital, but the Hospital itself was not erected until 1766. It is interesting to notice the dates of the founding of the following provincial Hospitals, and see how soon the good example set by our zealous founder, Dr. Clarke, was followed in other places; both the Hospital at Northampton and the Devon and Exeter Hospital are indebted to our first "House-Apothecary," Mr. Pratt, for his personal assistance at their start.

Bath Mineral Water Hospital, founded in 1739; Devon and Exeter Hospital, 1741; York County Hospital, 1741, rebuilt in 1846; General Infirmary at Northampton, 1744; Salop Infirmary, 1747; Infirmary for Durham and Northumberland, 1751; Gloucester Infirmary, 1755; General Infirmary at Chester, 1755; Staffordshire General Infirmary, 1765; Salisbury Infirmary, 1767; County Hospital at Lincoln, 1769; Radcliffe Infirmary, 1770; General Hospital, Birmingham, 1772; Norfolk and Norwich Hospital, 1772; General Infirmary at Nottingham, 1782; Kent and Canterbury Hospital, 1793. From these dates I think it appears that the statement "that the Hants County Hospital was the first and oldest of the County Infirmaries" is undeniable.

I am, &c.,

Henry Rundle, House-Surgeon.

Hants County Hospital, July 18.

THE ALLEGED CRUELTIES TO PRISONERS OF WAR IN THE PRISONS OF THE CONFEDERATE STATES.

Letter from Dr. P. F. Whitehead.

[To the Editor of the Medical Times and Gazette.]

Sir,—Notwithstanding my assertion, in a recent letter to your Journal, that the Surgeons of the Confederate Army did all in their power to mitigate the horrors of the late war, I am attacked by my own friends for language used in said letter. For their better understanding, I beg space enough in your columns to say that neither the Confederate Government nor the Medical Department thereof were any more responsible for the suffering at Andersonville than they were for that of their own sick. It was impossible for them to get adequate means for the relief of either.

When I wrote that the horrible suffering at Andersonville would be a "blot" upon us, I only intended to say that it would be so in the eyes of foreign nations, who are, as yet, ignorant of the true history of the recent war, and so dependent for their information upon the enemies of the late Confederacy.

I am, &c. P. F. Whitehead, M.D.

Vicksburg, Miss., U.S., July 8.

Dr. Aveling.—Sheffield is about to lose from its Medical ranks two gentlemen both favourably known to the Profession and highly respected by their personal friends—namely, Dr. J. H. Aveling and Dr. Frank Smith—the former practising as a Surgeon, the latter as a Physician. The reason alleged for the departure of Dr. Aveling from a highly respectable sphere of practice is the critical state of the health of his wife; and while those persons who have shared his friendship regret the existence of this painful cause, there are many others who will part with regret from one who has long taken an active and extra-professional part in various departments of local usefulness. As lecturer on midwifery at our Medical School, honorary secretary of the Social Science Association, a member of the Sanitary Committee, president of the Literary and Philosophical Society, and member of the committee of the Sheffield Library, he has made many friends, and during a twelve years' residence amongst us no enemies. But most gratefully will he be remembered as the originator of the Hospital for Women, an excellent institution, for which too much cannot be done, and the Doctor's solicitude for the success of which will not, we are sure, terminate in his anxiety for the election of a competent successor. We likewise hope that his removal from this town and neighbourhood will not prevent the completion of his long-promised "History of Roche Abbey," the greater portion of which has long been printed. —*Sheffield Telegraph.*

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 1, 1868.

Dr. HALL DAVIS, President, in the Chair.

THE following gentlemen were elected Fellows:—Dr. Boggs, Paris; Dr. Daly; Mr. Evan Jones, Aberdare; Dr. Parkinson Oates; Mr. Rogers, Bombay; Dr. Woakes, Luton.

Dr. FITZPATRICK exhibited an early ovum, in which the funis tightly encircled the left thigh of the fœtus.

Dr. BRAXTON HICKS exhibited the head of a child whose delivery had been effected by the cephalotribe.

Dr. MEADOWS exhibited

A LARGE FIBROUS VAGINAL TUMOUR,

which he had removed from a woman by the single wire écraseur. The case was remarkable in this respect, that it had been mistaken for one of procidentia uteri. The tumour protruded beyond the vulva, and when first seen by him was in a state of slough. It was attached to the anterior wall of the vagina and floor of the bladder; had grown rather rapidly upwards above the pelvic brim, between the uterus and bladder, but not involving either, and downwards beyond the vulva, filling the whole vaginal cavity. It seemed to have originated somewhere between the neck of the bladder and the vagina. The uterus was quite independent of it, and was perfectly healthy. The mass was fully as large as a child's head at term.

Dr. BRUNTON narrated the particulars of a case of presentation of the right breast, with prolapsus of an arm and of the funis. After a tedious labour the child was born alive.

Dr. BARNES read a paper on

CHOREA IN PREGNANCY.

The author premised that, although it was unsafe to deduce conclusions as to the general pathology of chorea from the study of the disease associated with pregnancy, still it was useful to approach the subject from as many different aspects as possible. The relations of chorea with pregnancy were very striking, yet they had been almost entirely overlooked in works on obstetrics. He had collected thirty-nine cases of chorea with pregnancy which ended in recovery, and seventeen ending fatally, making fifty-six, as a basis for study. These cases were related in detail and tabulated. The pathology of chorea was then discussed. The author subjected to analysis the theory that the proximate cause of chorea was embolism in the capillaries of the brain, derived from vegetations on the cardiac valves, the consequence of rheumatism—a theory maintained by Kirkes, Hughlings Jackson, Tuckwell, and others. He urged various clinical facts as inconsistent with this theory, at least in the exclusive and absolute form. The disease often came on nearly suddenly after terror or other form of psychical shock in persons not affected with rheumatism or heart disease. Could terror instantly cause the deposit of fibrin-beads on the heart valves to supply the emboli? Chorea was sometimes rapidly cured, the bruit taken as indicative of valvular disease remaining. The fibrin-beads found after death looked so fresh, and were often so small, that it might be suspected that they were only formed shortly before death.

Dr. OGLE conjectured that they might be formed during the last moments of life. The author put forward the speculation that the chorea at first was due to functional irritation of the brain, and that the softening and decided lesions found in some fatal cases were the result of the chorea, the consequence of altered nutrition caused by the repeated shocks and waste of nerve-force attending the chorea. It was remarkable, he observed, that the serious mental disorders, amounting sometimes to mania, were secondary and progressive. The chorea came first, the brain symptoms followed. And the way to arrest or cure the brain disease was to cure the chorea. He then discussed the relations of chorea to abortion and premature labour, the question of inducing labour, and other questions of treatment.

Dr. HUGHLINGS JACKSON thanked Dr. Barnes for his admirable paper, and not least for the able and liberal criticism on the views he (Dr. Jackson) had put forward. There were two chief points—1, the position of the morbid changes allowing the choreal movements; and 2, the nature of those changes. He would speak of the simplest cases—viz., those of hemichorea. Choreal movements were often unilateral, and when bilateral one side suffered more than the other. The muscular region most affected in hemichorea was the one which was palsied when part of the corpus striatum was destroyed—as, for instance, by a clot. Sometimes the movements were replaced by decided hemiplegia, like that which such destruction of the highest motor centre caused. As in hemiplegia from embolism, the right side was the one more often affected. The leg suffered more than the arm, and there was usually greater defect of speech with right than with left hemichorea. These facts pointed, Dr. Jackson believed, to the region of the corpus striatum as the locality at fault in hemichorea. He would not deny that other regions of the nervous system might be diseased by embolism at the same time. He supposed the accompanying mental symptoms to be due to similar disease of parts of the cerebrum distant from the corpus striatum, and spoke metaphorically of puerperal mania as "chorea of the mind." He adverted to the importance of comparing and contrasting cases of hemichorea, hemispasm, and hemiplegia, and referred to the great value of Dr. Broadbent's hypothesis on unilateral and bilateral movements. He (Dr. Jackson) did not think the spinal cord could be to blame for hemichorea, as the face was never affected in any kind of spinal disease. Alluding to the sort of movements, he remarked that they were not mere repetitions of spasms and cramps, but incoherent successions of different movements of considerable complexity. He thought it was reasonable to suppose that the nervous arrangements for highly developed physical (or rudimentary psychical) movements of the limbs lay near the corpora striata, as—on the left side of the brain at least—did those for the movements of speech. Next, as to the nature of the local changes. It was admitted by most Physicians that there was, frequently at least, a condition for embolism in chorea. To speak fully on this part of the subject would, he said, be to restate the observations and views of Kirkes and others, and the opinions Dr. Barnes had quoted from his published remarks. He next adverted to an argument often adduced against embolism being the cause of chorea, that the patients frequently get well quickly. In the first place he had never supposed that in any case of chorea the main trunk, or any large branch of the middle cerebral artery, was blocked. Yet recovery did follow even hemiplegia the supposed result of embolism. Such cases, however, rarely admitted of post-mortem verification. He could advance the stronger instance that recovery from hemiplegia occurred when part of the corpus striatum was actually destroyed, as by clot. Much more, then, might patients be expected to recover from the slighter lesion which plugging of the smaller branches of the middle cerebral artery would cause. Whatever the particular nature of the pathological change might be, its general nature was clear. It must be a slight one. Nerve-tissue could not be destroyed, for the symptoms which destruction of parts of a motor centre produces must be those of loss of function—palsy—not disorder of function, "activity" of movements. It was neither healthy nor destroyed, but unstable. This instability, although frequently the result of anæmia from blocking, might doubtless be induced in other ways, as in the choreiform movements which sometimes occur during recovery from epileptic hemiplegia the secondary result of coarse disease of a cerebral hemisphere. Nor did he deny that nerve-tissue might be unstable in any part of the nervous system, nor that any muscular groups might move irregularly, nor that any blood-vessels might be blocked. What he wished to uphold was that instability of nerve-tissue in the region of the corpus striatum only produced those incoherent successions of different movements of considerable complexity which constitute hemichorea. With regard to fright, his experience confirmed the view which the author of the paper and others held as to the frequency with which chorea was preceded by fright. The phenomena of fright were those of disorder of circulation — *e.g.* palpitation and pallor. The perceptible bodily condition induced was a general arterial change. A change throughout the body could not be the sole cause of one-sided chorea. The theory of embolism implied some local enfeeblement of the motor centre previous to such general disturbance. The fact that chorea occurred chiefly in children, and that infants and adults

mostly escaped, was a difficulty to all, and did not apply to the embolic theory in particular. Since the irregular movements were chiefly of muscles used voluntarily, and as the movements of these muscles required education, Dr. Jackson said he had some time ago put forward the hypothesis that the limitations to the period of liability were due to the imperfect education or incomplete development of the part of the nervous system in children which was changed by the morbid process. But the exceptional cases in infants and adults, and even sometimes in old people, were not explicable on this hypothesis. He admitted, in conclusion, that there were many difficulties in his way, and that he was not prepared to answer the whole of the objections the author had brought forward.

Dr. Levy wished to ask at what period of pregnancy the chorea most usually occurred in Dr. Barnes's cases, what was the latest age at which Dr. Barnes had observed pregnancy associated with chorea, and whether in the cases narrated the chorea occurred more frequently in first or subsequent pregnancies. Dr. Levy had at present under his care a woman, aged 47, attacked for the first time with chorea; but in this case there was no associated pregnancy.

Dr. Brunton said he was much delighted with Dr. Barnes's most able paper. He could not agree with the view that the chorea was a disease arising from primary affection of the corpora striata produced by minute emboli. He took the view that this affection of the corpora striata was a result, not a cause, of chorea. He looked upon chorea as a reflex disorder arising from eccentric irritation of the brain. Hence its occasional connexion with pregnancy. He had found much advantage therapeutically in the use of bromide of potassium and tincture of belladonna.

Dr. Gervis could hardly accept embolism occurring in certain cerebral vessels as the invariable cause of chorea, although it might well be one intracranial, though still eccentric, exciting cause of the disease. There must, he thought, be some antecedent predisposition in the patient, and he would suggest that this might be found in some condition of the blood. Given this predisposition, then, the occurrence of slight embolism in some of the cerebral arteries might be the exciting cause, determining the occurrence of the chorea in certain cases, pregnancy in others, and so on.

Dr. Fitzpatrick thought that every one who had seen much of such nervous diseases as chorea, stammering, epilepsy, particularly in the form of *petit mal*, must have been struck by the strong affinities which they presented. And from this point of view he wished to draw attention to the theory recently put forward by Dr. G. Johnson to account for the convulsions witnessed in epilepsy, which was that they were due to anæmia of the brain. And he could not but think that this theory was in some degree applicable to the present subject of discussion. What we know of the natural history of chorea shows it to be constantly associated with an anæmic condition of the system. Rheumatism and pregnancy both produced depravation of the blood, and the unfavourable hygienic condition in which the children of the poor, so often the subjects of chorea, lived had the same effect. In the cases of chorea resulting from fright, the subjects in them were not improbably suffering from such a predisposition to the disease that a slight cause sufficed to determine its occurrence.

Dr. Bathurst Woodman thought that chorea was only a symptom common to varying and widely different diseases. Its place as a symptom was alongside of other disordered movements, as hysterical convulsions, spasm and tic, epileptiform and tetanic convulsions, etc.; but the name of chorea was, he thought, given to three or four very dissimilar kinds of disease—one set acute, with a tendency to death; the other chronic, with a tendency to cure; one set associated with marked cerebral symptoms; the others, and this was commonly the case, could use all their mental powers, and (as shown by the gymnastic cures) could execute purposive movements of the very limbs affected. Many cases of chorea pass urine of low specific gravity.

Dr. Kaufmann (Paris) remarked that it was easy in post-mortem examinations to recognise if a subject had had fits of epilepsy, for in epilepsy the corpora olivaria were always indurated; whereas in subjects suffering from chorea those portions of the medulla oblongata preserved their usual appearance.

After some further remarks from Dr. Wynn Williams, Mr. Heckford, and Dr. Martyn, Dr. Barnes replied, and the Society adjourned until October.

MEDICAL SOCIETY OF LONDON.

May 4, 1868.

Dr. Richardson, F.R.S., President, in the Chair.

The President related a case of

FATAL RAILWAY ACCIDENT ILLUSTRATING IMPORTANT POINTS IN PHYSIOLOGY AND MEDICAL JURISPRUDENCE.

He was present at the time when a cry was raised that a person had been decapitated by a passing train; he found at once that complete severance *without the loss of any blood* had occurred just above the level of the shoulders. On discovering the trunk, though at least a minute had elapsed, respiratory movements were observed, and the right side of the heart still pulsated. On proceeding down the line, the face was found warm, and with the appearance of life—the irides even faintly contracted to sight. Then the brain was found entire, perfectly enucleated. Its examination revealed indication of old and standing lesion which gave rise to the hypothesis of insanity—an hypothesis which was substantiated by the evidence at the inquest.

After some remarks by Dr. Day, Deputy Inspector-General Burke said he was once present at an execution at Canton. Examining the severed head, he saw violent contortions of the muscles below the jaws, which continued for at least twenty minutes.

Dr. Leared thought that the respiratory movements observed might have been automatic, just as those which occur in the hearts of the lower animals.

OBITUARY.

WILLIAM STEVENS, M.D., D.C.L.

We have to notice the decease of this eminent Physician, at the advanced age of 82. He is justly celebrated as having originated a method of treating cholera which was based on deeper and more thoughtful principles than were current in the year 1832. He took the diploma of the Royal College of Surgeons in 1814, the degree of M.D. at Copenhagen in 1820, and in 1834 was honoured by the D.C.L. of the University of Oxford, along with Dr. Hume, of Peninsular fame, and Sir Astley Cooper, in 1834. The magistrates of the county of Middlesex awarded Dr. Stevens a vote of thanks, and presented him with a piece of plate of the value of a hundred guineas as an expression of gratitude for his valuable services in combating the cholera in the county prison of Coldbath-fields; and King Christian VIII. of Denmark, in admiration of his genius and in requital of his valuable services rendered in the Danish West Indies, bestowed upon him a princely gift. His works on the Blood and on Cholera must ever keep their place in Medical literature.

BENJAMIN TRAVERS, Jun.

We are sorry to record the death, in his 60th year, of Benjamin Travers, the younger, the son and successor, though not the equal in power and dignity, of the famous Benjamin Travers, of St. Thomas's Hospital. The life of the deceased was not marked by any incidents which would be of much interest. He published several contributions to Surgical literature, amongst them a testimony to the value of tobacco in tetanus; but during the last years of his life was disconnected from teaching and Hospital practice, and he devoted himself to practice and did not often appear at Professional meetings.

Fetid Breath.—Obstinate cases of this kind may be relieved by formulæ recommended by M. Préterre, consisting of gargles composed either of 15 grains of phenic acid to 45 oz. of water, or of 150 grains of permanganate of potash to the same quantity. The gargle is to be used several times a day, swallowing a spoonful. The phenic acid is the most active of the two, but it leaves a smell of tar behind Formulæ of syrup of permanganate that have been prescribed are quite inert, as sugar, like other organic matters, reduces the permanganate into binoxide.—*Journ. de Chimie Méd.*, May.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 23rd inst. :—

Aniley, Daniel, Halifax, of St. Bartholomew's Hospital.
Banks, Richard, Cockermouth, of Guy's Hospital.
Bates, Tom, L.R.C.P. Edin., Worcester, of Paris and Glasgow.
Boyd, Herbert, St. John's, New Brunswick, of St. Mary's Hospital.
Brown, David, Dublin, of the Dublin and Belfast Schools.
Churley, M. W. W., Leeds, of the Leeds School of Medicine.
Colson, Edward, Great Hormead, Herts, of Guy's Hospital.
Edwards, Branford, L.R.C.P., Ipswich, of Guy's Hospital.
Gittins, T. J., Barbadoes, of Guy's Hospital.
Lett, Francis, Woolwich, of Guy's Hospital.
Mason, J. D., Lewisham, of Guy's Hospital.
Morris, William, Birmingham, of the London Hospital.
Patrick, Robert, Bolton, of the Manchester School.
Scott, W. J., Cape of Good Hope, of University College Hospital.
Smith, Leonard, Cambridge-street, of St. George's Hospital.
Walker, G. S., Islip, Oxon, of St. George's Hospital.
Wing, C. E., Bury St. Edmunds, of Guy's Hospital.

The following gentlemen were admitted Members on the 24th inst., viz. :—

Bevan, J. B., St. Ives, Cornwall, of University College Hospital.
Brockwell, Thomas, Sturry, near Canterbury, of Guy's Hospital.
Chatterton, James, M.D. Dublin, Cork, of the Cork School.
Drinkwater, William, L.S.A., Shepherd's-bush, of King's College Hospital.
Earle, T. E., Calcutta, of University College Hospital.
Leahy, John, Bombay, of University College and Bombay.
Ledgard, W. E., Fulford, Yorkshire, of St. George's Hospital.
Morgan, G. J., Shrewsbury, of Birmingham and King's College Hospital.
Nettleton, H. T., Paymaster Royal Navy, of the Westminster Hospital.
Penruddocke, George, Bath, of the Middlesex and Bath Hospitals.
Renshaw, W. A., Altrincham, Cheshire, of the Manchester School.
Sanders, Edwin, Jersey, of St. Bartholomew's Hospital.
Smith, Frederick, Great Grimsby, of the London Hospital.
Staples, H. T., Brompton, of King's College Hospital.
Trevor, S. L., Welshpool, of King's College Hospital.
Walsh, Inman, Bayswater, of St. Mary's Hospital.
Waring, F. J. A., Dublin, of the Dublin School.

Admitted a Member of the College under the old regulations :—

Dawson, John, M.D. Philadelphia, Rangoon, British Burmah.

The following gentlemen, having undergone the necessary examination, received their diplomas in Dental Surgery at a meeting of the Board of Examiners on the 29th ult. :—

Payne, George W., Grosvenor-street, Eaton-square.
Webster, R. M., Colebrook-row, Islington.
Whittingham, A. W., Hanley, Staffordshire.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 23, 1868 :—

Amsden, George, King's College Hospital.
Andrews, George, Sarsden, Chipping Norton.
Bate, George Paddock, Walton, Stone, Staffordshire.
Black, John Gordon, Newcastle-on-Tyne.
Blenkinsop, Frederick Henry, St. George's Hospital.
Brett, Francis Chas., Halsey-street, Cadogan-place.
Evans, Thomas Walter, Llanymawddwy, Merioneth.
Hallowes, Adolphus Henry Blackwood, Redhill, Surrey.
Laidler, Joseph, South Stockton-on-Tees.

The following gentlemen also, on the same day, passed their First Examination :—

Bell, John Albert, St. Thomas's Hospital.
Bullock, James Lawrence, University College Hospital.
Butler, Charles, St. Bartholomew's Hospital.
Crowther, William Edwin, Guy's Hospital.
Hyde, William Derby, Charing-cross Hospital.
Pearce, William Henry, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BRADLEY, GEORGE, M.R.C.S.—Junior House-Surgeon to the Liverpool Northern Hospital.

BRAME, FRANCIS WOODHOUSE, F.R.C.S.—Chloroformist to the Dental Hospital.

CLAYTON, OSCAR, M.D.—Surgeon-in-Ordinary to H.R.H. the Duke of Edinburgh.

HEALE, J. N., M.D. Lond., M.R.C.P.—Physician-in-Ordinary to the Royal Hants County Hospital.

HILL, Mr. J. R.—Medical Officer of the House at Holloway belonging to the West London Union.

LIVETT, H. W., Hon. Assistant-Surgeon 10th Somerset Rifle Volunteer Corps—Assistant-Surgeon, *vice* Swete, promoted.

NICOLSON, CH., M.A., B.Sc., M.B. and C.M.—Resident Physician to the Medical Missionary Training Institution and Dispensary, 39, Cowgate, Edinburgh.

OLIPHANT, JOHN, M.D.—House-Surgeon to the Liverpool Northern Hospital.

SMITH, HEYWOOD, M.A., M.B. Oxon, M.R.C.P.—Assistant Physician to the Hospital for Women.

SWETE, Assistant-Surgeon E. H. W.—Surgeon 3rd Battalion Somerset Rifle Volunteers, *vice* Nicholls, deceased.

THOMPSON, J. ASHBURTON, of Guy's Hospital—Resident Obstetric Assistant at Middlesex Hospital.

BIRTHS.

EARLE.—On July 26, at Boulogne-sur-Mer, the wife of F. J. Earle, M.D., H.M.'s Indian Army, prematurely of a daughter.

JONES.—On July 5, the wife of Mr. Jones, Assistant Resident Medical Officer St. Thomas's Hospital, of a son.

NICHOL.—On July 26, at Denmark-hill, the wife of R. Nichol, M.D., of a daughter.

RATTRAY.—On July 26, at 8, Brighton-place, Portobello, near Edinburgh, the wife of Andrew M. T. Rattray, M.D., of a son.

ROTH.—On July 25, at 16A, Old Cavendish-street, the wife of Dr. Roth, of a daughter.

SMITH.—On July 26, at Eton, the wife of J. Smith, M.D., of a son.

WILBE.—On July 26, at 24, Queen's-road, St. John's-wood, N.W., the wife of Richard Haydock Wilbe, M.D., of a daughter.

WRIGHT.—On July 27, at 49, Summer-hill, Birmingham, the wife of M. H. Wright, M.R.C.S., etc., of a son.

MARRIAGES.

BROWN—BUTT.—On July 22, Richard Brown, M.D., of Tudor House, Burgess-hill, to Louisa Rosa, eldest daughter of Henry John Butt, Esq., late of Woodlands, Southborough, Tunbridge Wells.

EDDOWES—HUMMEL.—On July 23, at Christ Church, Brixton, William Eddowes, Surgeon, Shrewsbury, to Mary Lavinia, only daughter of Horace Morley Hummel, Esq., Melbourne Lodge, Brixton. No cards.

FREEMAN—HALE.—On July 21, at St. Swithin's Church, East Grinstead, Henry Wm. Freeman, L.R.C.P. Lond., of 38, Gay-street, Bath, to Lena, third daughter of the late John Hale, Esq., of Felcourt Hall, Surrey. No cards.

GREENALL—MACKINTOSH.—On July 14, at St. George's, Hanover-square, Jas. Fenton Greenall, Esq., of Lingholme, Cumberland, and Grappenhall Lodge, Cheshire, Lieutenant-Colonel of the 4th and 49th Regiments of Lancashire Volunteers, Warrington, to Fanny Grenvelline, eldest daughter of William Henry Mackintosh, M.D., Staff Surgeon-Major.

JONES—WHITE—On July 25, at Christ Church, Surbiton, Richard Jones, M.R.C.S., of Awre, Gloucestershire, and Wimbledon, to the only child of Thomas Ambrose White, of Surbiton-hill.

WARD—LANGDON.—On July 23, at St. Saviour's Church, Chobham, Surrey, Samuel Meire Ward, M.B. Cantab., to Marian, widow of the late John Langdon, Esq., and daughter of the late Josh. Hewer, Esq.

DEATHS.

BALLINGALL, ROBERT, M.D., late Bombay Medical Service, at Altamount Blairgowrie, Perthshire, suddenly, on July 25, aged 42.

JOHNSON, H. SCHOLFIELD, M.D., at his residence, West-street, Congleton, after a few hours' illness, on July 20.

LOCKWOOD, AUGUSTUS PUREFOY, K.L.H., Surgeon-Major Royal Scots Greys after a long illness, on July 20, aged 49.

NAISMAITH, JOHN, M.D., Deputy-Inspector-General of Hospitals, Agra Circle, H.M I.A., at Agra, on June 5, in the 51st year of his age.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Cranbrook Union.—The Goudhurst District is vacant; area 9500; population 2778; salary £63 per annum.

Wycombe Union.—The Fifth District is vacant; area 15,684; population 5162; salary £83 5s. per annum.

APPOINTMENTS.

Belper Union.—George T. Hankins, M.R.C.S.E., L.S.A., to the Markeaton District.

Gravesend and Milton Union.—James H. Armstrong, M.R.C.S.E., L.S.A., to the Gravesend District.

Lancaster Union.—James Matthews, M.R.C.S.E., L.S.A., to the Northern District.

Liverpool Parish.—Isaiah De Zouche, M.D. Ire., M.R.C.S.E., to the Sixth District. Samuel J. B. Caldwell, L.R.C.P. Edin., M.R.C.S.E., to the Seventh District.

Preston Union.—Joseph S. Ridley, M.D. St. And., M.R.C.S.E., L.S.A., to the New Workhouse.

THE following is the programme of the forthcoming meeting of the British Medical Association at Oxford. The thirty-sixth annual meeting will commence on Tuesday, August 4, 1868, and will conclude on Friday, August 7.

Retiring President: William Stokes, M.D., D.C.L. Oxon., F.R.S., Regius Professor of Physic in the University of Dublin. President Elect: Henry W. Acland, M.D. Oxon and Dublin, LL.D., F.R.S., Regius Professor of Physic in the University of Oxford. The scientific business will be conducted as follows:—I. At general meetings: The President's Address. An Address on Medicine, by Dr. Gull. An Address on Physiology, by Professor Rolleston, F.R.S. Paper on the Relations of Food to Force, by the Rev. Professor Haughton, F.R.S. Report by Professor Bennett on Mercury, and Reports of Committees. II. At Meetings of Sections: A—Medicine: Sir William Jenner, Bart., M.D., F.R.S., President; E. Long Fox, M.A., M.D., and W. Roberts, M.D., Secretaries. B—Physiology: Professor Rolleston, M.D., F.R.S., President; W. S. Church, M.A., M.B., and Professor Beale, F.R.S., Secretaries. C—Surgery: James Paget, F.R.S., President; T. P. Teale, M.A., M.B., and W. Stokes, jun., M.D., Secretaries. D—Midwifery: Sir Charles Locock, Bart., M.D., F.R.S., President; James G. Wilson, M.D., and J. G. Swayne, M.D., Secretaries. E—Public Medicine: John Simon, F.R.S., President; J. E. Morgan, M.A., M.D., and T. J. Dyke, F.R.C.S., Secretaries. *Reception Room.*—A room in the Town Hall will be open as a reception room on Monday, August 3, at 10 a.m., and on the following days at 8 a.m., for the issue of tickets to members, and for supplying lists and prices of lodgings, and other information. Members and others who require information with respect to the meeting are requested to make application in this room. The General Post-office is under the Town Hall; the telegraph offices are at No. 117, in the High-street, 65, Cornmarket, and North-Western Station. The "Journal," announcing the arrangements for each day, will be laid on the table of this room on Tuesday and the following mornings at 8 a.m. for distribution. Lists of members present will be issued as soon as possible after the commencement of the meeting, and will be placed in the same room for distribution. The member's ticket contains a map of Oxford. The library, writing rooms, and news rooms of the Oxford University Debating Society in Frewen-court, Cornmarket, are open to all members of the Association during their stay. *Tuesday, August* 4.—1 p.m. Meeting of Committee of Council—Old Clarendon, Broad-street. 3 p.m. Meeting of General Council—Convocation House. 8 p.m. First general meeting—the Hall of Christ Church. The retiring President, Professor Stokes, will resign his office; the new President, Dr. Acland, will deliver his inaugural address. The report of the Council will be read and discussed. The election of the General Secretary will take place. The election of auditors. The report of Medical Benevolent Fund will be read. *Wednesday, August* 5.—8 a.m. Breakfast of the Association at the Corn Exchange. Tickets (price half a crown) to be had at the reception room up till 10 p.m. Tuesday night. 9.30 a.m. Meeting of New Council—Convocation House. 10.30 a.m. Honorary degrees will be conferred in the Sheldonian Theatre. 11 a.m. Second general meeting—Divinity School. The appointment of the place of meeting in 1869, and of the President Elect, will be made. Report of the joint committees of the British Medical and Social Science Associations on Public Medicine. 12 noon. Address in Physiology, by Professor Rolleston, F.R.S. 2 p.m. Third general meeting—Divinity School. Rev. Professor Haughton will read a paper on Sources of Vital and Mechanical Force derived from Food, and its Influence on Medical Practice. 3 till 6. Meetings of Sections: Medicine—the Schools. Sir W. Jenner will take the chair at 3. Physiology—the Schools. Professor Rolleston will take the chair at 3.30. Surgery—the Schools. Mr. Paget will take the chair at 4. 8.30. The President's Soirée at University Museum. *Thursday, August* 6.—10 a.m. Fourth general meeting—Divinity School. Reports of Committee, report by Professor Bennett on the Action of Mercury. 11 a.m. Meetings of Sections: Public Medicine—the Schools. Mr. Simon, F.R.S., will take the chair. Medicine—the Schools. Surgery—the Schools. 2 p.m. Fifth general meeting—Divinity School. Address in Medicine by Dr. Gull. 3 p.m. Meetings of Sections: Midwifery—the Schools. Sir Charles Locock will take the chair. Medicine—the Schools. Physiology—the Schools. 7 p.m. Dinner of the Association in the Hall of Christ Church. Tickets (price one guinea) to be had at the Reception-room only. *Friday, August* 7.—10 a.m. Meetings of Sections—the Schools. 4 p.m. Concluding general meeting—Divinity School. *Objects of interest in Oxford and the neighbourhood:*—The Colleges, Bodleian Library, Radcliffe Library, Museum, the University Press, University Galleries, Physic Garden, Christ Church Meadows, Observatory, the Infirmary, Model Lodging Houses (St. Thomas's), Mr. Maclaren's Gymnasium, County Lunatic Asylum, Blenheim, Nuneham. For further information members are referred to E. B. Gray, M.A., M.D., 40, Beaumont-street, H. M. Tuckwell, M.A., M.D., 99, Holywell-street, and E. Chapman, M.A., Frewen-hall, Cornmarket-street, Local Secretary; R. F. Freeborn, F.R.C.P.E., 38, Broad-street.

Oxford Meeting of British Medical Association.—Arrangements for an Annual Museum.—At the meeting in Oxford next week, an exhibition room will be set apart as a temporary museum. It is proposed to collect in it any objects of Professional interest recently obtained. The following are especially contemplated:—1. Instruments and Surgical appliances. 2. Casts, models, photographs, drawings, etc., illustrating subjects in connexion with Medicine or Surgery. 3. New drugs or pharmaceutical preparations. 4. Pathological preparations. 5. New books, especially those containing illustrations. 6. Models, etc., of inventions relating to hygiene, etc. As far as may be, objects exhibited ought to be new within the last twelve months, but this limit need not be rigidly observed. All objects intended for exhibition should be consigned to the care of Dr. Gray, the University Museum, Oxford. The annual museum will open on Tuesday morning, and remain open till Friday evening. Objects for exhibition should, if possible, reach Oxford this week, or, at the latest, on Monday, August 3. They should be removed on Saturday, the 7th inst.

Unfounded Charge against a District Medical Officer.—At a former meeting of the Paddington Board of Guardians a letter was read from a parishioner, complaining of the conduct of Dr. Norway in not attending to a poor woman named Ashenden, living in Clarendon-street, and who subsequently died. At the last meeting of the guardians Dr. Norway's statement of the true facts of the case was read. He said that on the 23rd ult. he intercepted the order on his return home, and immediately proceeded to the house, 58, Clarendon-street, but found to his surprise there was no one of the name mentioned living there, or known to them. About half-past 10 the same evening he received a second message, that the number was wrong, and ought to have been 56. He went again and found the patient insensible, unable to swallow, with difficult breathing, and pulse almost imperceptible. She was evidently sinking fast. He therefore told the people present that nothing could be done for her except constantly wetting her lips with cold brandy and water, and also that they should let him know if she was alive in the morning, and he would see her again. He heard nothing more until the morning of the 25th, when they applied for a certificate of death. On asking why he was not informed, according to promise, of the woman's being alive on the next day, he was told that a little girl had been sent twice, but could not find the place. After this letter had been read, and the original order which Dr. Norway enclosed, and which gave the number 58, had been examined, the chairman said that, in justice to Dr. Norway, he felt bound to say that the explanation was quite complete. The board passed a resolution to the same effect.

The Feats of a Juggler explained.—A correspondent of the *Gazette des Hôpitaux* states that at one of M. Flammarion's *soirées scientifiques* he recently had the opportunity of examining some of the feats of Ling-Look, the celebrated Chinese juggler. He is a very finely-made man, of about 30 years old, having very little Chinese in appearance except his tail. He presented a sabre to the company, which, on examination, was found to be a true sabre with its point blunted measuring ninety centimètres. Bending his head very far back, so that the digestive canal might present a straight line from the mouth to the stomach, he introduced the blade into the pharynx, and pushed it to a depth of eighty centimètres. Its extremity was easily felt with the hand on a level with the left iliac fossa; and it was evident that the lower wall of the organ had been carried down to that point. In fact, this new method of œsophageal catheterism presents nothing extraordinary in its mechanism, but it is a curious feat, requiring on the part of the performer great dexterity and persevering gymnastics. Ling-Look next introduced a hen's egg in its entire shell into his mouth, which disappeared from sight during a feigned movement of deglutition. The throat was examined and the neck percussed without the egg being discovered. Nevertheless, the juggler swallowed a whiff of tobacco, and the egg reap-

peared in his mouth. Much difference of opinion prevailed as to the explanation. M. Fournié, believing that he had observed an incompleteness in the deglutition, maintained that it had been retained in the laryngo-pharyngeal region, while others were of opinion that the egg had really descended to the stomach and had been brought up by a kind of ruminatory effort. The feat being again performed, M. Fournié brought his laryngoscope into play, and, with the aid of the magnesium light, was enabled to exhibit to every one present the egg lying below the base of the tongue on a level with the laryngeal orifice, where, by constant practice, Ling-Look had managed to construct a kind of nest for it. Those familiar with the laryngoscope know that after a sufficient amount of practice a foreign body can be borne in the pharyngo-laryngeal region without exciting efforts to swallow; so that the feat is not physiologically surprising, although it is a very curious one, very difficult of execution, and well deserving the applause it always induces.—*Gaz. des Hôp.*, June 20.

Bromide of Potassium in Vomiting of Pregnancy.—Dr. Hodgkins relates a case in which he found this of singular efficacy. To a lady who, about her sixth month, had become greatly reduced in consequence of obstinate vomiting, he prescribed a dessert-spoonful of an aqueous solution of the bromide (ʒss. ad ʒiv.), and as a consequence of taking three doses within twelve hours, all vomiting ceased. It was easily checked thenceforth by an occasional dose.—*Boston Journal*, April 9.

Cited against oneself.—"The likeness of Dr. Franklin is a very good one, but the Cassius-like sternness is left out. I passed one day with him at Spithead with Sir Joseph Banks and Dr. Solander, when they went to smooth the water with oil. There was but little conversation, except from Solander (one of the most pleasant men I ever met with), but a laughable scene occurred between an officer on board and Dr. Franklin on the properties of thunder and lightning. The officer continually contradicted the Doctor, saying, 'Sir, you are quite wrong in your opinion. Dr. Franklin says so and so. The Doctor and you are quite contrary in your ideas, and I never can allow that Dr. F. is wrong. No, sir, I am sure he is right, and you are wrong, begging your pardon.' The Doctor never altered a feature during the conversation. All the company enjoyed a laugh except the disputants."—*Lettsom's Letters.*

Pneumonia.—Dr. Borland has just published tabulated reports on 90 cases of pneumonia treated at the Boston City Hospital during 1864-8. Of these 57 were males and 33 females, 30 of the number being natives of North America and 52 Irish. The average age of the males was 31 years 8 months; of the females, 30 years 4 months. Under 20 there were 9 cases; between 20 and 30, 43 cases; between 30 and 40, 17 cases; from 40 to 50, 9 cases; and above 50, 12 cases. The duration of the disease, computed from the rigor to its entire disappearance, averaged 39½ days, the average stay in Hospital being 28 days. Of the 90 cases, 12, or 7½ per cent., died. In only 3 cases, however, was the disease uncomplicated, and in 2 death resulted from other causes than the pneumonia. In 2 cases the locality of the disease was not stated. In 42 the pneumonia was double, and in 46 single, in 28 of these last the right side, and in 18 the left, being affected. The treatment was, for the most part, restorative, as described by Dr. Bennett. In no case was bleeding practised.—*Boston Journal*, May 21.

Massachusetts Registration Returns for 1866.—These are very gratifying as exhibiting the great rallying which has followed the cessation of the war. The births have increased by 3836, and the marriages by 1376, while the deaths have diminished by 2525. The great diminution of adult males during the war is remarkable, for while there were in 1860, between the ages of 20 and 60, 266,049 males, there were in 1865 but 249,806, their numbers thus diminishing by 16,243, in spite of a gain to the general population of 35,965. These losses, of course, have told immensely on the birth-rate, and accordingly, to bring this up to 2·87, as prior to the war, there ought to have occurred 2265 additional births in 1866. If we can imagine a compulsory union in 1866 between the ages of 15 and 50, there would be 55,483 women for whom no partners existed. The rapid relative increase of foreign births has received a considerable check. While the death-rate for the State is 1·86, in certain divisions of it (comprising a population of 56 per cent. of the whole State) this is only 1·71, so that the prospect of long life is at least as good as that enjoyed by any civilised country.—*Boston Journal.*

German Pigs.—The panic concerning trichinæ found in these animals has much subsided, although instances are every now and then met with. It did much good by giving rise to a systematic inspection. Medicinal-Rath Dr. Ude has just published an account of the inspection of 75,911 slaughtered pigs made in the Duchy of Brunswick during 1866-67, from which it results that in 11 animals trichinæ were found, and in 22 others the carcases were declared unfit for food from other causes.—*Virchow's Archiv*, May 27.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The Duality of Venereal Sores.

To the Editor of the Medical Times and Gazette.

Sir,—At the present time every little fact bearing on the nature of syphilis deserves to be accurately noted, and especially facts observed by men of experience before present theories came into vogue. Now, I see in Mr. Prescott Hewett's evidence before the Lords' Committee on Contagious Diseases Act, the following:—"One of the leading Surgeons was affected with syphilis from a cut which he got in his finger in opening an abscess."

Now, may I make use of your columns to ask this able Surgeon, Was this abscess a bubo? Was it the product of hard or soft sore? Does Mr. Prescott Hewett adhere to the doctrine that suppurating bubo belongs almost exclusively to the non-infecting sore? and was this case an exception?

I am, &c. A Student of Syphilis.

Meaning of the Words "Imp" and "Brat."

To the Editor of the Medical Times and Gazette.

Sir,—Some of the penny newspapers have run their heads against the above two words, as if their derivation were uncertain or obscure. *Imp*, or (properly) *impe*, is a good old English word, which in the earliest Latin dictionaries was given as the rendering for *surculus*, a sprout or twig, and especially a *graffe*, which is now vulgarised into *graft*. The word *brat* seems an offspring of the root *breed*.

I am, &c. Vox et Præterea Nihil.

Meaning of the Word "Gorget."

To the Editor of the Medical Times and Gazette.

Sir,—Why is a certain lithotomy instrument called a gorget? Is it (some might say) because such a weapon was once used to cut throats? I believe the explanation is this—A gorget, three centuries ago, was defined as "the kerchief wherewith women doe cover their pappes"—*i.e.*, a kerchief folded three-cornerwise; and the knife for splitting open the prostate in lithotomy was called "gorget" because shaped like the same.

I am, &c. Vox et Præterea Nihil.

Castor-oil Treatment of Cholera.

To the Editor of the Medical Times and Gazette.

Sir,—There is nothing new under the sun. Whether this be universally true or not, we seem to be continually meeting with illustrations of it in the course of our Medical inquiries.

If you think it worth insertion, you may give a corner to the following extract from my journal under the date August 31, 1823, the second year of my studentship in Edinburgh. The fellow-student mentioned has been long since dead. He was born and brought up in Bengal, and came to Edinburgh to take his degree. He was some four years my senior in age, and I looked up to him with due respect.

"Bowring came to our room and took supper with us. In appearance he looks anything but brilliant, but I learn more in his society than in that of any of my acquaintance. He has seen a good deal of practice, and seems to have great stores of information, which he imparts in the most simple and unpretentious manner possible. In the course of conversation on Medical subjects he mentioned cholera, saying how terribly fatal it is in India, and how great a diversity of opinion there exists both as to its nature and treatment. He mentioned a case which happened to a Surgeon in Calcutta, whose pupil he was. This gentleman had persuaded himself that if the stomach could by any means be brought to retain some gentle laxative, great relief would be afforded. He accordingly gave castor oil in a little peppermint water. This was at first rejected, but after several repetitions it was retained, and ultimately the patient recovered. From that time every cholera patient that was brought in was treated in the same manner, and with the most decided success, so much so that this dreadful scourge seemed to be disarmed of its worst terrors. I am not yet competent to judge how far this may prove correct; however, it may hereafter be useful to remember it, therefore I think it worth while inserting here. Bowring says that he has mentioned it to several Medical men, but they put no faith in it. He speaks of it in a very sanguine manner, and says that, instead of having to sit up whole nights with cholera patients, all he had to do was to administer castor oil, and they were invariably relieved."

I am, &c. M.D. Edin.

Health of Bridgwater.

To the Editor of the Medical Times and Gazette.

Sir,—I thought my letter would have been so conclusive as to prevent the possibility of doubt so as to require any further remark from me, but the editorial statement—viz., "Mr. Hurman does not deny the existence of fever"—at the foot of my letter carries with it such a wrong impression that I feel bound to state most emphatically that typhus fever is not, and has not been, raging at Bridgwater, nor has there been epidemic fever prevailing at Bridgwater.

I am, &c. John Hurman.

1, Cornhill, Bridgwater.

Hot Milk as a Remedy for Diarrhœa.

To the Editor of the Medical Times and Gazette.

Sir,—Your correspondent who writes upon the above subject says that "it may deserve inquiry whether the milk should be boiled and allowed to become sufficiently cool to swallow, or whether it should only be made warm." I believe that milk should never be boiled; it mostly disagrees,

especially with infants; few stomachs can tolerate it; it is frequently rejected, and when retained it otherwise disagrees. The explanation which naturally suggests itself is this:—When subjected to the action of a certain degree of heat, a temperature approaching to boiling point, the milk undergoes a chemical change, which causes the separation of the solids and fluids, and the casein thus becomes indigestible. The intolerance of boiled milk has occurred in too many instances within my own experience to admit of an explanation on the score of individual idiosyncrasy. The best way of heating milk is to place it in an earthen vessel surrounded by boiling water till it attains a temperature called "milk-warm," the proper temperature for infants' food. This is a very interesting question to those of your readers who may be giving special attention to the subject of infant dietetics. My remarks throughout this letter have had reference to that interesting, but much neglected, branch of study—viz. "the effects of injudicious feeding and defective alimentation upon infant life and health."

I am, &c.

July 25. M. A. B.

Period of Submergence in Fatal Drowning.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Every summer, unfortunately, numbers of people meet with accidents whilst boating or bathing, and rarely are any restored to life. This year has been unusually fruitful in such accidents, and conspicuous among them was the one which occurred at Sandhurst.

For many years I have been painfully struck with the ignorance of the public, of the press, and of coroners, as to the time a man may be submerged and yet restored to life. Having resided for many years at Upper Clapton, where the River Lea ran close to the back of my house, I have had much experience in cases of drowning. On one occasion the late Mr. Baker, then a coroner for the county of Middlesex, found fault with me for not attempting to restore life in the case of a student who had been three hours under water, and remarked to the jury that he knew, for a fact, that a gentleman had been brought to life after being four hours submerged in the River Clyde! This, Sir, sounds very ridiculous, but are we much wiser now? The *Times*, the so-called leading journal, in giving an account of the accident at Sandhurst, states, with approbation, that the local blacksmith set to work to make some drags, and that a messenger was despatched to fetch these instruments from Aldershot; and, stranger still, praised the Medical gentlemen for attempting to restore life after the bodies had been more than an hour under water! It is quite time that the public should know that five minutes' actual submergence is amply sufficient to completely destroy life, or, in other words, to stop respiration and arrest the heart's action, and that, after the heart has actually ceased to beat, all attempts to re-establish respiration and restore life are futile. It is self-evident that this prevalent ignorance is well calculated to misdirect the energies of the humane bystanders, and conduce to the loss of life. At Sandhurst, for instance, the cadet and the servant rowed away from the scene of the accident, and the blacksmith, good soul, set to work to make drags! Why should there be any hurry, when it is believed that a man may be four hours in the Clyde, or more than an hour in the lake at Sandhurst, and yet be restored to life?

I write this, Mr. Editor, under the strong conviction that it cannot be too widely published to the world that in all cases of drowning time is precious, very precious—five minutes deciding for life or for death.

53, Blenheim-crescent. I am, &c., J. Jones, M.R.C.P.

COMMUNICATIONS have been received from—

Dr. Lawson; Dr. Gordon; Mr. J. Chatto; Mr. Bruce; Mr. T. M. Stone; Mr. Gower; Dr. Baumler; Dr. Allbutt; Dr. J. Hughlings Jackson; Dr. Hall Davis; Mr. Henry Rundle; Mr. John Hurman; Mr. Chapman; J. D.; Dr. J. Jones; Mr. H. Sergeant; Dr. Letheby; Mr. G. Bradley; Mr. W. Harris; Mr. J. Jackson; Dr. Henry Osborn; Mr. J. C. Calvert; Mr. F. Ravenscroft.

BOOKS RECEIVED—

Hanover Square, No. 10—Tripe's Report on the Sanitary State of the Hackney District—Parsons on the Climate of Dover—Nomenclature of Diseases drawn up by a Joint Committee appointed by the Royal College of Physicians of London, No. 6.

NEWSPAPERS RECEIVED—

Worcester Herald—West Surrey Times—Aberdeen Free Press—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 25, 1868.

BIRTHS.

Births of Boys, 980; Girls, 1023; Total, 2003.
Average of 10 corresponding weeks, 1858-67, 1874·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	945	940	1885
Average of the ten years 1858-67	741·2	690·7	1431·9
Average corrected to increased population..	..	..	1575
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	6	8	2	5	5	78	10
North ..	618,210	2	4	0	1	11	15	88	14
Central	378,058	..	8	11	3	2	6	47	11
East ..	571,158	2	9	5	..	10	14	87	10
South ..	773,175	3	8	14	1	17	17	142	13
Total ..	2,803,989	7	35	47	10	45	57	442	58

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·969 in.
Mean temperature	69·2
Highest point of thermometer	86·6
Lowest point of thermometer	50·9
Mean dew-point temperature	53·9
General direction of wind	Variable.
Whole amount of rain in the week	0·01

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 25, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending July 25.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending July 25.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2003	1441	1885	96·6	50·9	69·2	0·01	1
Bristol (City) . .	167487	35·7	113	75	*89	..	..	..	..	..
Birmingham (Boro')	352296	45·0	230	171	254	..	..	..	..	..
Liverpool (Borough)	500676	98·0	352	290	352	80·1	47·6	63·4	0·00	0
Manchester (City) .	366835	81·8	245	208	*281	88·0	44·5	62·8	0·01	1
Salford (Borough) .	117162	22·7	104	59	79	84·5	42·0	63·0	0·00	0
Sheffield (Borough).	232362	10·2	176	122	173	91·6	46·8	64·4	0·00	0
Bradford (Borough)	108019	16·4	85	55	102	..	..	..	..	..
Leeds (Borough) .	236746	11·0	161	120	159	90·0	38·0	61·6	0·00	0
Hull (Borough) .	108269	30·4	95	50	80	..	..	..	..	..
Nwestl-on-Tyne, do.	127701	23·9	76	68	63	82·0	51·0	60·3	0·17	17
Edinburgh (City) .	177039	40·0	128	85	75	75·7	47·0	59·9	0·00	0
Glasgow (City) .	449868	88·9	454	262	323	76·2	43·7	60·5	0·11	11
Dublin (City and some suburbs) .	319985	32·8	162	157	144	88·4	41·4	63·8	0·00	0
Total of 14 large Towns . . .	6391080	34·7	4384	3163	4050	96·6	38·0	62·9	0·03	3
					Week ending July 18.	Week ending July 18.				
Vienna (City) . .	(1863) 560000	..	..	..	399	..	..	†71·6	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·969 in. The barometrical reading increased from 29·83 in. at the beginning of the week to 29·94 in. by 9 a.m. on Monday, July 20; decreased to 29·86 in. by 3 p.m. on the same day; increased to 29·93 in. by 9 a.m. on Tuesday, July 21; decreased to 29·78 in. by 3 p.m. on Wednesday, July 22; increased to 30·25 in. by 9 a.m. on Friday, July 24; and decreased to 30·03 in. by the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 70·7°.

APPOINTMENTS FOR THE WEEK.

August 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

4. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

7. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

THE DUTIES OF PRACTITIONERS OF MEDICINE, AND THE FUTURE ADVANCES OF MEDICINE;

BEING THE MEDICAL GRADUATION ADDRESS IN THE UNIVERSITY OF EDINBURGH FOR AUGUST 1, 1868.

By Sir J. Y. SIMPSON, Bart., M.D., D.C.L., etc.

Gentlemen,—In the course of the twenty-eight years during which I have been a professor in this University of Edinburgh, it has twice fallen to my lot to act as Promoter for the Medical Faculty; and this year the duty has again, in rotation, devolved upon me. In conformity with the calls of the office, and ere the old relationship between you and us, of pupils and teachers, is entirely severed, I have, in the names of my colleagues, and in my own name, to detain you yet for a brief time while I venture to offer—as the last academic lecture to which you are to be called upon to listen—a few words of admonition and advice, of encouragement and hope. . . . To you your diseased fellow-men are henceforth to be your great volumes of study; guided in doing so by whatever you can read of highest authority regarding the maladies you are for the time being specially observing; but guided more particularly by your own close, earnest, searching observation of all their phenomena, and of all their diversified transformations and changes. . . . . .

In some professions and occupations, man's principal duty is to *think;* in others, his principal duty is to *do*. The practice of Physic and Surgery calls for the constant and resolute exercise of both qualities—of thought alike and of action. It is, however, the part of the Medical Practitioner, not only to be ready to think and act for the relief and cure of his patients, but also to feel for them in their sorrow and suffering. An unsympathising Physician is a Physician bereft of one of the most potent agencies of treatment and cure. . . . . .

The grave and profound responsibilities of Medical practice are in themselves enough—were there no other incitements—to call upon you earnestly and constantly to increase and widen and extend your Professional knowledge by all the possible means which lie within your individual powers. For you go forth to battle ever with disease and death in and over the persons of your sick fellow-men. See to it, then, that your weapons and armour are always as sharp and bright as your abilities can possibly make them; and beware that your hands are kept deft and dexterous in the use of them. In dark and dangerous cases of disease, and particularly of acute disease, as honourable and conscientious Physicians—answerable, as far as Medical knowledge can go, for the life of your trusting brother-man—your anxiety will sometimes become intensified to the most painful degree. Under such circumstances, "I feel," said Dr. Bard, "as if I had a giant by the throat, and must fight him for very life." It is not reputation or profit that you then wrestle and yearn for, but victory. The conquests which you may thus make will gain you the warm esteem and gratitude of most patients—not, invariably, of all. But be not cast down, or turned aside for a single moment from your good and humane work, if such a result do not follow. The lion from whose swollen paw Androcles drew forth the festering thorn spared the life of his former forest friend and Physician, when he was sent in—whetted with hunger—to devour him in the Roman circus. There was a depth of gratitude in the heart of the noble brute that you will not always find in the hearts of your human patients.

Many of you, anxious to enter upon the actual duties of Professional toil and work, may be leaving these College halls to-day, under the fond belief that patients and practice, and fame and fees, will speedily accumulate around you in whatever place you may determine to locate yourselves. I wish, *ab imo corde*, that fortune may smile on all of you in this way; but I fear it is my duty to warn most of your number that this is not the common fate of the young and aspiring Medical Practitioner. The pathway to Professional success and to Professional eminence is as open to you as it ever was to any of your predecessors. But remember it is a pathway which, by its very nature, is by no means smooth and easy; on the contrary, it is generally found rough and rugged, and full of such difficulties and obstacles as require intrepid exertion and indomitable patience on your part—in the early years especially of your Professional journey.

A gentleman who graduated at this University in 1792, and who, by his professorial teachings and Professional successes, afterwards won for himself the proud title of the Father of American Surgery—and who died (to quote the words of his biographer) "one of the wealthiest men in Philadelphia"—used to state his own case as an illustration of the slowness with which practice at first comes even to those who are at last to have far more of it offered to them than they can well undertake. "I walked" (said this American Professor, the celebrated Dr. Physick) "the pavements of Philadelphia, after my return from Europe, for nearly three years, without making as much money by my practice as put soles on my shoes."

I believe that most of the leading members of our Profession, here and elsewhere, could tell somewhat of a similar tale in regard to the history of their own early careers and first struggles. And sometimes this initial life-fight has been both severe and long. If such prove to be the fact with any of you, I pray you to despair not. Walk stoutly and bravely onward, drear as the road and scene may look. In the history of most members of our Profession the darkness has dissipated at length; and with many it has at last suddenly uplifted and disappeared.

The young Practitioner often tries to obtain patients and practice by roads that only lead to disappointment and failure. Do not, for example, imagine that those to whom you make yourself an agreeable companion at the dining-board or in the drawing-room, around the card-table or in the croquêt-ground, will, on that account, trust to your Professional skill in the hours of sickness and peril. The very reverse is far more likely to hold true. Nor trust, in your outset in life, to formal introductions and precarious patrons. A Professional gentleman, of deservedly high name and reputation in England, told me, a few weeks ago, that at the commencement of his Professional life he carried to the city in which he was induced to locate himself various introductions of the very first class. These introductions procured for him a few invitations and dinners; but never procured for him, then or afterwards, a single patient. He went on to remark to me, "I, however, at last obtained some introductory letters which did carry me onwards into practice, and from them I date all the great success which has fallen to my lot in Professional life." "From whom," asked I, "did you procure these latter and more fortunate introductions?" "From myself," he quietly and quaintly observed; "for I happened," he added, "to cure a desperate inflammation of the eye, by discovering and removing the exciting cause—viz., a fragment of foreign body lodged there. In a case of abdominal inflammation that seemed the very despair of Physic, I opened an abscess, and the patient recovered, etc., etc." "These," he added, "were my real introductions and testimonials." And such introductions and certificates will be of infinitely more value to you, as they were to my friend, than any others. No, do not trust your fate and fortune to the letters and the influences of others. Be your own patrons. Write out your own Professional claims in the results of your own Professional achievements and skill, and in your Professional devotion and zeal to the weal of your patients, be they rich or poor. "The poor you have always with you," may be said of all true Physicians, and particularly of the young Physician. They are specially his objects of care and his charge. He will find the phenomena and the treatment of disease the same in the body of the pauper and in the body of the millionnaire. And do not suppose that the devotion of your time and talents to the sick poor may not be the very steps by which you may ultimately obtain success in life. They often prove the direct means of advancement. Many Physicians have found it to be so. "I crept," observed one old Edinburgh graduate, and afterwards the most eminent and best employed Physician of his day in London, Dr. Fothergill—"I crept over the backs of the poor into the pockets of the rich." And he said it as an incentive and encouragement to young Physicians like you—not with any mercenary motive. For no man was ever less mercenary than Dr. Fothergill. He scorned the idea of Physicians becoming mere traders and traffickers in gold for the relief of human pain and woe. "I would banish," he observes, "all thoughts of practising Physic as a money-getting trade, with the same solicitude as I would the suggestions of vice or intemperance. . . . I endeavour to follow my business,

because it is my duty rather than my interest; the last is inseparable from a just discharge of duty, but I have ever wished to look at the profits in the last place, and this wish has attended me ever since my beginning. . . . With a great degree of gratitude I look back to the gracious secret Preserver that kept my mind more attentive to the discharge of my present anxious care for those I visited than either to the profits or the credit resulting from it; and I am sure, to be kept under such a circumscribed unaspiring temper of mind, doing everything with diligence, humility, and as in the sight of the God of healing, frees the mind from much unavailing distress and consequential disappointment."

Ordained this day as Physicians, most of you will not, let us hope, be simply content to practise Medicine as a mere means of livelihood and respectability. It is a progressive science and art which has lately moved forward rapidly, and which threatens to speed still more quickly onward for the future. Knowing this, the hearts of many in your ranks are, I doubt not, fired with the wish of assisting in its proud progress, and of advancing it by your own labours and discoveries. What subjects, then, are most patent for new researches—what fields of inquiry are most likely to bear rich fruits? Bear with me while I say a few words on this topic.

During the present century the scalpel and the microscope have developed for us a vast amount of new and most invaluable facts in the way of morbid anatomy and pathology; and this field is by no means yet exhausted. Science has, at the same time, laboured most successfully to place in the hands of the Medical Practitioner means and instruments by which we can perceive and discover the pathological anatomy of various organs within the body of the yet living individual. Thus, for example, by the invention of the ophthalmoscope we can look into that dark inner chamber of the eye where shadows and soul—where matter and mind—so mysteriously meet and commune with each other; and can distinctly see the various diseases that may affect its walls or its fluid contents. The laryngoscope exposes fully in a similar way to our inspection the interior of the organs of voice. The endoscope reveals to us the conditions of other internal canals and organs. While to the instructed ear of the Physician the stethoscope whispers back the diversified morbid conditions of the lungs—telling wondrous secrets as to their exact nature and precise seats. In this great line of discovery new victories are certain to be won. Do you search out other additional physical means of diagnosis for these and other viscera. Possibly even, by the concentration of electrical or other lights, we may yet render many parts of the body, if not the whole body, sufficiently diaphanous for the inspection of the practised eye of the Physician and Surgeon.

But the future greatest conquests for you and for the coming race of Physicians are probably to be gained by researches in pathological chemistry and therapeutics. Pathological chemistry contains, doubtless, a rare, and rich, and most extensive mine of priceless ores and products for the future advancement of theoretical and practical Medicine, and the only shafts yet attempted to be struck into its lodes have barely touched the mere surface of its boundless wealth. The most practical, however, and so far the most important objects for calm, earnest, and faithful researches on your part, are probably to be found in the wide field of therapeutics. For the department of therapeutics, though the most important of all the departments of Physic, has hitherto been the most neglected of all—the one regarding which we know the least. The physiological modes of action of medicines form a labyrinth, or series of labyrinths, to which we as yet in fact possess no clue. Will you strive to unlock its secret entrances? Besides, we know not enough of the simple powers of our drugs; though the practice of Medicine is essentially and ultimately the practical application of therapeutic agents. In making this statement, do not misconstrue my meaning. The young Physician trusts, perhaps, too much to mere drugs; the aged Physician, perhaps, too little. "Do not," observed a former Medical sage—Dr. Gregory—to a friend asking what kind of Medical man he should employ when he settled in London—"do not employ too young a Doctor—he will kill you; and do not employ too old a one, for he will merely let you die." The training of the philosophic Physician consists in teaching himself when to give medicines, and what medicines; and in what cases, and at what times, he should abstain from all drugs, and trust to nature, or to nature and hygienic means alone. He knows that a masterly inactivity is sometimes far more safe for his patients than the most efficacious but officious druggery. But when medicines are used they should be the best and surest. We have a formidable farrago of them from the vegetable and metallic kingdoms—many inefficient, some doubtful, and almost all repulsive in character and form. A most extensive field for new investigations in this line lies temptingly open for the young and ambitious Physician in the almost innumerable series of new chemical compounds which modern organic chemistry has evolved. Among this world of new compounds will probably be yet detected therapeutic agents more direct, more swift, and yet more sure in their action, than any which our present Pharmacopœias can boast of. It may be, also, that the day will yet come when our patients will be asked to breathe or inspire most of their drugs instead of swallowing them; or at least when they will be changed into pleasant beverages instead of disgusting draughts and powders, boluses, and pills. But that day of revolution will not probably be fully realised till those distant days when Physicians—a century or two hence—shall be familiar with the chemistry of most diseases; when they shall know the exact organic poisons that produce them, with all their exact antidotes and eliminatories; when they shall look upon the cure of some maladies as simply a series of chemical problems and formulæ; when they shall melt down all calculi, necrosed bones, etc., chemically, and not remove them by Surgical operations; when the bleeding in amputations and other wounds shall be stemmed, not by septic ligatures or stupid needles, but by the simple application of hæmostatic gases or washes; when the few wounds then required in Surgery shall all be swiftly and immediately healed by the first intention; when Medical men shall be able to stay the ravages of tubercle, blot out fevers and inflammations, avert and melt down morbid growths, cure cancer, destroy all morbific organic germs and ferments, annul the deadly influences of malaria and contagions, and by these and various other means markedly lengthen out the average duration of human life; when our hygienic condition and laws shall have been changed by state legislation, so as to forbid all communicable diseases from being communicated, and remove all causes of sickness that are removable; when the rapidly increasing length of human life shall begin to fulfil that ancient prophecy, "the child shall die an hundred years old;" when there shall have been achieved, too, advances in other walks of life far beyond our present state of progress; when houses shall be built, and many other kinds of work performed, by machinery and not by human hands alone; when the crops in these islands shall be increased five- or tenfold, and abundance of human food be provided for our increased population by our fields being irrigated by that waste organic refuse of our towns which we now recklessly run off into our rivers and seas; when man shall have invented means of calling down rain at will; when he shall have gained cheaper and better motive-powers than steam; when he shall travel from continent to continent by submarine railways, or by flying and ballooning through the air; and when—to venture on only one illustration more—tiresome graduation addresses shall no longer require to be written by old professors, nor listened to by young Physicians.

In developing these and many other analogous discoveries that in due time will be made in the Medical and in other sciences, there will necessarily be expended a stupendous amount of thought, with countless hosts of experiments, and trials, and inquiries. But some of the discoveries will, in all likelihood, be reached by simpler routes. For within our own bodies, and on every side in the great world around us, are constantly at work numerous yet unseen and undetermined high general laws and actions. These laws and actions are, most of them, hidden and covered over by the thinnest films. They lie within our touch, and yet we touch them not; within our gaze, and yet we see them not. In future times some of them will be detected by you or others—as some of them have been detected in times past—almost by accidental glimpses. If any of these accidental glimpses flash across your path, try to note and fix the value of the vision. In illustration of what I wish to state, let me cite two or three instances only from the past, and let us hope that such instances will be multiplied more and more in the future. A Medical student, Galileo, sat one day idling in the Cathedral of Pisa, and observed the singular regularity with which the oscillations of a lamp suspended from the roof were performed, and ultimately he elicited from this phenomenon the important laws and results to science involved in the movements of the pendulum. An Italian Physician, Galvani, and his wife, in preparing the legs

of some frogs for food, accidentally observed the skinned limb twitch convulsively when its muscles and nerves were touched simultaneously by two approximated metals—an observation that has eventuated in various momentous discoveries, and, among others, in the electric telegraph. A young Medical disciple heard, in his master's shop at Sodbury, a country maiden accidentally prattle of the impossibility of her taking small-pox, as she already had had cow-pox. This casual remark was treasured up by the young listener, William Jenner, and at last elaborated by him into the discovery of the protective power of vaccination—a discovery which has been computed to have added three whole years to the duration of human life. An American Physician, who graduated in this University in 1768—or precisely a century ago—Dr. Benjamin Rush, in his writings tells us that in cases of puerperal convulsions and coma he had seen uterine action go methodically on; and he hence inferred and prophesied that a medicine would be yet found capable of safely producing an analogous artificial coma, with the effect of making parturition anæsthetic. And this prophesied medicine or class of medicines has been found. Keep, therefore, I warn you, your minds always awake, and your eyes and ears always open; and it may be vouchsafed to some of you yet to peer under and uplift the flimsy veils behind which nature's most important Medical facts and laws are, no doubt, still tantalisingly masked.

But it is more than time that these desultory remarks should be drawn to a close, for I dare detain you no longer. Your cords of pupilage are already severed and dropping off for ever. Pardon me, however, if I venture to make one remark more ere we part—and part never all to meet together again, on earth at least. I have incidentally spoken to you of an American Physician, the celebrated Dr. Rush, who graduated in this University exactly one hundred years ago, when Professors Munro the second and Joseph Black, William Cullen and John Gregory, and Francis Hume, were members of the Medical Faculty. Where are they and their armies of enthusiastic pupils? No one who was present at that graduation is alive now. Fifty years hence very few of you assembled here this day will be still living; a hundred years hence, and all these bodies of ours will be dead and decomposed, for we are all labelled and ticketed "for the grave"—some, perhaps, to reach it very soon, and others later, and later, till all are gone, and gathered to our mother earth, dust to dust, and ashes to ashes. Amid our greatest pleasures, and in days even of just joy and rational rejoicing like this, we are constantly reminded of the shortness of our sojourn here. Ὁ βίος βραχύς, ἡ δὲ τέχνη μακρή. So wrote the Father of Medicine upwards of 2000 years ago. In paraphrasing that striking adage of Hippocrates, the greatest lyric poet of our age tells us that we each carry now within our own breasts an organ marking our march deathward:—

> "Art is long, but time is fleeting;
> And our hearts, though stout and brave,
> Still, like muffled drums, are beating
> Funeral marches to the grave."

These hearts of ours, since we entered this Hall this morning, have already beat some 6000 or 7000 strokes which they shall never beat again. We all are 6000 or 7000 pulse-beats nearer death. When the time comes—as come it must—when our breasts heave with their latest death-throbs, may you and we be all ready for the mighty and tremendous change from time to eternity that then awaits our still living souls. . . .

Obstruction of the Passage of the Meconium by Diseased Liver in an Infant.—Dr. Kristeller related to the Berlin Obstetrical Society the case of an infant to which he was called three days after birth, no meconium having been passed, although the passage was open. An elastic catheter was passed in as far as 19 centimetres, and some fluid injected, but none returned, the infant remaining quite quiet during the procedure. Some calomel was given, and three days sixteen hours after birth a great deal of meconium was passed. The infant, however, died twelve hours later, and at the autopsy the small intestines were found excessively distended by meconium, while the liver was enlarged, indurated, and nutmeg-coloured. The transverse and descending colon was much contracted and empty. No signs of syphilis were present. The compression exerted by the enlarged liver on the ascending colon prevented the flow of the meconium—an obstruction partially and incompletely overcome only by the augmented peristaltic action produced by the calomel and injection.—*Monats. für Geburt.*, May.

ORIGINAL COMMUNICATIONS.

CASE OF

COMPOUND DISLOCATION OUTWARDS OF LEFT ANKLE, WITH FRACTURE OF INTERNAL MALLEOLUS AND FIBULA.

REDUCTION—ERYSIPELATOUS INFLAMMATION OF LEG AND THIGH—RESECTION OF TIBIA—RECOVERY WITH A USEFUL LIMB.

By Assistant-Surgeon WELCH, 1st Batt. 22nd Regiment.

Private William F., aged 23, an average-sized well-developed soldier, was brought to Hospital 10.30 p.m. of April 8, 1865, with the following injury, which had been caused by slipping up on the stone pavement while endeavouring to escape from a picket who were in pursuit of him—a compound dislocation outwards of the left ankle-joint, a transverse fracture of the internal malleolus (the lower fragment held *in situ* by its ligaments), with protrusion of the end of the tibia to the extent of two inches, and an oblique fracture of the fibula upwards and outwards, commencing one inch above the joint. The external wound, about three inches in length and transverse in direction across the inner malleolus, was but slightly lacerated or contused, the bleeding little; the reduction of the bones was easily accomplished, the edges of the wound approximated loosely by a suture, and cold-water dressing and splints applied. The man was drunk at the time, and showed no symptoms of shock.

On the 10th erysipelatous inflammation of the foot and leg, as far as the knee, had supervened, the edges of the wound were sloughy and tense, with a copious sanious oozing, pyrexia, and absence of rest at night. The ligature was cut, poultice applied, and general treatment.

On the 12th the end of the tibia was protruding, necessitating readjustment of the limb.

On the 14th, the skin over the foot was swollen, tense, bluish-black, with a tendency to formation of blisters; the end of the tibia had reappeared; systemic derangement great. No further attempt was made to rectify the position of foot; the limb was placed on pillows, deep incisions made wherever tension existed, poulticing continued, and frequent liquid nutriment and opiates administered.

Much relief, both local and general, followed the incisions into the deep fascia of foot, and up to the 18th the indications were favourable; but on this day the skin of the leg was tense, swollen, and red; an angry blush, with pitting on pressure, was diffused over the lower half of the thigh; the fascia of the foot was sloughy, all the wounds discharging a copious offensive pus, and symptoms of exhaustion of system were present.

On consultation it was decided to relieve the leg by deep incisions, to continue poulticing and general treatment, and, on the abeyance of erysipelas of thigh, to amputate below the knee, any attempt to save the foot appearing out of question.

Again, great improvement followed the incisions, and on the 21st erysipelas had disappeared from the thigh; deep pitting of skin as far as the knee, but inflammation limited to within three inches of wound of injury; no pyrexia.

On the 24th, the condition of the limb was as follows:—Foot completely everted and loose, the sole looking outwards and dorsum covered by a large slough the size of the hand; the tibia protruding an inch and three-quarters, black, carious, denuded of cartilage and periosteum, and exhaling a most offensive odour; the original wound everted at the edges, dirty-looking, but showing a few scattered healthy granulations; five or six incisions into the deep fascia of the lower half of leg discharging healthy purulent matter, the intermediate tissue being normal; man's health comparatively good, appetite fair, sleeps well, pain only on movement of foot.

It was decided that, owing to the improvement of the health and general condition of the limb, and considering his age, patency of circulation of foot, and the danger not being materially enhanced should further operative proceedings be requisite, an attempt should be made to save the limb by resection of the protruding end of tibia. Chloroform having been administered, an inch and a half of the bone was removed, the section passing through healthy extra-vascular tissue covered externally, except in one small spot, by periosteum; the internal malleolus and lower fragment of fibula, being

healthy and attached in their normal position by their respective ligaments, were left; the sawn end of tibia was approximated to the healthy astragalus, and water-dressing and splints applied. A section of the sawn-off fragment of tibia demonstrated that the bone was dead and carious to the extent of an inch and a quarter, and eroded on its cartilaginous surface.

The man suffered but slightly from the operation, and from this date daily progress ensued, with gradual improvement of the health. The discharges diminished from all the numerous wounds, and healthy granulating surfaces appeared, quickly cicatrising. The main difficulty experienced was in keeping the foot in relative position to the leg, owing to the frequent necessary changing of the dressings, the inability to employ any local pressure on account of the sores, and a constant tendency which the end of the tibia betrayed to slip from the curved surface of the astragulus and to protrude.

On June 3 nearly all the incised wounds were healed, the end of the tibia was covered in, and the tissues around the false joint were firm, the only drawback being a small slough forming over the sharp end of the lower fragment of fibula, a portion of which subsequently exfoliated.

On June 26 all the wounds had cicatrised, and a starch bandage being applied, the man was able to get about on crutches.

On July 6, eighty-nine days after the accident and seventy-two after resection, he was invalided from Malta to England and discharged the service. The condition of the limb was as follows:—General thickening of the superficial tissues of foot and lower third of leg, yet relative position of foot to limb well preserved; union between the end of tibia and astragalus ligamentous, allowing of flexion and extension to about three inches in each direction, but free within this space, and unaccompanied by pain; shortening of limb one and a quarter inch; by the help of a stick he is able to stand up, but cannot progress without a crutch, owing to the limited flexion throwing the whole weight on the end of toes.

In February, 1868, two years and ten months after the accident, information was received by letter through a comrade of the man's state. He was then pursuing his former avocation of a bricklayer; he had free use of his foot, he was able to mount a ladder and scale a roof, his leg was "quite as good as the other, only that he limped a little in walking."

The chief points in this case of conservative surgery of severe injury to a joint, the best primary treatment of which appears still very doubtful, are as follows:—

(*a*) The non-interference by operative proceedings in the first place, notwithstanding the severity of injury—the age, constitution, apparent small lesion of soft parts, limitation of fractures, and probable patency of circulation of foot contra-indicating it.

(*b*) The subsequent adoption of the minor operation of resection in a young healthy subject in place of amputation, thus allowing of saving the limb, while in the event of failure and necessity of amputation the man's condition not being materially deteriorated thereby.

(*c*) The remarkable restorative powers of nature, in virtue of which such severe injuries terminated in the possession of a good firm limb, but little removed in utility from the sound one, and far superior to any adaptation of art.

ON TWO METHODS OF REMOVING FOREIGN BODIES FROM THE EXTERNAL AUDITORY MEATUS.

By A. GARDINER BROWN, M.R.C.S.

Too great importance can hardly be attached to the proper and successful removal of various foreign bodies from the external auditory meatus, and, seeing the subject touched upon in the impression of this Journal for March 7, I wish to point out two methods of extraction which have been of frequent service to me in cases where the foreign body is either spherical or bean-shaped.

Where the substance to be removed is not too tightly impacted in the meatus, atmospheric pressure (suction) may often advantageously be had recourse to in the following way:—A few inches of French vulcanised rubber tubing, of a size to fit the meatus easily, but not loosely, is cut at one end with a pair of sharp scissors in such a manner as to make it fit the visible surface of the foreign body somewhat neatly when pushed gently against it in the meatus. The end of the tube, before introduction, is moistened, and the direction of any inclination of the seen surface of the foreign body accurately determined, so that the cut end shall be properly applied to it. Suction, for the purpose of extraction, is now to be made use of in one of the following ways:—An assistant is to attach an ordinary ear syringe (the piston being home) to the other or free end of the tube, and make gentle suction by drawing out the piston-rod. Or the mouth may be applied to the tube: suction thus produced is extremely convenient, but not advisable if the presence of the foreign substance have set up any suppurative action or other discharge. Or let the left hand of the operator rest comfortably on the side affected of the patient's head, which must be well supported; gently, but firmly, grasp the rubber tube (nicely applied as before) with the thumb and forefinger of the same hand close up to the meatus; starting from this point, run the corresponding digits of the right hand somewhat rapidly along the tube to near its end, pinching it firmly at the same time to exclude all air. The vacuum thus made will act on the substance to be removed immediately the pressure of the left fingers is discontinued.

The above method requires some practice and nice manipulation in order to insure success. If thought desirable, the vacuum may be produced by connecting a piece of the rubber tubing to a phial by means of a cork pierced with a short glass tube, then removing the air by spirit lamp, as in cupping, or by boiling water. To obviate the tendency which rubber tubing has to collapse under atmospheric pressure, the greater part of the length employed may be substituted by quilled-glass tubing, this latter being only tipped with the former.

Where the foreign body is spherical, it may often be successfully removed by a rolling-out plan being attempted in the following way:—Select a curved suture needle with a broad but thin point, and rub this extremity on a steel surface (as the blade of a knife), so as to allow the finger, when passed along its concave surface, to feel a slight "burr" or turning-over of the point. The operator is now armed with a microscopic hook of great relative power, and one which will hardly ever refuse to pass between the wall of the meatus and the obstructing body. This instrument should always be passed at that point of the circumference of the foreign body which presses least on the meatus, this being generally, I believe, either above or below when the form is spherical. The rolling-out process requires the needle to be inserted some five or six times over the object, especially when deeply seated. Care must be taken that the "burr" is well brought over the point of the needle in preparing it, or the repeated introduction will push the substance in further or as far as the traction brings it out.

Trinity-square, Southwark, S.E.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ROYAL INFIRMARY, MANCHESTER.

On Friday evening, July 31, a very fatal accident occurred at a music-hall in Manchester, styled "The Victoria Music Gallery," one of the cheapest of its class. The building was originally an ordinary house, and wears a miserable exterior. The concert-room consists of a stage, a pit, and two galleries, the end and sides of the pit extending about four feet under the lower gallery; and it affords accommodation for about 2000 persons. The entrance is by a passage, five feet wide, which leads to a stone staircase still narrower. To the right of the landing which is thus reached, a staircase of thirteen iron-faced wooden steps branches off to the galleries, having a width of four feet, and a centre rail dividing it into two parts, with a sharp turn halfway, which barely leaves room for foothold. The staircase is bounded on one side by a stone wall, and the height from the landing just mentioned to the ceiling is seven feet, even this space being lessened by a projecting cross-beam five inches deep. The prices of admission range from 3d. to 1d., and the audience is almost entirely composed of rough factory lads, with a sprinkling of girls from the same class.

The entertainment on this occasion was for the benefit of a popular vocalist, and the programme was a peculiarly attrac-

tive one. Prizes were to be given away to the best and the worst amateur singers, and the competitors were to carry a live goose under their arm while singing. After these contests, the great excitement of the evening centred in a sack-race across the stage, and the audience in the pit stood up, clambered on to the backs of the benches, and gained any accessible vantage point from which they might better see the fun. One or two lads in a recess under the lower gallery hit upon the expedient of hanging on to a gas-bracket, which, of course, instantly gave way, and the fumes of gas speedily filled the room. Then some of the benches creaked and broke down beneath their unaccustomed burden, and, to add to the sources of confusion, one of the audience jumped on to the stage, knocking the burner from one of the footlights, which immediately flared up to an alarming height. And lastly, although the escape of gas was checked and the burner re-adjusted without delay, the alarm cry of "fire" was raised by some person in the gallery, and the audience became panic-stricken and uncontrollable.

The people in the pit, seeing that there was really no danger, were soon quieted, but not so the occupants of the galleries. Downstairs they rushed impetuously, and in an inconceivably short time the passages and stairs leading to the galleries became choked with the frantic throng. The dividing balustrade gave way before the enormous pressure, and some scores of lads and girls were thrown down and trampled on; while on the landing below a horrible heap of suffocating people accumulated to such a height that they became almost inextricably wedged beneath the cross-beam. The sickening cries for help, the moans of the dying—in fact, the whole scene during the clearance of the bodies of the injured, are utterly indescribable.

As soon as they could be extricated, and a way could be made through the immense crowd outside, they were conveyed to the accident-room at the Royal Infirmary; and here, too, the sight was appalling. Body after body was hastily deposited on the floor of the large room, and in a very short time the number of dead had reached twenty-three. Of these some three or four breathed a few times; the rest were lifeless on admission. Scantily clothed in dirty and torn garments, and with unwashed faces, nineteen youths, most of them strongly built, and all under 20 years of age, an older man, a woman of 35, and two pale thin girls of 12, constituted the array of corpses. On none was there any mark of external violence, and in no case was a limb or a rib broken; but the faces and necks of most of them were swollen, discoloured, and distorted, and froth had collected about their lips, in some instances mixed with blood. As soon as possible the bodies were laid in the several out-patient rooms to facilitate identification, and in the presence of a body of police the eager multitude of inquirers, who by this time choked the entrance to the Hospital, were admitted through the night in groups of convenient number to inspect the bodies of the killed. The scene as each fresh identification took place was most distressing, and the anxiety depicted on the faces of each group, as the list of those already identified was read out to them, was indeed terrible.

With regard to those sent into the wards, twelve in number, the only dangerous case was that of a boy, aged 14, who was suffering from severe concussion of the brain, with laceration of the right ear. The remainder, nine male and two female patients, were all in a condition of collapse, presenting also the same phenomena of great congestion of the head and neck as were observed in those brought in dead. There were no fractures, and, indeed, no external injuries. The following morning nearly all had headache and retention of urine. No death has occurred at the time of writing, and it is now confidently hoped all will recover. Minor accidents were attended to and sent away. They were comparatively few in number, and consisted mainly of sprains of the wrist and ankle and general bruising. The total number of injured persons cannot be accurately ascertained, as many who were able to do so went straight to their own homes.

For the notes of the above cases we are indebted to Mr. C. J. Cullingworth, Resident Physician's Assistant in the Royal Infirmary.

We notice with satisfaction that the Lord Chancellor has just appointed three Medical men as magistrates for the city and borough of Wells—viz., Dr. Livett, Dr. Purnell, and J. G. French, Esq.—the fourth gentleman appointed being C. Lovell-Lovell, Esq., banker.

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Medical Times and Gazette.

SATURDAY, AUGUST 8, 1868.

SEWAGE BLUNDERS.

We are compelled to notice from time to time the attempts to convert sewage into pure water by abstracting its organic and earthy constituents, precipitating and drying these into a portable and valuable manure, and allowing the purified water to flow off into the nearest stream.

Schemes such as these have no real foundation in science; they are but desperate attempts to meet legal difficulties, and to evade the consequence of ignorance or wilful violation of natural laws by means of chemical drugs.

Just as an alderman who neglects the natural laws of diet, air, and exercise, is ready to fly to pills and colchicum when his veins are distended by the ill-digested materials within them, so do common councillors, boards of health, and the like functionaries begin by establishing water-closets in houses and sewers in the streets, without ever thinking of the necessity of some plan whereby the excrementitious matter may be inoffensively but surely aërated and oxidised, and rendered fit again to enter the cycle of organic life.

In some cities of no great size, and situated at a distance from a dense population (as Salisbury), it seems to answer the purpose to run the sewage into the nearest river at a little distance below the town, and there trust to the running water and river vegetation and low animal forms to decompose it by degrees. Below Salisbury the river for four or five miles is described as being foul, turbid, with scum on its surface, yet that all nuisance is abated ere it reaches Downton, the nearest town below.

But in populous districts, as at Tottenham and in Lancashire, and at Guildford, it is felt that this lazy river-fouling barbarism is intolerable, and the problem there is how to "deodorise the sewage" before pouring it into the stream—how, in other words, to do by drugs what ought to be done by the elements of earth and air.

A process of the sort is now going on at Leicester. There is the sewage, with pumps, and the engineering devices, for which the ratepayers, we hope, are grateful. But the sewage must be deodorised; and it is hoped that a mixture of blood, clay, charcoal, alum, or some such drugs, at the cost of £17 3s., will precipitate what are called the "manurial" elements, and enable them to be sold for £160 daily.

We hope it may be done; but we must observe that the so-called "purified" sewage contains (according to the *Times* report) 43·3 grains of inorganic and 14·2 of organic matter per gallon. Then it is coolly assumed that "London drinking water contains 8½ grains of organic matter per gallon. This is more than half the quantity (says the *Times* report) left in

this purified sewage, which, therefore, must be quite innocuous." Considering that the London drinking waters are grievously complained of when their organic matter exceeds 1 grain per gallon, we need say no more of the trustworthiness of these calculations about the Leicester sewage.

THE WEEK.

VISCOUNT AMBERLEY'S INSULT TO THE MEDICAL PROFESSION.

We are compelled to notice—but for the present very briefly—a most scandalous insult offered by Viscount Amberley to our Profession—one we can only account for on the supposition of an entire oblivion of all difference between right and wrong, moral and physical. There is a society called the "Dialectical," established for the free discussion of any subject that may be brought before it, and especially for such as, however much they need discussion, a delicacy, true or false, banishes from ordinary meetings. We have no objection whatever to this. Such a society may do great good and has plenty of work before it. Well, a meeting was held last month to discuss the "Happiness of the Community as affected by Large Families." The subject was introduced by a Mr. Laurie, who advocated a "small family system," such as prevails in France and elsewhere, as a remedy for over-population and poverty. Any one would imagine that intelligent beings in discussing such a proposition would first inquire—Does over-population exist, taking the world as it is? Is a large population an evil? Are there no means of diffusing population, and of lessening the evils attendant on too great concentration? In fact, one speaker, Dr. Chapman, who seemed like one sane man amongst a crowd of lunatics, denied the proposition on which the whole question turned. Nevertheless, the President, Viscount Amberley, said "that the prevention of over-population was by far the most satisfactory method of attacking the evil." "Unfortunately, the influence of the clergy in common with that of society, and the natural passions of mankind, were opposed to the prevention of over-population." "He objected to celibacy. Well, then, the only remaining alternative seemed to him to be small families; and after all it turned out to be a Medical question how this could best be accomplished without injury to the health. He wished much he could hear the proposals of the Medical men in the room as to the best means of limiting numbers. In America ladies were in the habit of keeping back their families, but the methods they employed seemed to him to be dangerous to health. Hence he should much like to hear a discussion as to whether some innocuous measure might not be discovered. It was remarkable that the subject should have first been taken up in America, where it was not so much required as it was here." We shall return to this again. Meanwhile, before Lord Amberley repeats his insolent question as to how far Medical men are willing to degrade women, and make themselves accomplices in unnatural crimes, we would observe that the fact of the prevalence of these infernal practices in America, where there are no aristocacy, no restriction in the supply of land, and no want of space, shows the hollowness of the excuses set up by such wretches as desire to enjoy the privilege of selfish lust, and to evade the duties of matrimony.

MEDICAL REPORT OF THE NATIONAL RIFLE ASSOCIATION.

We understand that the Council of the National Rifle Association have sent, by the hands of their Chairman, Earl Spencer, a handsome letter of acknowledgment to Surgeon-Major Wyatt, of the Coldstream Guards, and Surgeon to the National Rifle Association, for his Medical report upon the late meeting at Wimbledon, and for his services. They remark with satisfaction the entire absence of any accident from the shooting, as well as of any illness attributable to want of sanitary arrangements. The earth-closet system seems to have been all that was desired. Mr. Temple and Mr. Pearson, Mr. Wyatt's assistants, were obliged to leave the camp from illness, and their place was efficiently supplied at short notice by Mr. Morgan and Mr. Little. The average number that slept in the camp was 2159, including army, 548; volunteers, 1172; police, 232; camp followers, 207. The proportion that came under Medical treatment was about 11 per cent. of the regular army, nearly 22 per cent. of the volunteers, 24 per cent. of the police, and 34 per cent. of the camp followers. In each class two-thirds of the whole sickness was from diarrhœa; but of the whole number 5 soldiers, 20 volunteers, 1 policeman, and 4 followers, were affected with "fever from exposure." The numbers who went into Hospital were 10 soldiers, 20 volunteers, 2 police, and 4 followers. The numbers are too small for drawing any adverse conclusions, but, so far as they go, they seem to prove that regulars have at present twice the power of bearing camp life that the volunteers have. But with time and training they may become as hardy as the Germans under Ariovistus, who boasted to Julius Cæsar that they had not slept under a roof for fourteen years.

THE POOR-LAW MEDICAL SERVICE IN SCOTLAND.

The Poor-law Medical Officers in Scotland are making great efforts to improve their position. As matters now stand, they are liable to dismissal at a moment's notice by the respective parochial Boards they serve. Naturally they desire something better than this, and to have their posts at least as secure as those of Inspectors and other officials, who can only be displaced by the Board of Supervision. The evil results of the present mode of tenure are sufficiently obvious, and we most heartily sympathise with a body of men whose efforts for the good of those placed under their charge are liable at any moment to procure them loss instead of honour and reward. The North of Scotland Medical Association, which has recently met, has been trying to secure an improved position for many of its members in this respect. We can assure them of the hearty sympathy of their brethren in the South, and trust that their efforts will be crowned with success.

DUBLIN JUNIOR UNIVERSITY CLUB.

A junior University Club, for graduates residing in Ireland, is about to be established in Dawson-street, Dublin. Communications may be addressed to Mr. F. Bindon or Mr. P. J. Graham, at the committee rooms, 17, Trinity College, Dublin. The annual subscription is two guineas, in advance, from October 1.

FROM ABROAD.—BRUSSELS REGISTRATION RETURNS—M. BARTHEZ ON TRACHEOTOMY IN CROUP.

M. Janssens has just published a *résumé* of the Brussels registration returns for 1867. The population of the town on January 1 amounted to 163,434 souls, and had increased by December 31 to 170,318—82,492 males and 87,826 females. During the year 5826 births were registered—viz., 2914 males (2178 legitimate and 736 illegitimate) and 2912 (2169 legitimate and 745 illegitimate) females. In this number are included 100 twin births (55 male and 45 female), 74 being legitimate and 26 illegitimate. 1804 marriages were celebrated, and 13 divorces granted. The mortality (inclusive of 390 children born dead) amounted to 5389 (2819 males and 2570 females), being a diminution of 517 on the annual mean of the quinquennial period 1862-6. The excess of births over deaths was 437; and the daily mean furnished 4·9 marriages, 15·9 births, and 14·7 deaths. The three Hospitals of the town and the Grand Hospice had together within their walls, on January 1, 1197 inmates. During the year 19,025 cases were admitted, 17,709 were dismissed, and 1489 died. Of the 4998 (exclusive of the 390

still-born) deaths occurring during the year, the following are the principal causes exhibited in the decreasing order of their frequency:—Phthisis, 883; bronchitis and pneumonia, 458; enteritis, 367; organic diseases of the heart, 301; convulsions, 293; granular meningitis, 270; apoplexy and softening of the brain, 238; tabes mesenterica, 218; measles, 183; congenital debility, 148; diphtheria and croup, 124; typhoid fever, 109; accidental death, 93; senile marasmus, 92; schirrus of the stomach, etc., 70; puerperal diseases, 66; Asiatic cholera, 66; external cancer, 56; suicide, 47; alcoholic delirium, 30; scarlatina, 29; and variola, 12. The remaining other diseases united amounted to 846.

In one of his recent statistical comparisons M. Vacher, treating of Hospital mortality, stigmatised the treatment of croup by tracheotomy in Paris as a very unfortunate procedure. M. Barthez, the well-known Physician of Ste. Eugénie, however, as regards his own Hospital, calls into question the accuracy of the conclusion arrived at, and shows the errors which may accrue from the prevalent plan of taking Medical statistics in the lump, and leaving out of consideration the modifying circumstances. M. Vacher stated that, in the year 1862, of 255 children operated upon in the Paris Hospitals 193, or 75 per cent., died. Of these, 113 were operated upon at the Ste. Eugénie, 80 dying. M. Barthez states that the result was not even so favourable in that year, the deaths after the operation having been really 89, or 1 recovery in 5, while in 1861 there was even only 1 recovery in 6·90. It is true that if M. Vacher had examined the figures for 1866 and 1867 he would have found 223 operations, with 79 recoveries, or 1 in 2·80. However, M. Vacher, confining his remarks to 1862, and finding that there was only 1 recovery in 4, asks how the operation can be justified in the face of the success of Medical treatment in the hands of Rosen, who cured 1 case in 3. The same proportion of cures, M. Barthez adds, was obtained by Rilliet at Geneva.

As it is not likely that this operation would have been so warmly advocated by Trousseau had its results been as unfavourable as they are represented to be by M. Vacher, some fallacy would naturally be expected to be lurking among his conclusions, and this M. Barthez shows to be the case. First, taking the figures at Ste. Eugénie for a longer period—viz., from 1861 to 1867—it is found that, of 785 patients operated upon, 222 recovered—*i.e.*, 1 in 3·53—making a near approach to Rosen and Rilliet's average of recoveries in cases treated by Medical means. During this same period there occurred at Ste. Eugénie 132 cases in which no operation was performed, and of these 82 were cured—*i.e.*, 1 in 1·60. The entire number of cases during 1860-7, therefore, was 917, with 304 recoveries, or 1 in 3, which is exactly the proportion M. Vacher holds up for attainment.

The point which gives most importance to the results obtained from the operation in the Hospitals is the fact that most of these patients are brought in after having undergone Medical treatment which has failed, and that in a considerable number death seems imminent, time in some scarcely existing to get the instruments ready. It is evident that children cured under these circumstances are snatched from certain death. Wherever there is any chance of its success treatment is always first tried, and the operation is not resorted to until such success cannot be expected. It may be almost stated that of the 917 cases only 82 (1 in 11) were cured by Medical treatment, while tracheotomy has saved from a nearly certain death 1 in 3·53—a result by no means to be thought lightly of. M. Vacher may say that 1 cure in 11 is poor work compared to Rosen and Rilliet's 1 in 3. But it may be replied that the 1 in 11 is only approximative, for while a certain number of children in whom treatment has failed at home are brought to the Hospital, no account can be obtained of those in which it has succeeded. These results would of course be entirely in favour of Medical treatment without in anywise damaging the success obtained from tracheotomy.

Supposing that a few more of the cases admitted into the Hospitals might be treated successfully without tracheotomy, the number could never be raised to 1 in 3. First, several of these cases originate in the wards in children exhausted from other diseases, and such cases usually prove fatal; and next, since 1855 diphtheritic affections have assumed at intervals a very malignant form in Paris, very unfavourable to Medical treatment, and which Rilliet never met with in his Geneva cases. In such cases, asphyxia being highly imminent, the operation, by averting this, gives more time for the chance of cure. Finally, before summarily drawing conclusions as to the fatality of tracheotomy, we have to bear in mind that the cause of death may be quite independent of this. Its main object is to obviate asphyxia, but asphyxia is far from being the only cause of a fatal termination. Thus we may have death from extension of the diphtheritis into the bronchi, from broncho-pneumonia, from diphtheritic paralysis, or various complicating diseases, as pertussis, rubeola, etc.

"If," M. Barthez says in conclusion, "I thus actively defend tracheotomy against attacks which appear to me void of foundation, it is not that I am unaware of the inconveniences and misfortunes which it is my endeavour to obviate. It would be very easy to surround this operation with the aureola of favourable statistics. It would suffice for this to operate early, choose the cases carefully, act only during the second stage of the affection, selecting children of a certain age and mild cases, avoid unfortunate series and unhealthy months, and select favourable years, etc. All this would be easy enough for a person accustomed to this disease. Under such a procedure, tracheotomy would certainly in a few years furnish a recovery in every second case, while Medical treatment would be charged with several of the deaths which now encumber the operation. All this would be in the interest of tracheotomy, but to the detriment of the patient; for if children the subjects of bad croup, having reached the stage of confirmed asphyxia, and having no longer anything to expect of Medicine, offer to the Surgeon the chance of one recovery in ten, in twenty, or even less, I for one have not the courage to refuse them. This is to act in the interest of the patient, but to sacrifice that of tracheotomy; and, at the present time, such is our duty."

ON THE TREATMENT OF BALDNESS.

M. Hardy, the eminent dermatologist and Physician to the Paris Hospital of St. Louis, in an excellent article on this subject, points out the diagnostic means by which we may decide whether a case of baldness is hopeless, or whether it is likely to yield to treatment. He regards those cases as the most favourable which are consequent on chlorosis and on the anæmia which not uncommonly follows childbirth and severe acute diseases, when the falling off of the hair is due to general debility. While preparations of iron and bark, nourishing diet, country air, the shower-bath, and other general tonic measures should be prescribed, local means should also be adopted. The first step in this direction is to cut the hair so short as not to exceed a centimetre (two-fifths of an inch) in length, and to repeat this process two or three times at intervals of a fortnight or three weeks. Stimulating ointments or lotions may then be prescribed. He simply alludes to the preparations of cantharides, and specially recommends lotions containing spirits of rosemary or castor oil, followed by a pomade containing one-twentieth of its weight of tannic or one-thirtieth of gallic acid; and he has often seen great benefit derived from the use of a pomade consisting of sixty parts of beef marrow, thirty of castor oil, and three of gallic acid.

There is a quack medicine largely sold in many parts of England under the name of "Mrs. Allen's Hair Restorer," and which is popularly supposed to possess marvellous virtues. We know nothing personally of its nature or value, but if any of our chemical friends would take the trouble to analyse a bottle we should be glad to hear the result.

THE

MEETING OF THE BRITISH MEDICAL ASSOCIATION AT OXFORD.

(*From our Special Correspondent.*)

Medicine is reunited with Philosophy; the divorce which Hippocrates Cous managed to bring about is henceforth a thing of the past. In the year of science 1868 the British Medical Association have met at Oxford. Really, what with an attempt, however feeble, to rise to the overwhelming greatness of the occasion, the heat of the weather, the overpowering odour of erudition which pervades this place, and the undeniable character of university hospitality, your correspondent must entreat your indulgence and that of your readers. His head is so full of Great Tom—the bell he means—and Anthony à Wood;—the retiring President's paternal farewell and the new President's polished periods;—Dr. Radcliffe's library and Dr. Acland's museum, cloisters and spires, chapels and gardens, gurgoyles and pathological preparations, William of Wykeham and Dr. Gull, the correlation of the physical forces and the correlation of the forces of Physic, mediæval and Medical, that he is obliged to confess himself, with Tony Lumpkin, in a concatenation accordingly. At one moment under the influence of the musty memory of Duns Scotus, and in the next under that of the eloquence of Professor Rolleston—now dreaming of the wonders planned by the King Cardinal, and anon awakening to a lively interest in the good time coming, when daily experience shall advance science, discoursed of so hopefully by King Chambers—his ideas are all seething together in an organic mixture, an *olla podrida*, an Irish stew if you will. Spires and spirometers, mitred prelates and mitral obstructives, Addison's walk and Addison's disease, tests chemical, microscopical, diagnostical, and the abolition of all tests, are, Queen Mab like, driving through his sensorium in admired confusion, and taking grey corpuscles at a hand-gallop.

However, to plunge *in medias res*, I have just returned from the first general meeting in the Great Hall of Christ Church. At everybody nowadays goes to Oxford, I shall not attempt a description of that most glorious of refectories. On this occasion the upper half of the room was well filled with the members of the Association, amongst whom was here and there to be seen a College don, attracted no doubt by the oratorical powers of the Regius Professor of Physic. The hall is lighted with rows of small gas-jets, after the fashion of the dome of St. Paul's. The effect is good and brilliant, but not quite in character with the mediæval air of the room, and it certainly does not permit the pictures, which, from Holbein to Lawrence and later, form around it an uninterrupted succession of English portraiture, to be seen. Amongst the members of the Association present we noticed—Mr. W. Adams; Dr. Althaus; Dr. C. Allbutt; Dr. Anstie; Dr. Ballard; Dr. Barnes; Dr. Lionel Beale; Dr. Beatty, Dublin; Dr. J. R. Bennett; Mr. J. Birkett; Dr. Broadbent; Dr. T. K. Chambers; Dr. William Cholmeley; Mr. Cooper; Mr. Clarence Cooper; Dr. Crucknell; Mr. T. B. Curling; M. Duchenne, Boulogne; Dr. S. Gibbon; Dr. Greenhalgh; Professor Gross, Philadelphia; Mr. E. Hart; Professor Haughton; Mr. E. C. Hulme; Professor Humphry, Cambridge; Sir C. Locock; Dr. John Ogle; Dr. Paget; Mr. Paget; Dr. J. R. Reynolds; Professor Rolleston; Professor Phillips; Dr. Sibson; Mr. T. Spencer Wells; Dr. F. C. Webb, etc., etc. Between three and four hundred were present in all.

Dr. Stokes, the retiring President, delivered his farewell address with remarkable energy and animation, and on quitting the chair his place was taken by the new President, Professor Acland. I need say nothing in praise of his oration, of which I send you a *verbatim* report. It was an eloquent and able commentary on the relations of Medicine to science and society, dressed in his usual classical style and felicitous diction.

The vote of thanks to the retiring President was proposed by the Chairman of Council, Dr. Sibson, and seconded by Mr. Paget. I need scarcely say it was carried with acclamation. The meeting then proceeded to discuss the business of the Association. The thirty-sixth annual report presented by the Council is a somewhat lengthy document. It commences, as such reports generally do, with congratulations and compliments, and a pleasant vein of appreciation of the labours of the Association, its Council, and its officers, gently meanders through it. The bitter drop in the cup, however, is the decided snubbing the Association received from the General Council in the matter of representation of the Profession. The Council determine, nevertheless, gallantly to return to the charge.

"The Council are deeply impressed with the conviction that the direct representation of the large body of registered Practitioners in the General Medical Council is an object of high Professional importance that should be steadily pressed by representations to the Government and to both branches of the Legislature. They feel satisfied that they have faithfully interpreted, in this matter, the wishes of the Profession, and they are convinced that the efforts of the Association will not be relaxed until this object is attained. They recommend that this subject should receive the best attention of the Oxford Meeting, and of the various Branch Meetings throughout the kingdom."

I need not detain your readers by quoting any part of the Report of the Committee on Parliamentary Bills. It is sufficient to say that the action of the Association through its Committee on the Bills affecting the Profession recently before Parliament seems to me on all major points to have been well and wisely directed, and to deserve the thanks of the Profession at large.

On Wednesday the first great gathering was in the Sheldonian Theatre, where the honorary degrees were to be conferred. I may here notice that the ticket presented to each member had engraved on its back a miniature map of Oxford, with references to all the public buildings—an "institution" which greatly facilitated the movements of the strangers. The theatre was well filled, there being present a goodly array of ladies and members of the University, besides, of course, the three or four hundred Medical men whom the Association had directly brought together. The weather was so glorious that even professional grumblers forgot to talk about the drought, and of course everything and everybody appeared to the best advantage. At half-past ten the ceremony began. The Vice-Chancellor, the Rev. Dr. Leighton, Warden of All Souls, entered, followed by the Senior and Junior Proctors, Professors Acland and Rolleston, and eight or ten other Doctors, all of course in academic costume, and took their seats in a semicircle, the Vice-Chancellor occupying a kind of pulpit in the centre. The speaker on the occasion who presented those selected for honorary D.C.L. degrees was Sir Travers Twiss, the Professor of Civil Law. The list of distinguished Medical men intended for the honour included Sir Charles Locock, Sir W. Jenner, Dr. Gull, the Rev. Professor Haughton, M.D., Mr. Paget, Mr. Simon, and Professor Syme. Unfortunately Sir William Jenner's attendance upon her Majesty prevented his being present to receive the honour which we conclude is reserved for him. Each gentleman was introduced and presented to the Vice-Chancellor in a Latin speech by Sir Travers Twiss, who recounted their titles, styles, and achievements. In presenting Mr. Paget, a well-timed allusion to the successful termination of the illness of the Princess of Wales, brought to pass under his care, was loudly applauded, not only by the *viri doctissimi et peritissimi* assembled in the area of the theatre, but by the fair occupants of the galleries, who seemed to divine by instinct the meaning of the Latin phrases. A large amount of applause greeted each of the new Doctors, but the announcement of Mr. Paget's name was the signal for a demonstration prolonged and renewed again and again. The scarlet robes, the heat, and the excitement, must, I should think, have been somewhat trying, but an Oxford honorary degree is certainly a distinction which would well repay a little inconvenience.

After the ceremony, the Association met in an ancient stone-vaulted building known as the Divinity School. Amongst the preliminary business transacted was the election of a number of honorary members. Amongst those whom the Association

has thus honoured are Professor Airy, Professor Stokes (the Master of Trinity College, Cambridge), the Vice-Chancellor of the University of Oxford, the Heads of New College and of St. Mary's Hall, Professor Phillips, and Mr. Chapman, M.A., of Frewen Hall. To this last gentleman the Association has paid a just and well-deserved compliment. A large part of the success of this most successful meeting has been due to his generous exertions. In addition, Dr. Duchenne (of Boulogne), Dr. Marey, Dr. V. Carus, and Professor Gross (of Philadelphia), all of whom are attending the meeting, and Mr. Edwin Chadwick, are elected honorary members. Professor Gross is, I believe, accompanied by several other gentlemen delegates from the Association of the United States. These complimentary proceedings having been brought to a close, a report of the joint committees of the British Medical and Social Science Associations on Public Medicine followed, and at twelve o'clock Professor Rolleston delivered his very profound and original address on physiology, of which I send you a full report.

Professor Haughton's paper on "Sources of Vital and Mechanical Force derived from Food, and its Influence on Medical Practice," was one of those happy inspirations, in great part delivered extempore, sparkling with illustration, rich humour, breaking every now and then into glowing eloquence, at the same time embodying the highest scientific results, which must be heard to be appreciated. The happy manner and winning and forcible delivery of the speaker cannot be presented on paper.

On Wednesday,

In the Sections, amongst the papers read were the following, of which abstracts will be published:—

Dr. Eade, of Norwich, on the Etiology of Phthisis.

Professor Haughton.

Mr. Paget on Stammering, etc.

Dr. R. McDonnell on the Claims of Bell and Magendie.

Mr. Southam, Manchester, on Lithotomy.

The next meeting of the Association is to take place at Leeds, the President elect being Dr. Chadwick, of that town.

FAREWELL ADDRESS OF DR. STOKES.

Mr. President of Council, Dr. Acland, and gentlemen,—My term of office, as annual President of the British Medical Association, having expired, I have to resign the chair to one whose life and labours are a guarantee that he will do it honour. I need not ask you to believe with what sincerity I have appreciated the importance of the position which, owing to your too flattering estimation of me, I have held since the occasion of the meeting in Dublin, where, as here, you were received and honoured in the halls of a great University. To be chosen to preside over a Society of three thousand educated gentlemen, all zealous for the advancement of human knowledge, many of them distinguished in the paths of literature and science, and not a few the practical doers of Christ's work upon earth, is a distinction of which any man might be proud, for which any man should be thankful. For, though the place of meeting influences the selection of President, the character of him who is to preside influences, at least among other things, the choice of the place of meeting. Here, and for the third time, you meet in Oxford, whose history is that of England, the free, the enlightened, the religious—the conqueror in the arts of peace and of war. Let me, before bidding you farewell, say a few words as to the future of this great Society—the most numerous body working for the benefit of science in the world, and which will doubtless attain to larger dimensions. So far, we have been a united body, which is to be attributed to our federal constitution, with independent local action, and a representative and imperial executive. How long this strength-giving union may last, no man can predict; nor, on the other hand, can any man say to what an amount of influence for good this Association may attain. But it is plain that its durability and usefulness will depend on its being made the instrument for the public good, rather than the machinery to advance immediate Professional interests. It is impossible, in any country, that evils of custom and of administration, private wrong, corporate shortcomings, hard dealings, unfair competition, and scanty remuneration for public and private services, should not occur. But, these evils being admitted, how are they to be lessened, if not removed? Is it by public agitation and remonstrance, addressed to deafened or unwilling ears? Is it by the demand for class-legislation? or is it by the efforts of one and all to place Medicine in the hierarchy of the sciences—in the vanguard of human progress; eliminating every influence that can lower it, every day more and more getting rid of the trade principle, while we foster all things that relate to its moral, literary, and scientific character? When this becomes our rule of action, then begins the real reform of all those things at which we fret and chafe. Then will Medicine have its due weight in the councils of the country. There is no royal road to this consummation. On the one hand, the liberal education of the public must advance; and, on the other, that of ourselves must extend its foundations, and trust far less to the special than to the general training of the mind. When Medicine is in a position to command respect, its rewards will be proportionally increased, and its status elevated. In the history of the human race, three objects of man's solicitude may be indicated: first, his future state; next, his worldly interests; and lastly, his health. And so the professions which deal with these considerations have been relatively considered: first, that of divinity; next, that of law or government; and, as man loves gold more than life, the last is Medicine. But, with the progress of society, a juster balance will obtain, conditionally that we work in the right direction, and make ourselves worthy to take a share in its government, not by coercive curricula of education, not by overloaded examinations in special knowledge, which are, in comparison to a large mental training, almost valueless, but by seeing to the moral and religious cultivation, and the general intellectual advancement of the student. Doubtless such a revolution, which, could men only read the signs of the times, is slowly, though surely, coming, will lessen the number of a certain order of candidates for licence to practise. Doubtless the funds of special corporations will be diminished; doubtless university education will be extended; but the whole character of Medicine will be changed, greatly to the advantage of its social position in the country and the interests of science and the public at large. These principles have from the first influenced the Medical Council, whose efforts have been so much directed to the promotion of general education, and who, while administering an imperfect law to the best of their ability, and persevering in what they believe to be the right course, have been exposed to depreciating observations. As every one knows, the Council has no direct coercive powers in the matter of education, and I believe that, at least as yet, it is better that it should not have such powers; but I know that I speak the sentiments of the existing members of that body, whether its constitution be or be not changed, that they look to the Profession at large for moral support and for counsel. Our invitation to this metropolis of ancient and modern British thought, which, with its sister Universities of Cambridge and of Dublin, has so effectually subserved the real interests of Medicine, is a graceful compliment to the Association, and an evidence that this great University will still more foster the cause of Medical science. Putting aside the success of your labours at Dublin, in a scientific point of view, your meeting of last year deserves a long remembrance. It was the first occasion on which the members of all ranks of British and Irish Professional men met to know one another, to unite in the common cause of the advancement of knowledge, and to learn, on a great scale, how the mutual cultivation of science will efface national prejudices; for it is only in this way that the national dislikes and distrustings which become hereditary feelings, transmitted from one generation to another, can ever be removed. The star of knowledge, while it illuminates the path to wider and wider discovery, yet is like unto that which guided the sages of the East to the cradle at Bethlehem; for its benignant light is the herald of peace and goodwill among men. I now respectfully and gratefully bid you farewell, and may all good things be yours.

THE PRESIDENT'S ADDRESS.

THE MEDICINE OF MODERN TIMES.

On taking the chair, Dr. H. W. Acland proceeded to read the following Address:—

Gentlemen,—The meeting which was held last year by your Association in Dublin was attended by circumstances never to be forgotten. The great interest of that delightful metropolis, the fervent hospitality of our hosts, the pre-eminence of our President, bequeathed to his successor a task from which any man, however fortunately placed, might reasonably shrink. Two motives only have induced me to accept the honour most graciously offered, of following him as your President: the

one, the strong desire to help in carrying on his and your work of last year; the other, the conviction (more than justified by the great kindness already shown to me) that you will only require such hearty service as it is in my power to render. To all, whether to your distinguished officers, to my valued coadjutors in this place, to those present from this or other countries, I look for a continuance of that kindness and support. Confident of this, I look forward to a useful and happy meeting, though we are shorn of some of the splendours of Dublin, and remote from the exhilarating buoyancy of Irish life.

It has been said that one chief art in a president's address is to advance no serious opinions and to provoke no criticism. A speaker cannot, however, speak with advantage unless he express thoughts which awaken a response in the head and the heart of his hearers. The test of the success or failure of his attempt must be their approval or condemnation. Pleasant and bright as I hope our meeting will be, full as it should be of the double objects of such a gathering—the advance of our common pursuits, and the calling forth the kindly feelings of a common profession—I much mistake your wishes if you do not desire that something more than an agreeable retrospect, more also than words of hearty welcome, should occupy us for a brief space to-night.

We are living in a critical period of our country's history—in a new era in the history of man. Every part of our social fabric is now undergoing scrutiny, revision, and reform. Government, trade, institutions, laws, the artificial usages of society, the character to be given to our children by the method of their early training, are not only being criticised, but are most of them being changed—changed with unexampled rapidity; and the change is, some think, a tendency to absolute perfection, or, according to one philosopher, a last plunge down the Falls of Niagara. The facility with which ideas are communicated through the whole human family, distinguishes our ages from all that precede it. Our own Profession is not exempt from these influences. Even if it were, we are part of the body politic, and as wise men we might do well to look forth from the fretted shelter of this ancient hall, itself a memorial of the ferment of the Reformation, and, watching the storm as it drifts along, take the bearing of our own course in the stream of time. The accomplished authors of the special addresses which you will hear at your general meetings, Professor Rolleston, Professor Haughton, and Dr. Gull, will bring before you abundant illustrations of the present state of three great departments of the science and the art we profess. While waiting for these addresses, and for the other more technical communications which you will hear, I propose to take a general survey of the position occupied by our Professional knowledge in relation to other branches of knowledge, and to consider the objects which ought to be held in view when we discuss the temper required of us by our times and the training proper for the formation of that character and temper. No better illustration of what is meant by Medical character and temper can perhaps be found than in the words deep graven in the hearts of true Physicians for a hundred generations:—

ὁ καιρὸς ὀξύς, ἡ δὲ πεῖρα σφαλερή, ἡ δὲ κρίσις χαλεπή.

How may every age—some more than others, but yet every age—for itself exclaim, "Yes! opportunity fleets by and is lost. Old experience is a quicksand. Sound judgment is hard, above all things." The traditions of our present resting-place may well induce us to ask, in the language of this grey old aphorism—Are we losing opportunities now? Is our experience fallacious? Is not judgment in science and in art still hard? Are we attempting what cannot be done, or spurning what can even now be accomplished? What will our children's children say of us and of our day? Will they bless us for the training we gave them, and the example we set? Or will they say that our conclusions were baseless or rash, the tasks we bequeathed to them unnecessarily difficult?

Now, in judging of the Medical character, we set aside of course all reference to individuals. We form an ideal character. And yet the ideal cannot be considered wholly in an abstract way. We have to judge of it in its relations—first to the condition of science, and secondly to the constant properties and the variable accidents of humanity. In the present age, science is advancing, and the means of its progress are increasing with altogether unexampled rapidity. No bounds can be set to its possible conquests. A profession dependent on science must vary with that on which it depends; and if it does not advance with the advance of science, that fact proves it to be in error. Humanity has its constant properties and its variable accidents; its constants of need of food, of warmth, and of clothing; its constants of sickness and disease; its constants of relative poverty and relative wealth; its constants of yearning after good, and exposure to misery and guilt. But humanity has also its variable accidents of climate, of fashion, of ease, of luxury, of degradation; not, like death, unavoidable and irremediable, but accidents, terrible accidents—such as, however formidable and perilous, to a certain extent may be avoided or can be remedied. Reflection will show to what a vast range of subjects Medicine is linked by these two circumstances—the progress of science and the fluctuations of humanity. How numerous are the points of science which touch us more or less closely. How intimately are we bound up with the sufferings and the sorrows, physical and mental, of mankind. It is this necessary law of connexion with science as a whole, and with man as a whole, which makes both the difficulty and the glory of our work in the body politic; and it is this connexion which pre-eminently now, at this period of the history of our country and of human knowledge, makes a revision of our present state desirable and, indeed, unavoidable.

Let us, then, consider, first, the relation of modern Medicine to modern science. It was just now said that Medicine is necessarily linked to the existing condition of science. This statement must be examined more closely. Medicine is at once in advance of the exact sciences, so called, and behind them. It is in advance of them, inasmuch as it clinically observes as facts some things which science has not yet fully explained; and it believes with strong conviction what can at present be neither demonstrated nor ignored. It is behind them, inasmuch as they claim for every fact of science an exactness to which Medicine cannot always pretend. But Medicine too long consented to regard itself as an art as distinguished from science. It cannot wholly fulfil its function till it asserts, and has entirely substantiated, its claim as one of the band of sciences that precisely interpret the phenomena of Nature. Now, the existing relations of pure science and Medicine are both direct and indirect. In the direct relations it follows the lead of science without hesitation; in the indirect relations it cannot afford always to wait for positive instructions. Let us look for a moment at each of these relations. The relations are direct in the case of all those means of modern invention and research which are applied daily, in ways of which half a century ago there was no conception, to the discovery and the explanation of physiological and pathological phenomena. To the interpretation of sounds heard within the body, Laennec and a host of subsequent observers brought precise acoustical observation and experiment, and showed us how to map out the condition of external parts, the action of which we hear but cannot see; so that, though we are not always able to say absolutely what is the nature of an abnormity, producing an abnormal phenomenon, we can at least say what it is not. By applications of optical instruments, Czermak and Cruise have laid open to us many organs of the body before inscrutable—the pharynx, the vocal cords, the trachea, the vagina, the uterus, the bladder; so that the actual but hidden causes of many phenomena are no longer matter of argument, but of sight and demonstration. The secrets of the eye, I need not say, are now disclosed by means of the physical contrivances of Helmholtz and others, assisted by the many elucidations contributed by our own countrymen. Allbutt and Ogle in this country, and others on the Continent, are working out the further proposition that some states of the eye are not only important in themselves as local abnormities, but as being pathognomic of other suspected conditions in other and distant organs. The sense of touch is so supplemented by the skilful apparatus of Marey that the wave phenomena of the pulse and heart are registered; and thereby, through indirect but clear induction, we can fathom the secrets not only of the circulatory apparatus, but of nerve-action and nerve-lesion behind and beyond. And am I to add in this company that the very romance of zoological evolution is brought to enlarge our knowledge of the parasites that infest our bodies, modifying sanitary regulations in a remarkable manner, or that in every Practitioner's hand the microscope and the test-tube answer in a moment questions once unanswerable, though on them hang issues of life and death?

It were tedious to you, and unbecoming in me, to tell of these things in detail; for they are of the alphabet of modern Medicine in its everyday work. They are named only to recall in the argument a few out of many instances of the

direct application of scientific appliance and method to the progress of Medical knowledge by means of light, sound, and direct touch. The exploration of the nervous system by electrical agencies, by manometers and the like, through the recent labours of many, but especially of M. Duchenne de Boulogne, and the registration of changes of temperature in evidence of chemical alterations and in proof of corresponding alterations in the organism, should be cited as among the less developed but equally certain advances of physical inquiry as applied to disease. The indirect relations of Medicine to the other branches of physical science are more remarkable still, but, being also more remote, are less familiar. Foremost it should be remembered what is the effect of the temper of modern science on modern Medicine. Now it must at once be granted that opinion and authority in Medicine have ceased to have any value as such, except where the authority is derived from high moral and intellectual qualities combined with large experience. But this is a personal question, like the personal equation of astronomical observers, and does not affect the framework of the art. The framework of Medicine simply considered as an art now depends on accurate data, on experiment, on observation, and direct induction therefrom. But though this be true, yet Medicine as an art cannot always go hand in hand with Medicine as a science. The Physician, with emergencies constantly before him, cannot wait to act till science has established her conclusions with absolute certainty. In so far as Medicine is purely scientific it is not in harmony with the average mind of mankind; in so far as it is empirical, it is at variance with pure science. Science being organised knowledge, and admitting no uncertain element, objects to the probabilities which guide the master of the art to his conclusions, and lead him to act with a promptitude incomprehensible and appalling to the uninitiated. Just as the scientific navigator, who is furnished (as every navigator ought to be) with the instincts of the empirical seaman, trusts those instincts in a gale as readily as his accurate observations in clear weather, so the true clinical Physician decides first, and afterwards puts together in logical arrangement the reasons for his decision. In so far as he does this he abandons the order observed in pure science. Still he must do so in many cases if he is to act at all. If he cannot do so, he is apt to become first sceptical, then indifferent. That such scepticism and such indifference may be a real danger in the practice of Medicine, and is some counterpoise to the many advantages which modern Medicine may derive from her scientific character, is hardly to be doubted. This subject of Medical scepticism is too grave to be here passed over without some consideration. Healthy criticism of existing belief is one thing; mere destructive criticism, with no honest purpose of getting at the truth, is another. The former is a necessary quality in a man of full power; the latter is the frequent sign of idleness in youth and of carelessness in advanced years. What is certain in respect of Medicine, critically considered as a science and as an art, may be thus stated. There is a true Medicine and a false Medicine. Like the wheat and the tares, they now stand together. The true is that which is based on unalterable laws of nature; the false that which is the result of ignorance, unconscious misinterpretation, or wilful error; ignorance of Nature, unintentional misunderstanding of her laws, wilful falsification of facts to subserve some temporary purpose. From these two, the true and the false, come all the traditions of our art. To winnow the one from the other, to extrude the uncertain from the proved, to add to what is known, regardless of the effect on previous beliefs, is the special duty of the time in which we are now placed. If this duty were completely done, we should possess the real history of an art three thousand years old. It is a history not without parallel in other departments of human thought. There was a time when the priest and the Physician were one, and when the art of healing was looked on as a supernatural gift. It is so esteemed even now among savages. Cures wrought by a higher intelligence, being above the conception of the "rude untutored mind," seem emanations from the attributes "of the unknown god." The impostor priest could be also impostor Physician. Trading on the weaknesses of his fellow-men, he would dogmatise on the ailments of the body and their cure, as well as on the diseases of the mind and their remedies. The destruction of such dogmas, groundless though they may be, is a slow and dangerous process, as all students of history can tell. But the time is come when every opinion and conclusion has to be sifted; and another danger has come rapidly upon us—that of reckless negation of the accumulated experience of our race. What are our fathers to us? Are we not better than they? This is with some the modern version of the well-known lamentation:—

> "Ætas parentum pejor avis tulit
> Nos nequiores, mox daturos
> Progeniem vitiosiorem."

But still in the traditions of the past there is a mass of practical wisdom. Nothing is more admirable than the caution and care, the generally scientific spirit, and often the truly scientific method, with which the best men, such as Morgagni, Sydenham, and Hunter, observed and reasoned. It is conceivable that this caution was due in great measure to the uncertainty of the ground they trod, and the want of precision in the means they possessed. We are superior to our fathers in the means at our disposal, and in the positiveness with which we can up to certain points enunciate our results. But we ought not to overlook the fact, that with these positive gains we are subject to contingent losses, and that in an epoch of details and comparatively facile methods of inquiry the great qualities of patience and reserve may be lost to those who are not themselves original investigators. With the exception implied by the above remarks, the temper of modern science indirectly rules the progress of the healing art. It is of consequence to appreciate what that temper is. It would be difficult more aptly to describe it than by the words of Newton:—"The main business of natural philosophy is to argue from phenomena without feigning hypotheses, and to deduce causes from effects, till we come to the very first cause, which is certainly not mechanical." To discuss this simple phrase, and to expand it into its full significance, would be to recapitulate the history of a great portion of modern science. There probably is no part of it to which some modern thinkers would not take exception. But it cannot fail to raise in every mind a splendid and affecting image of the boundless field of physical philosophy. It will suggest to one a countless host of loving worshippers; to another it reveals a crowd of stern inquirers ardently groping in dim cold twilight. Each in his own sphere, each tinged with the special hue of his own nature, in physics and biology, all alike are searching for a true cause. From the causes of twining in the delicate tendril to the causes of variation in the human species, from the causes and local conditions of atmospheric changes to the causes and physical consequences of the combustion of a fixed star, the biologists and physicists of the day are seeking a true cause; and each in his way, appreciated by hundreds of fellow-workers and ten thousands of more or less intelligent followers, is making a step towards the first cause, which, Newton says, "is certainly not mechanical." And what have they reached? First, the conviction, clearly expressed many years ago, of the exquisite interdependence between our entire fauna and flora in the chemical circulation of matter on our globe; and next, the generalisation at once so simple, so overwhelming, that all action of which we are immediately cognisant is but the result of the operation of solar heat upon and through interdependent and correlative existences; that all things in this system are capable only of interchange; that there is no destruction of what exists; no creation of new energy. The theorem of the conservation of energy has not, as may be supposed, brought direct fruit to Medicine, but indirectly it has already told in more ways than one. It makes more and more doubtful the existence of a "vital principle," controlling the ordinary laws and affinities of matter. It tends to bring the phenomena of living bodies more and more within the domain of pure physical necessity. It helps to lessen the improbability of the hypothesis of Darwin, by showing how deeply mutual correlations run into the very structure of the universe; and it increases the probability that living beings placed in similar conditions will move in similar lines, and conversely. But it explains nothing whatever of the origin of things; nothing of the nature of will. However true it may be that the solar energy was stored up myriads of ages ago in the coal-fields, however true it may be that, in the processes of vegetable life and decay, the sun's energy is constantly being first captured and then liberated for further use in other organisms, yet nothing of this emits the smallest spark of information on the true cause of organisation, or of the working of a single organic cell. It is clear (however careful we may be not to idolise new words) that the idea of conservation of energy must now find an entrance into every conception of organic change. We are more and more drawn to the conviction that the same result follows the same cause in similar organic conditions; and that while health consists in the regular performance of an elaborate series of physical

changes, diseases properly called chemical (as opposed to mechanical or surgical diseases) follow a definite course, which we should be able to estimate if we could know all the conditions—a supposition (it may be added) which is impossible, because of the factor of will which has to be taken into account. These fundamental ideas seem at first sight to belong so little to the work of everyday life or to the practice of an art, as hardly to have any relation to them. Yet very little reflection shows how the Profession, which has always assiduously pursued, indeed has been the chief promoter of, natural knowledge, cannot separate itself from the indirect, any more than from the direct influence of science, and so has to follow these apparently remote speculations. Who would suppose that the question of spontaneous generation, so keenly debated from a very early period to our own year and day, need have any immediate bearing on practice? Yet see how the observations of Pasteur are connected with the questions of infection—nay more, of suppuration, and (as shown to be probable by Professor Lister) of surgical treatment. It would indeed be a great point if we could prove that no germs, carriers of disease, spontaneously originate, but must always immediately come from a progenitor cell. If so, there would be just a hope that some diseases might be effectually and finally stamped out. What we do know of zymotic diseases does not favour this expectation. At the same time it has to be borne in mind that both the success and the failure of vaccination disclose the existence of properties which it would have been fantastic to expect, but which experiments proved to exist. What the powers of "nature" are in producing and regulating morbid products, and what the powers of man may be, is becoming every day more apparent in such inquiries as those on the relations of vaccination to syphilis, which are now being discussed by Ballard and Seaton. If we take them into consideration, together with the researches into the origin of tubercle by Villemin, Sanderson, and Wilson Fox, the inquiries into the origin of the cattle-plague, and the whole state of our knowledge of the nature of what is called infection, we have presented to us certainly one of the most remarkable series of biological and pathological investigations that have been ever recorded, and, to an intelligent and cultivated person unacquainted with the state of human knowledge in respect of biology, one which must at first seem almost incredible. Yet any one, however little informed upon such subjects, reflecting on these few general illustrations, would admit the vastness of the subjects now comprised under the head of modern Medicine, the firm basis of physical science on which it is placed, and the peculiar difficulty which it encounters as being a science complicated by an art, and that art one which is not only entangled with all the disturbing elements of progressive human society, but also an art operating on the most complicated of chemical processes—namely, the so-called vital actions. Further, he would probably say, "There are here intricate processes affecting human health, depending on actions partly physical and involuntary, partly mental and voluntary—what really are the powers by which Medicine can influence them?" If such a question were proposed, the answer would be, "There are two methods by which the art must work: first, the method of pure science, with no other object but the attainment of knowledge and truth, the method which works by observation and experiment, in physics, chemistry, anatomy, and physiology, by the study of agents, and, where necessary, by vivisections; and secondly, the empirical method, or the method which attempts to cure by rules derived from tradition, probability, and tentative experiment."

Now, by the first of these methods we are able to ascertain the law or course of action of the most complicated vital processes, as appears from the researches into tubercle and syphilis to which I but now allude. But this method is unable to explain the relations of phenomena in any, even the simplest organism, for it cannot be said that we at present understand the simplest vital process. This is put with much force by a great French chemist (Berthelot). "Car nous n'en connaissons aucun d'une manière complète, puisque la connaissance parfaite de chacun d'eux exigerait celle de toutes les lois, de toutes les forces qui concourent à le produire, c'est-à-dire la connaissance parfaite de l'univers." Still, it is a great thing to see the laws or course of action of living bodies being gradually developed and laid down. We know, for instance, that a certain disease will run a certain course in a certain family. What is this but the law that living matter acts in a definite manner under definite conditions, and that when we can predicate the conditions we can predict some at least of the results? This law is of course the scientific basis of all curative Medicine in individual instances, and of all preventive or State Medicine in communities. The application of this law to vital as well as to inorganic phenomena strikes a blow at many ancient prejudices which assumed and sometimes fostered the notion of exceptional and erratic procedures—that is to say, of procedures for which no reason could be given. Viewed calmly, it is the ground for all hope of future progress in therapeutics; and for this reason among others. In the present state of knowledge, we are always on the verge of the most amazing results, and we do not know when or where the outcome will be. As in a siege, we advance by a series of zigzags and parallels; and these must be begun at a great distance from the fortress. While we are ignorant of the nature of some of the commonest chemical changes that we know to be going on every second of our lives in our own bodies, some inquirers are quietly but minutely discussing the chemical actions by which acid and alkaline magmas modified the constitution of the earth's crust, and gradually produced the chemical conditions which made the evolution of organisms, as at present constituted, possible in our planet. And slowly but surely the siege of the fortress of knowledge advances. Latterly it has shown sign of progress in a new and unexpected direction. Chemistry, which used to be chiefly analytical, has now become enthusiastically synthetical. There are virtually no limits to the substances which can be made. Berthelot makes a calculation of the number of combinations with acids of certain alcohols. He says, if you gave each a name, allowing a line for the name, then printed 100 lines in a page, and made volumes of 1000 pages, and placed a million volumes in a library, you would need 14,000 libraries for your catalogue. He therefore properly calls such bodies infinite, instancing the synthetical construction of the alcohol and aldehyde series, of the organic acids, of the amides, of urea, and the millions of possible bodies which loom in the future—certain to be made, waiting to be made, the possessors of qualities suspected but unknown. I almost hesitate to observe that bodies of this kind have important relations to the properties of the nervous system in man. Chloroform and the various amides employed by Richardson have made this familiar to all. The beautiful experiments by Bernard upon amygdalin show the question to be still more intricate and vast than Berthelot puts it in the passage already cited. It is manifest, therefore, that the possible agents for affecting the human body are infinite, and the instances which I have partially touched on of the relations of glanders, tubercle, and irritation, of syphilis and vaccination, show what might antecedently have been expected—the equally infinite problems which may be experimentally discussed and solved in the higher animal organism, problems equally affecting the classifications of pathology and therapeutics. Science is indebted to this Association for the example it sets in the appreciation of this vast question; and especially to Professor Bennett for the able and patient manner in which he is now conducting for it difficult researches on the action of an important remedy, the first, I hope, of a long series of such detailed and rigorous inquiries. A more useful expenditure of money can hardly be conceived. Of the second, or the empirical method, to which I but now allude, it is not to the present purpose I speak.

Having said thus much on the relations of modern Medicine and modern science, in the hope of vindicating our Profession from one-sided attacks founded on the notion that it is wanting in scientific precision, I leave this light sketch of a vast subject in order to consider the present relations of modern Medicine to humanity—in other words, its relations to the wants of man in the complex state of modern society. If the philosophic basis of Medicine has been changed during this century by its relations to science, its object or aim has been as much modified by its relations to man as he is, and as he is becoming under the exigencies of fast-growing population and the agency of a fast-improving social organisation. It would not be true to say that till modern times no great crowds of men have been densely congregated into unhealthy masses, nor to say that attention had never been given to their sanitary state. There were great armies before the Christian era; there must have been great crowding in ancient Rome; a careful and detailed sanitary code was imposed on the Jewish people at the time of the Exodus; Rome paid no small attention to sanitary works. But neither permanent populous cities nor sanitary codes were the rule. In our day, on the contrary, one of the peculiarities of modern life is shown from statistics to be the tendency to increase of population in great

towns; so that in England between 1841 and 1851 (Quetelet, *Bulletin de Comm. centrale de Statistique*, tom. x., 1866) there was an increase in the population of towns of over 100,000 inhabitants of 23 per cent.; and in the following decennial period, 1851 to 1861, there was, in France, in towns of similar magnitude, taken collectively, an increase of 50 per cent. In our day preventive and public Medicine has become a great branch of Medical science. Imperfectly as yet carried out in this country, it is more fully developed in several continental countries, and, of late in a noble manner, in the United States. It is here and there carried to great perfection, as in various departments of armies. It has made great progress also in navies, and in almost every part of civil life. Still we cannot say that the evils incident to modern civilisation have been as yet met by that clear-sighted and systematic superintendence by which alone they can be subdued. It would far exceed the limits which are necessarily imposed upon me to attempt even the slightest sketch of the exact position of sanitary science in this kingdom. Its literature has become voluminous; its general principles are recognised; its need is felt. Nay, its value is by some injuriously exaggerated. What it requires now is proper administrative organisation. The admirable paper of Dr. Rumsey, read last year in Dublin, has been followed by not unimportant results, which will be the subject of a special report by Dr. Stewart, and therefore need not be here discussed. It will suffice to say that we have some reason to hope that we may see the relations which ought to subsist between this department of the science of Medicine and the community at large investigated systematically by a Royal Commission.

To anticipate the conclusions of such a commission would be no becoming occupation. But this may be confidently expected, that one result would be the elevation of the duties of an officer in State Medicine to that of a recognised profession, as in several special instances it has already become. At present it is not uncommon for a young man to be charged with wasting his powers if he devotes himself to improve the public health. Hereafter, charge of the public health must be made as much a matter of honourable ambition in the body politic, and must become as much an object of special education and training, as the business of any other recognised branch of the civil service. The Government will have to define the duties to be discharged by public health officers or other officers of public Medicine, and the General Council of Medical Education will be able to direct the education of those who aspire to the performance of duties so defined. What those duties and what that education shall be, it is not our province to-day to consider. It is enough to say, that without a sound general education and without intelligent interest in the great problems that wait on dense population—viz., a fluctuating labour market, the rights of capital and of labour, the duties of property, the principles of morality, and the nature and aims of physical, moral, and intellectual education—in other words, for what purposes the bodies of the people are to be trained—no man can discuss with safety the large questions which must be answered by State or Preventive Medicine. If he be not so prepared, he will be liable to take part unwittingly with dogmas dictated by ignorant selfishness, or unintentionally to support oppressive enactments suggested by imaginative philanthropy, in ignorance of the amount of the burdens which can in the long run be borne by the toil of a people, for the purpose of civil administration. I have not here touched on the problems arising from the condition of great towns. They are become part of the literature—I had almost said the sensational literature—of the day. The admirable reports of Mr. Simon, under the sanction of the Privy Council, the graphic sketches by Dr. Farr in the Registrar-General's Returns, the papers by the Metropolitan Officers of Health, the Returns from Ireland by Dr. Burke, from Scotland by Professor Gairdner and others, and the paper by Dr. Morgan, have filled the public mind first with amazement, and then with alarm. Long familiar with poverty, and the sorrows and penalties and crimes which hang about it, as well as the patience which called forth the words "Blessed be ye poor," I had not learnt the intricacy of these problems till in the work of the Cubic Space Committee (wherein I joined the most able President of your Council) I found myself set face to face with them, and had to consider what was the significance to the State of a child born in the workhouse—of a prostitute, brought up during childhood in the workhouse, cast forth into the purlieus of the city, becoming pregnant and returning poisoned with syphilitic sores, at an immature age, to bear a syphilitic infant; nor did I see the magnitude of the problems till I found that, not in one instance but in thousands, not in one district but in many, is this process being carried on. Where and how these frightful evils can be stopped is known only to Him who can tell the causes which laid desolate whole kingdoms of Asia, and left us to wonder at the ruins of cities whose very names are unknown. But it rests upon us, more perhaps than on any other class in the community, to see to it that no remedy which can be applied, however partially, is neglected, and that no means by which the comfortable and indifferent public can be roused to appreciate the task before them shall be left unused. Still less do I presume to handle now the relation of physiological and Medical knowledge to the habits of some among the higher classes—to the conditions of modern society which over-stimulate nervous action, the late hours, the exhausting effort, the wholly unhealthy existence. This is a subject which needs much tenderness and skill, and longer time than you can spare. But it is a subject on which the advancing knowledge and culture of modern Medicine will have not a little to say, and which, it may be hoped, will be so said as to be heard.

There is one other relation of modern Medicine which it would be improper to pass by, although it is one which an over-prudent man would instinctively avoid—its relation to spiritual beliefs. The reason why an over-prudent man would avoid all allusion to such beliefs is, that he dreads to entangle himself in the maze of angry controversy which not only surrounds, but almost fills, the ecclesiastical world—controversy not between creeds permanently opposed, as the creeds of Buddhism, of Islam, and of Christendom, but feuds in the bosom of each separate religious system. The reason why we cannot, if we would, avoid considering our own relation to spiritual beliefs, lies in the two fundamental facts that we are ourselves men like other men, and that we stand in a closer and more real relation to man, as man, than does any other class of the commonwealth. It has indeed been said, "Ubi tres medici, ibi duo athei." The recent attacks by the Cardinals in the French Senate on the Faculty of Medicine show that the charge conveyed in this aphorism is not forgotten in France. Signs of the same notion are not wanting in this country. What is the fact? The fact seems to be, that the members of the Medical Profession are in their lives not less religious than the average of the society in which they live. As a body, they are calm earnest men, who mingle little, perhaps too little, in the questions of the day, and seldom with violence. Religious enthusiasm is rare with them; fanaticism is generally absent; and, on the whole, it may be said that, as a Profession, they stand aloof from religious discussion. Self-interest operates in some degree; usage operates to some extent; but there is a deeper reason for their standing aloof, which religious teachers would do well to lay to heart. There are none who know so much of the reality of man's nature, its phenomena, its conditions, its pains, its privileges. To the Physician, the bodily nature is bared in its beauty and in its hideousness, in its formation and growth, and in its decay and dissolution. Man's relation to other living forms, his likeness or his unlikeness to irresponsible, unreasoning, or half-reasoning brutes, are vital questions to those whose minds are filled with ideas of anatomical homologies, of the relations of functions to organs, of the laws of hereditary transmission, and of the evolution of mental attributes as well as of corporeal organisation in the animal series. The Physician sees in the body of man the material structure by which alone the known operations of the mind of man are possible in this world, the organs by which alone he can work his earthly work, whether it be the work which he shares in common with the beasts of the field, or the work through which he can enter into conscious relation to his unapproachable Creator; the frame by which, while bound down in an earthly charnel-house, he lifts his eyes and strains his heart with yearning ineffable towards a higher nature, and obeys the upward-tending impulses of affections strong unto death, affections so pure and so divine as to lose in the love of others even the consciousness of self. All this, and much more, our Profession sees as phenomena. It knows that "the child is the father of the man;" that "the sins of the fathers are visited upon the children to the third and fourth generation;" that man, though in one sense "lower than the beasts which perish," is yet "the paragon of animals, in apprehension how like a god, in action how like an angel." These, and all the contrasts which poets and preachers paint, are present to us under all phases, in every circumstance of race and creed, of

temptation caused either by want or by luxury and power, or temperament engendered by any of these conditions, modifying, as you all know, both disease and the remedies it requires. I forbear from enlarging on this difficult and perilous topic here, but I shall have to recur to it briefly under the last head of my address. It need only now be said that the connexion which Medical men must have with the future culture of the country is becoming more and more intimate. The general public, heretofore indifferent to physical science, are daily becoming more alive to its importance, inasmuch as they are in many instances themselves scientific, and judges of those who are so.

If these, then, be the relations of Medicine to science and to the bodily wants and the mental condition of man, and such the character of the Physician, what is to be the preparation for his duties? There is no better answer than this of Strabo —'Η δὲ [ἀρετὴ] ποιητοῦ συνέζευκται τῇ τοῦ ἀνθρώπου· καὶ οὐχ οἷόν τε ἀγαθὸν γενέσθαι ποιητὴν μὴ πρότερον γενηθέντα ἄνδρα ἀγαθόν. "The value of a poet is bound up with that of the man. He cannot be a good poet who is not a good man." On which Joseph Henry Green, who quotes the passage, says: "I anticipate no objection when I state that the process for attaining or approximating to this great moral result constitutes, in its scope or end, *a liberal education.*" What that is, and how to be attained, is held by all thinking men to be one of the problems which our age has to solve, in and for the interests of our country. May not grave mistakes arise herein? At all events, in the present transitional condition of this and other questions of social economy, it were a waste of time for an Association such as ours to undertake the investigation of this difficult subject. But so far may be said, that the object of academical education for *our* Profession is from early life to discipline all the faculties. It is obvious that the Physician should be many-sided: he should be capable of sympathy with every form of good; he should have all his senses, eye, touch, hearing, disciplined to nice precision and exactness both in perception and thought. When a man says there is, in the present age of the world, only one education worth possessing, the education provided by "the scientific method," he seems to have forgotten the more genial parts of our nature, the relations of man to man; and the more tender parts of our nature, sympathy with goodness, imagination, generosity, devotion. Are not these essential to the highest success in our Profession, quite as much as the intellectual efforts of the more specially scientific observer? We may take one instance—the bearing of the so-called Fine Arts on the development of certain qualities of mind. It is not on account of the accuracy which is required for their successful cultivation, for that belongs more or less to all scientific work. No youth can be a draughtsman or a musician to any good purpose without this; but music and drawing not only discipline the sense of sight, touch, and ear in an eminent degree, but have a peculiar effect on the imagination and intellect. There are a refinement of observation and a tact acquired by the study of masters of music, architecture, painting, and sculpture, which add a charm to the life and character of a man, whatever be his profession, such as is hardly attainable in any other way. Not, of course, that I would wish all men to be so educated as if they were to be artists or musicians. Mathematics are valuable to train the mind to habits of accurate thought. The mathematics may be forgotten, may vanish in all their details; but the accuracy and precision given by their study may remain. So the practical dexterity of the eye and hand and ear in drawing and in music may be lost, but the delicate perception of form and colour and the relations of colour, of sound and the relations of sound, and the effect produced upon the mind by the study and cultivation of the arts therewith connected, may remain, and tinge with a higher character the whole nature of the man. The development in excess of one part of our nature distorts the harmony of that nature. Many properties, which in excess are noxious, are, when held in subordination, ennobling. It would be out of place, I repeat, to attempt a full analysis of this educational question. It is, indeed, here entered upon simply by way of protest against the view that accurate science can do all that is needed for training the Medical student. Of all men, allow me to repeat, he most needs the harmonious development of all the good qualities of his nature, with "scientific accuracy" and method at the root. In the present period of our history, I might say in the history of the human family, the principles which should regulate the training of our children have to be discussed with largeness of view, and carried out with extreme caution. There is no part of a statesman's duty just now for which he is more gravely responsible than that of preparing the children of the nation for the struggle, intellectual, religious, and material, which is certainly in store for them; there is no greater political treachery than that a statesman should pander to popular clamour by joining any temporary educational cry which he does not believe to be founded on permanent truths of morality.

It would be trespassing too much on your good nature to ask you to listen to the proofs that an acquaintance with the mental constitution of man, of those ways of ennobling its impulses, and of that mixed knowledge and discipline, which are called religion, is more especially necessary for our Profession. I therefore assume that you generally consider every scheme of preliminary education faulty which does not admit this, and will only state briefly what present circumstances seem to require of caution under that admission. Granted that, for the intellectual training of a Medical man, religious discipline and psychological knowledge are required, how are they to be imparted? and of what kind should they be? If those who have investigated the subject were agreed as to the nature and origin of human families; if the unity of our race were conceded; if there were no variations in character dependent on family and inheritance; if there were no questions as to the future state, nor disputes concerning our relation to the Infinite; if no questions had arisen within the pale of Christendom as to the scheme of redemption, nor outside that pale as to the evidence of that Christian faith—then, indeed, the student preparing for Medicine would find some definite course of mental philosophy and religious instruction in all colleges from San Francisco to Calcutta. Till that day of united conviction arrive, we must be content to take some general position that all can accept. Nor is this difficult. All will agree that we must, first, study the phenomena of human nature as now known to us, without regard to the origin of man; and, secondly, study the principles of laws which ought to regulate the will and affections of man for the good of himself and society—in other words, the principles of universal morality. Nothing less than this is necessary for the youth who are to follow our Profession; nothing more can we now enforce. We have in England to educate for the empire—that is to say, for persons of every creed. Our education as Physicians cannot in this respect be limited by any one form of religious belief; and, however much I may deplore, in the pathetic words of Faraday, "The people will go astray when they have this blessed book to guide them," we cannot deny that, under existing circumstances, the results of mental science, deduced from every source, must be to some extent made part of the higher education of our Profession, without any regard to the bearing they may be supposed to have upon commonly accepted religious opinion.

The reason is a practical one and plain. It is our business to deal with the characters of men, to observe the action and reaction respectively of body and mind, to trace out how character is affected by physical alterations of the brain; how this may be modified by physical means, by discipline, by food, by the physiological agents called drugs. And our youth must and will follow the researches which are made in these several directions. It will be useless to denounce the inquiries which tend to explain the relations between thought and material organisation. That bundle (as it were) of qualities, good and evil, which we call mind, does, as far as we know, require for its manifestation the continuity and integrity of a complex organisation. That organisation varies with the qualities which are exhibited. The mental organisation of animals inferior to man is as various as their bodily structure. In truth, we have as good right to call the bodily organisation the material part made for the action of mind, as the mind the consequence of the bodily organisation. The distinctive properties of the mind of man furnish the most notable illustration of the origin of force. The absence of any one of these powers, and especially of the will, shows the greatness of their presence. There are phenomena such as those of aphasia, such as the innumerable facts of pathological analysis observed in the insane, such as the remarkable results obtained by the researches of Claude Bernard, which become part of the common stock of knowledge, and must find their place in any theory of humanity which is to claim an acknowledgment from the intelligent physiologist of the future. This deep, this profoundly interesting subject might be pursued to great length; it is commended to your serious attention with these words of Bacon:—"All depends on

keeping the eye steadily fixed upon the facts of nature, and so seeing their images simply as they are. For God forbid that we should give out a dream of our own imagination for a pattern of the world. Rather may He graciously grant us a true vision of the footsteps of the Creator imprinted on His creatures." (*Nov. Org.* pr. i.) "Very meet it is, therefore, that we be sober-minded, and give to faith that only which is faith's." (*Nov. Org.* 65.)

It is not to be desired that we should part to-night without some interchange of thought on the relation of this University as a place of national education to the topics we have been considering. The functions of a university have lately been clearly stated by Mr. Mill in his address at St. Andrew's. His statements coincide with those repeatedly expressed in this place by the best thinkers on the subject. His opinion is of special value, as no one will suspect him of too great leaning towards ancient studies, or the gentler parts of human culture. He says: "The proper function of a university in national education is tolerably well understood. At least, there is a tolerably general agreement about what a university is not. It is not a place of professional education. Universities are not intended to teach the knowledge required to fit men for some special mode of gaining their livelihood. Their object is not to make skilful lawyers, or Physicians, or engineers, but capable and cultivated human beings. . . . What professional men should carry away with them from a university is not professional knowledge, but that which would direct the use of their professional knowledge, and bring the light of general culture to illuminate the technicalities of a special pursuit." He reviews the several parts of human knowledge by which this function is to be performed. For my own part, I know nothing apparently so damaging to the reputation of the study of classics as a means of forming completeness of character, as its active antipathy in former years to the cultivation of science, and its passive indifference to the promotion of art. As long as this temper existed, it implied an ignorance of both, and, as respects art, a narrow appreciation of the true domain of literature. The causes of this temper need not be discussed by us; we are not the persons to do it in this place. The causes do not lie entirely in the effect of classical training, but in the narrowing tendency of exclusive devotion to one class of pursuits in a limited society. It was addition to the old studies, not substitution, that was needed. The addition is in the course of being made. May the substitution be averted. Your assembly in this hall is a proof of the fact of the addition. This meeting is a testimony, if any were needed, that these ancient foundations are opened to the professions, opened on conviction and with hearty goodwill; the union of the ancient thought with modern method will be effected in this place. Yet we may ask why the professions should be welcomed by the University—why this union should be desired by them. The answer is plain. Not through the guidance of the people by a few superior minds, not through the laying down rules of fashion by concurrence, not through the dogmas of authority by compulsion, but by the culture of practical life, by the moral elevation of the working people of every class, are the great traditions of this country to be maintained. Not by peers, nor commons, nor ecclesiastics, nor artisans, as such, nor by all combined; but by love of knowledge, of truth, and of uprightness; by a wide view of the needs of man, religious, moral, material; by a small estimate of our own powers, but by a large one of our duties; by a just sense of the narrow field to which our own vision is limited, and of the shortness of time during which to each of us that vision shall last; by all these qualities uniformly diffused according to the capacity each may have, are peers, commons, ecclesiastics, artisans, to keep alive the force of their common country. And, if these thoughts seem to belong to the arena of the political world, and not to the shady recesses of a scientific assembly, remember that if your young men who are to be engaged in Professional life, if the sons of your commercial men come hither, you will find their characters tempered through life by the processes to which they have been submitted. If they find here the traditions and the practice of general culture, of love of good, of pursuit of all knowledge, pure or applied; if they learn precision when precision is needed, method when method; if they are taught to indulge imagination where only imagination avails, fancy where only fancy; if they see us here resisting authority when there should be inquiry, and bowing humbly before that which is not for man to know, not ashamed of reverence and hope, nor afraid of faith; if here they may learn to be industrious and contented, and manly and of tender heart—then the Profession may send their youth to a place the country has reason warmly to cherish, if not wholly to approve.

I know nothing more hopeful than the prospect before us. Those who control the fate of this city of a thousand years can still say that the religious basis of the place is not yet undermined by levity, nor suffering from the dry rot of unfounded assertions; that science is daily enlarging its borders by the addition of new institutions and new men, and that art is asserting its just claims; so that those who desire to see the youth of England possessed of great opportunities may yet find them here.

One word more, and I have done. The picture I have drawn is not intended to describe what is to be sought, or what is to be had in this or the other place of education, but what is to be sought in all. What we may aim at here we wish others to attain. If they be first, then we will follow; if they be last, we hope that our speed may quicken with their advancing tread. You will perceive, I doubt not, that I address you not as an Oxford man, but as President of your Association when it visits Oxford. While you are here I have not the functions of host. As your representative, I have asked freely for what you seemed to desire, and in your name I thank those who have granted it. In the name of your Oxford friends, and as official head of the ancient and honourable Faculty of Medicine in her University, I heartily welcome you to whatever in the lotus-growing stagnant depth of the long vacation you may find still living here. You bring your own life, from England, Scotland, and Ireland, from the United States, France, and Germany. Live it among us. And in exchange for our welcome to the banks of the Isis, give us your thoughts and your counsels, to the end that we may all return refreshed and strengthened to our common and happy toil.

ADDRESS IN MEDICINE.

By Dr. WILLIAM W. GULL.

Mr. President and Gentlemen,—I deeply feel the honour and responsibility which you have put upon me, by placing me here to-day as your exponent of the present position of Clinical Medicine. My task is difficult, from the distinguished character of my audience, and from the imperfections of our knowledge in the subject of which I have to speak. I feel, indeed, as one about to undergo the ordeal by fire, the difficulty and delicacy of my task being so great that I dare not hope to escape adverse criticism.

You have been listening to learned discourses on the physics and physiology of living things, wherein the learned lecturers have been able to instruct and satisfy the mind with details more or less capable of demonstration; whilst I have to admit that my subject lies on the confines of human knowledge, and that too often the highest effort of the clinical student is to arrive at some feeble probability, in the presence of uncertain, or even delusive, evidence.

Clinical Medicine, though a special department of knowledge, is so intimately connected with other sciences, that, when the claims of these are satisfied, it might seem that nothing would remain to it. This appears to me the present error of our schools. It would not, however, be too much to assert that, were it possible to conjoin in one human intelligence all that is now known of other sciences, such knowledge would be compatible with entire ignorance of the department of Clinical Medicine. As the physiologist must yet assert that the phenomena of living tissues are not explained by their chemical composition, or as the chemist himself has equally to admit that mere isomerism may be no clue to chemical qualities, so the clinical Physician knows that the phenomena of disease are not explained by the knowledge of healthy textures, nor by the actions of healthy organs. Clinical work is a work by itself; and yet, if I may use the comparison, only so far by itself as one form of organic life may be considered separate from another. It stands apart, but has the most intimate relations to all that surrounds it. It is elucidated by the light of physics, chemistry, and physiology, yet is not comprehended by them as they now stand. In ages gone by, Hippocrates had to vindicate the study of disease from the inroads of superstition; at the present day, we have to guard it against assaults on the side of science, and need to watch lest we betray it by accepting a too chemical or physical limit to our thoughts.

We should all contemplate with great satisfaction such inroads of the collateral sciences upon Medicine, as that at length

Medicine might have no separate existence; but this consummation appears to be as yet far distant, and must be so acknowledged. Happily, such is the extension of the human mind into Nature, that almost daily new regions are discovered, and the boundaries of the old are so extended as to require fresh subdivisions in order to bring them within the domain of thought. Formerly the Physician might have been able to comprehend all that then constituted the allied sciences of Medicine; but that can never again be possible. His duty lies, therefore, in giving an exact and scientific character to the department which remains to him—to investigate its phenomena with that concentration which is necessary in every physical inquiry, and with all those aids which are afforded in increasing perfection by modern science.

It is not, however, to be overlooked that even Science herself is apt to have her moments of dogmatism, and, by throwing the light of some particular inquiry full in our eyes, to blind us for the time to that which lies beyond. How often has Medicine been thus diverted from her difficult path? A discovery in physics has made us for the moment no more than galvanic batteries, or a discovery in chemistry at another mere oxidising machines. To-day, however, we go to bedside work untrammeled by any exclusive theories of this kind, ready to investigate disease in every way that investigation is yet possible, and forming our judgment in no narrow spirit of a foregone conclusion. We have no system to satisfy; no dogmatic opinions to enforce. We have no ignorance to cloak, for we confess it; but we have to bring into the court of inquiry all possible evidence, and to decide upon it by the light of science and experience. They whose work lies more open to experiment and demonstration are apt to forget the difficulties we have to encounter, and the mental labour required in dealing with them with any measure of success. They would have us postpone these difficulties to a more convenient season until, by the advancement of other branches of science, they could be undertaken with less risk of failure.

However gratifying and proper this might be, were the end of our knowledge contemplation only, and were there no motives to present action, yet, as we are in the midst of human suffering, and have some knowledge for its relief, it is plainly the duty of some, and worthy of the highest intellects, to apply themselves to this work, even though by so doing they may forego the immediate rewards which pure science so liberally affords.

Whilst thus asking for the unstinted recognition of Clinical Medicine as a scientific department, I am not forgetful of the obligations imposed upon us, nor that in it there lie problems, as yet, far beyond a scientific solution. No one can hope, even as the sciences now stand, and much less as they shall further advance, to obtain a foremost knowledge of them and of Medicine at the same time. Yet such knowledge is to us of daily necessity. We must, therefore, refer our physiological difficulties to the physiologist, and our chemical questions to the chemist, and still admit that there remains an unlimited area of study for us, in tracing the causes and relations, and in recognising the presence of disease. I would not be understood to say that the Physician should neglect the sciences of chemistry and biology, and devote himself to the limited study of morbid phenomena. If any should desire to do so, the attempt would prove its impossibility. The interchangeable relations of things are such as to make necessary the most discursive operation of the mind, if it would successfully inquire into that which is most special. I desire only that that which is our proper work should have our entire energies, strengthened and directed by every collateral aid.

Whilst the biologist traces downwards the relations of the various forms of living things, and breaking away, one by one, the barriers of separation between them, at length views them all as springing from a common germ, the student of Clinical Medicine, working in another direction, seeks opposite results. To him, one form of life absorbs and centralises all other forms. His object is to see the facts of human organisation in their most special relations. The very perfection of his work lies in this. It is not even man in general, it is the individual man, upon whom his attention has to concentrate. The stock from whence he may have sprung, the circumstances of his birth, the time he may have lived, the diseases he may have undergone, the habits he may have acquired, are all subjects to be brought into the focus of thought at the bedside, and made to clear up the problem of disease.

Medicine is a specialism, but of no narrow kind. We have to dissect nature, which, for practice, is better than to abstract it.(a) Every form of life has to us a value, but in an order the reverse of the generalisations of natural history. We desire to know what limits, and specialises, and perverts. We study in order to distinguish, and not to classify.

Yet it is not the individual only that we have to isolate for the purposes of clinical study; we have further to inquire into the life of his several organs and tissues. These have each their own life, and, correlative with it, their own tendency to disease, and their specific power and mode of repair. To Clinical Medicine, therefore, the body becomes a pathological museum. In every part we recognise certain proclivities to morbid action; and the purpose of our study is to trace these tendencies to their source on the one hand, and to their effects on the other. Histology and anatomy are daily widening this fundamental department of Medicine; and we may be sanguine that an acquaintance with the morbid changes to which the same parts are liable, where present in the lower animals (comparative pathology), will afford further valuable aid, as by it we shall have in some degree a dynamic test of the general tendency to these morbid states, in addition to that furnished by human pathology. A knowledge of these intrinsic tendencies to pathological change in the several organs prepares us beforehand to recognise their occurrence where, without such knowledge, the signs and symptoms which are present would convey no information. To know, for instance, that the brain, from the early period of adult age, in persons otherwise healthy, is prone, without obvious exciting cause, to the formation of tumour in its substance—to be aware of the probability of insidious *ramollissement* of the central commissures in younger subjects—often enables us to suspect these conditions, and to give weight to what might otherwise seem some unimportant ailment. As I name these two instances, I feel sure your clinical reminiscences will supply the proof of what I state, and read a sad page of suffering, death, and error.

There would appear to be some textures of the body endowed with an almost complete immunity from disease, whilst others are equally liable to it—a difference of which at present we cannot give a sufficient account. Both stand as glaring instances to warn us against the adoption of some of our current theories. There is, perhaps, no part of the body organised for more rapid cell-life, or that is more extensive or more vascular, than the mucous membrane of the jejunum; yet, with the exception of the choleraic and diphtheritic processes, it is almost exempt from primary organic changes—so much so, that at the bedside, in considering the probabilities of disease in the abdomen, we have, on the one hand, to exclude this part from our consideration (except in mechanical obstruction), and as necessarily to direct special attention to certain seats of lesion from whence the trouble is likely to have sprung. Contrast the limited area presented by the lesser curvature and pyloric region of the stomach, the duodenum, cæcum, and rectum, with the enormous extent of the valvulæ conniventes, and compare the frequency and character of the lesions in the one with those of the others, taken together, and it is obvious how much our diagnosis of abdominal disease depends upon our acquaintance with the tendency of certain textures in the abdomen to morbid changes.

The investigations of morbid anatomy have thrown a flood of light upon the so-called acute idiopathic diseases. Formerly, they were supposed to be of common occurrence, and the treatment of the day was adapted to their apparent violence. But how rarely now do we meet with a case of acute inflammation of the membranes of the brain, or of the peritoneum, or, indeed, of any other texture, which we cannot refer to some chronic lesion, or to some distinct cachexia, the only idiopathic part of the case being that which was formerly overlooked or unrecognised—some chronic tissue change, unnoticed in the storm of acute disease to which it may have given rise.

Oken has said that all the tissues are nervous, and bone is hardened nerve. I shall not discuss this assertion on the present occasion; but, no doubt, modern physiology and pathology are advancing the evidence that whatever is living has nerve-quality in it. The highest expression of this quality is conscious intelligence; the lowest is, from the nature of the case, at present impossible to mark. This much, however, it appears important to recognise clinically: that morbid brain-force may give rise to a variety of disorders, apparently distinct from their original cause. There is a neuro-pathology from

(a) "Melius autem est naturam secare quam abstrahere."—Bacon, *Novum Organum.*

the brain to the tissues, as there is a reverse order of disturbance from the tissues to the brain. If we trace the history of morbid brain-force through the various members of a family, we shall often recognise a great variety of related phenomena, which, in nosological classification, are separated and considered as distinct. The intellectual disturbance in one may appear as epilepsy in a second; as mere dyspepsia and so-called acidity in a third; in a fourth, as some peculiar neuralgia; in a fifth, if a female, in many varieties of capillary disturbance, as amenorrhœa, vicarious menstruation, hæmatemesis, or even hæmoptysis; in a sixth, some part of the intestinal tract, the colon chiefly, may appear to be the recipient of the morbid nerve-process, and the patient be tortured with the fear of a tumour. And a tumour, indeed, there may be, though a mere phantom, yet calculated to mislead the unwary. Nor does this list exhaust the catalogue of these strange vagaries. It would seem as if sometimes this morbid brain action expended itself upon the voluntary muscles, which, if of the abdomen, may be shaped into forms that defy diagnosis and bewilder the most cautious.

It might be thought unnecessary for me to point to this strange field of pathology, which has long been recognised as in part connected with hysteria, but I have reason to think our views on the subject are still wanting in distinctness, and that the term hysteria, as now understood, does not include all I here intend. These morbid conditions occur as essentially, if not so frequently, in the male as in the female, though the form of them may be determined by the sex. As if, in different individuals, different portions of grey matter were the seat of the same kind of morbid action; the equivalent of mental disorder in one occurring as colon disorder in another, and so on. And besides these mere functional disturbances, the history of Medicine, and my own individual experience, supply instances of actual tissue changes which admit of no explanation until thus looked at; and, I need not add, such cases are entirely distinct from feigned and fictitious disorders.

The flatulent dyspepsia of the student, the tears of the distressed, the dry mouth of the anxious, and the jaundice of fright, daily remind us how far the cerebral influence extends, and physiology will hereafter teach us to trace the steps whereby these effects are produced. As there is no explanation of laughter when the axillary nerves are tickled, so there seem to be none of the morbid fears which oppress those who are the subjects of some affections of the colon, and who weary our patience with their doleful complaints. Yet surely we have no more ground to deny the reality of the one than of the other; though we must at present refer both to some ultimate fact of our natural history. "As face answereth to face" by mysterious sympathy, so do these and other peripheral impressions excite or depress, in an equally mysterious way, the subjects of them.

I cannot turn from this hasty glance at the idiopathic pathology of the tissues without mentioning how much Clinical Medicine has gained by recognising the relations of the tissues to time. The wise man says, "There is a time to be born, and a time to die." What the physiological limit of the latter may be, has not been determined; but at the bedside its presence has often to be recognised and to be distinguished from that of removable or remediable disease.

Abercrombie was amongst the first to point out that the paralytic affections of age were due to senile changes in the tissues; and more recently, the convulsive affections of otherwise healthy, but aged people, have been included in the same category. The epileptic attack of the old man is an evidence of failing power, as his paralytic seizure is an evidence of failing tissue. Though the actively-growing organs of the child contrast in a striking manner with the same in decay in the old, there is yet, in some respects, a similarity between the diseases of the two periods of life, like the tints of the rising and the setting sun. In the first period, the organism has not acquired its forces; in the latter period, it is losing them. Infantile convulsions, and senile convulsions; infantile diarrhœa, and senile diarrhœa; infantile eczema, and senile eczema; uric acid deposits in childhood, and uric acid deposits in age, may afford illustration of the truth of my statement.

Time, moreover, acting differently upon different parts of our organism, often performs a kind of pathological dissection, exposing the inherent weakness of entire organs, or parts of them, and giving rise to diseases, for which at present we have no name but that which designates some prominent symptom. This process of decay, due to time only, occurs at almost every period of life, according to the constitution of the individual. The fatty degeneration of muscular fibre, occurring in the children of certain families, affords such an illustration, and we have yet more striking ones in the progressive muscular atrophy, which occasionally exhibits itself from primary changes in the nervous system, in equally young subjects. Senile changes may thus occur in childhood, as the ephemera is born but for the day. My thoughts have been specially directed to this subject of late, whilst passing in review the facts of locomotive ataxia. The condition of the nervous system which most commonly gives rise to this form of unsteadiness of gait, is plainly one of decay, like baldness, or greyness, or the occurrence of the arcus senilis. It occurs to individuals of particular families, in which other forms of nerve degeneration are prevalent. It happens to be limited almost entirely to males at the middle or after the middle period of life; and, if we may venture to draw general conclusions from the few observations that have been made post mortem, is connected with fatty degeneration of the posterior columns of the cord; not, however, limited to these, but associated with changes of the like kind in other parts of the cord, and in the brain itself.

My friends, Mr. Lockhart Clarke and Dr. Hughlings Jackson, endorse the opinion first put forward by Duchenne, and subsequently maintained by Trousseau, that this locomotive ataxia is due to disease of the spinal marrow only; but I am disposed to think that they arrived at this opinion against clinical evidence, and partly biassed, though unconsciously, by the way we were first taught to dissect, and think about the nervous system.

It is only fair to English pathologists here to state that this form of disease has long been known to them. Matthew Baillie regarded it as the most common form of paraplegia, and had an anatomical explanation of its peculiarities, which, though certainly not applicable, proves that, with his usual acumen, he had investigated its post-mortem anatomy. His theory was that the malady arose from a morbid effusion of cerebro-spinal fluid, which, when the patient was erect, gravitated into the lower part of the theca vertebralis, and, by pressing upon the cord, rendered the patient unable to steady his movements; whilst, from the same cause, these became free again when he was placed in a recumbent position. I quoted these observations of Baillie in the year 1849, and took occasion then to call the malady encephalic paraplegia. It is probable that this was too restricted a term, as is that of locomotive ataxia, and that, in our consideration of the special disease, we must recognise a general diminution of nervous power from failing nutrition, as well as special lines of more unequivocal decay, most marked in the posterior columns of the cord. In support of this opinion, I may state that ataxia alone occurred but three times in fifty cases referred to by Trousseau. Nothwithstanding this, he draws the characters of the disease which he would typify from the three cases, and not from the forty-seven others in which there was evidently disease of parts of the brain, as of the cord. If, however, all that has yet been done still leaves the question of the lesion occasioning this form of paralysis in dispute, one suggestive fact remains—namely, the singular isolation of the posterior columns of the cord by the degenerative process. This fact appears to indicate that the affected structures have their own vitality, and probably, therefore, a separate function from that of adjacent parts. Todd maintained this separate function on other grounds, and concluded that the posterior columns were merely commissures. This theory seems the more probable from the facts now alluded to, inasmuch as textures having such a function may have a lower vitality than others which are more essential. This supposition is strengthened by what is observed under extreme inanition, it having been proved by the well-known experiments of Chossat that the nervous centres resist atrophy more than other tissues. Related to these intrinsic morbid changes, whether local or general, are the cancerous and tubercular affections, and the universal liability of the tissues to that perverted process of nutrition which we call inflammation. Although, for practical purposes, it is convenient to intensify the differences between cancer, tubercle, and the inflammatory process, we have abundant evidence of intimate relations between them. Thus, the children of parents dying of cancer are not rarely tubercular, and those of the third generation are liable to various forms of chronic inflammation; whilst in the same families are healthy individuals, in whom we can discover no evidence of any special morbid tendency. It is not improbable that that which seems most special to us in cancer and tubercle may depend more upon gradation than change of diathesis, and that both are allied to more common degenerations.

In tubercular phthisis this has long been felt and acknowledged. Those who have given most attention to the subject (and I could name no one whose experience would have more weight than that of the late Dr. Addison) have had to confess that the larger their observation, the greater became their difficulty in drawing a line of demarcation, limiting tuberculous from simply inflammatory productions. No doubt many of the errors of prognosis in phthisis, some wilful, some unwitting, arose from assuming a distinction which does not exist, except in extreme cases, where, as the logicians would say, the quantum passes into the quale. Although it has been observed that the scrofulous diathesis of early life may show its special characters in age, still we have, on the other side, frequent proof of a change of diathesis to that which is malignant; and your experience will, I am sure, confirm my statement that the tubercular peritonitis of childhood corresponds with great strictness to the cancerous peritonitis of age. It is probable that cancer is nearer to the simple degradation of tissues than tubercle. It appears to be more independent of an external exciting cause; and, although in its structure there is an appearance of vital activity, it has no correlation with healthy organic processes, but is a mere eddying off and separation from the organic cycle. A closer inquiry into the local origin of cancer and of the mode whereby the system becomes infected by it are yet desiderata. The tendency to infect the body generally may, after all, not be dependent upon a more marked cancerous diathesis, but upon local circumstances only. Something analogous appears to exist in the infecting and non-infecting chancre, for though, according to some authorities, one is essentially local and one as essentially infecting, yet it appears certain that even the infecting kind has not always the same infecting power.

In passing from these idiopathic or intrinsic morbid conditions to such as arise from accident or *ab extrâ*, the fevers chiefly claim our notice. In the elucidation of these, small-pox stands for first consideration; since, through vaccination, we have it clearly demonstrated, at least for this one form of fever, and it seems but fair to infer the same of others, that recovery and subsequent immunity are produced by a process of impregnation and assimilation, and not, as was early believed, and is still by some maintained, of elimination. The old theory of depuration, though true of gross chemical poisons, as lead, or mercury, or arsenic, appears to have no application to those operations which take place in the body, in contagious diseases, as the effect of organic poisons. After any one of these, the organism is not restored to its former condition, as if any poison had simply been cast out; but there is notoriously a residual and permanent effect, which has been induced under the superficial disorder; this effect being shown by permanent indisposition to a repetition of the same morbid process. Unfortunately for science, the phenomena of fermentation have been assumed in explanation of what takes place under these circumstances; and by the theory of zymosis we are carried back to the days of ignorance, when concoction and maturation were made to explain whatever was obscure. We discover, however, at the bedside nothing in the phenomena of febrile disease proper to zymosis. As well might we call the evolution of the germ after impregnation by such a name. The physiological disturbances induced by any one of the fever-poisons—namely, the excess of heat, the rapid waste, the quick action of the heart, the altered functions of secretion and excretion, etc., the so-called symptoms of the disease—are but the outward effects common to the class, and only so far peculiar to each as they may vary in time and intensity. That which really constitutes the specific character of each is the attendant tissue-change, which, when completed according to the special poison, is followed by convalescence.

If this be in any degree an approach to a true conception of these diseases, it follows that the object of Medicine must be rather to limit the violence of attendant symptoms than, with our present knowledge of therapeutics, to aim at arresting or neutralising their specific processes. Had any one formerly been asked the remedy for small-pox, he would hardly have seriously supposed the answer to be the poison of small-pox itself. Yet so it has proved; and from this experience we have learnt that help may come precisely in the opposite direction to that looked for in our theories, and we obtain a striking proof of the truth of Bacon's aphorism, "Natura non nisi parendo vincitur."

Yet, notwithstanding this teaching, pathology still persists in looking in another direction; and therapeutics are governed by the idea that disease is an entity which must be combated and cast out. I fancy that the habit of calling these and similar affections blood diseases insensibly fosters the idea of depuration. Now, though I am not disposed to stir up a discussion between solidism and humoralism, I cannot but express my conviction that the susceptibility to the various contagious fevers no way lies in the blood, except so far as this may be a channel through which the poisons reach the tissues; and that it is in these, and especially in the nervous tissues, that the true fever-processes begin and end. The facts of habit, such as that of taking opium or using tobacco, the facts of acclimatisation, and of the commoner experience of our daily life, whereby the nervous system becomes accustomed and indifferent to continued sources of irritation, render such an opinion the more probable; and a confirmation of it is gained by that enduring effect which insures against a repetition of morbid actions.

Were I to give liberty to my imagination, I might perhaps trace here a much more extensive law of our nervous organisation, whereby that which is new excites and that which is old becomes indifferent. For my own part, the views which have been put forth as to syphilisation have, on these grounds, seemed to deserve the fullest consideration; and, though I have not experience to set against the adverse conclusions of some who have made the subject a matter of experimental inquiry, I feel that we cannot set aside the more extensive experience of those who have asserted its success.

I cannot conclude these general remarks on some difficulties which now occupy our minds in respect to pathology without alluding to the vexed question of rheumatic fever. Is this state due, or is it not, to a *materies morbi?* Further, have we any grounds for assuming that such *materies morbi* is lactic or acetic acid? I put these questions thus explicitly because it seems to have been settled, upon mere authority, that they may both be answered in the affirmative. I say authority alone, not forgetting the experiments which have been made on animals in proof of this theory, since such experiments appear to me to prove only this, that the acids named, entering the blood, may cause endocarditis and some other pathological changes simulating those of rheumatism; but I cannot recognise in them the rheumatic state as I am acquainted with it at the bedside. There are, so far as I know, no analyses of the blood in rheumatism which show that it differs from normal blood in respect of its acidity. The theory of an acid *materies morbi* appears to be supported chiefly upon the excessively acid secretion of the skin in this disease, and the increased acidity of the urine. But neither of these can be considered in any degree characteristic; for not only in the worst forms of the rheumatic process is the secretion of the skin not acid, but alkaline, but in conditions of the system totally dissimilar from rheumatism, as, for instance, in phlebitis, and especially in that form following injuries to the head, as well as in arterial embolism, we often meet with excessive acid sweating, misleading to a false diagnosis those who believe this to be characteristic of rheumatism. Notoriously, a proper function of the skin is to secrete, and probably to form in itself lactic and acetic acid. Under different kinds of irritation this becomes excessive; but I know of no facts to show that this excess indicates a special pathology, or may be regarded as a salutary process, whereby the system is relieved of a *materies morbi*. In so supposing it, we seem to be misled by the same fallacies as, before the time of Sydenham, misled Practitioners in the treatment of eruptive diseases. I confess to a strong sympathy with those errors; and, though my reason is convinced that they were errors of the most dangerous kind, I cannot but excuse them, and admire the genius and courage of Sydenham, which enabled him to detect and correct them.

If, failing the evidence of the cutaneous secretion, the rheumatologist adduces proof of an acid diathesis from the character of the urine, must not the force of his argument be abated by the admission that urates replace urea in a large number of other morbid conditions, so that we cannot attach any specific value to this fact, the general significance of which will be better appreciated by the physiologist, who will see in the presence of uric acid and the urates a debased condition of organic waste, common to the life of inferior organisms?

To pass, however, from these desultory observations, which the present position of pathology has suggested, the subject of diagnosis claims a few words. We must all admit that diagnosis ultimately rests upon an exhaustive pathology. Without a knowledge of what is possible in disease, diagnosis must be defective, and is, therefore, in that degree defective at the present day, since it is plain that we are unacquainted

with many pathological states, if, indeed, we be fully acquainted with any. Moreover, a knowledge which might seem exhaustive to-day might, by the changing circumstances of the world, be defective to-morrow. Without raising the question whether disease has within historic periods changed its type, it may be maintained, as was long ago pointed out, that the pathological tendencies of the body do vary with the genius anni, as witness the changes in epidemic disease. Within our present experience, cholera has afforded us new pathological questions, which are not yet solved; and strangely side by side with it—to make the contrast more impressive—diphtheria has revived, laying before us, as if to teach us how feeble our pathological science is, two opposite conditions: two diseased mucous surfaces—one digestive, one respiratory—from the former of which, by mysterious inversion of its normal forces, the salines and water of the blood may be fatally diffused, and from the latter, as by a kind of morbid polarity, the fibrine only is poured out.

Although the perfection of diagnosis cannot be reached till we have a perfect pathology, we have to confess that it falls behind the pathological knowledge we at present possess, as the revelations of the post-mortem tables abundantly confirm.

And this brings me to the second principle of diagnosis—a knowledge of the probable in disease. Of this, experience alone can inform us, and experience of the most varied kind. But when so varied, and supported by a large knowledge of pathology, it often enables us, as by prophetic insight, to diagnosticate conditions which neither direct physical examination, nor the most systematic arrangement of symptoms, could explain. These suggestions are amongst the best fruits of experience—of that experience which is able to anticipate causes, and from causes their effect. The advancement of diagnosis depends upon the capacity of Medicine to make these anticipations with increasing certainty, which, though *anticipationes mentis*, are truly *interpretationes naturæ*. To illustrate these remarks, what could I better quote than the clinical history of thrombosis and embolism? What mysterious obscurity, until recently, involved the phenomena of which embolism was the cause! But, thanks to Kirkes and Virchow, when once the pregnant fact of embolism in vein or artery is recognised, not only present facts arrange themselves in order, but we are able to anticipate the possible occurrence of others, and, by anticipation, often prevent them. Symptoms and physical signs may supply us with abundance of clinical facts; but, until the one great fact be recognised in such cases, we can make no step in diagnosis.

Nor does this instance by any means stand alone; for wherever, from the nature of the case, we are unable to make a complete physical examination, as must occur in diseases of the brain, and as often occurs in diseases of the abdomen, pathological inference, or pathological anticipation, has to supply a meaning to other portions of the evidence. In brain-diseases this method of interpretation comes largely into play; and the neglect of it has much to do with the obscurity in which, at the bedside, these diseases are still involved. It is often impossible to form any opinion whatever of the malady under which a patient with brain-disease may be labouring, from an inquiry however acute, and however complete, into the mere statical facts, as they at the moment present themselves. The attempt to do so is perhaps more likely to lead to error than to truth—a fact which, if I be right in the statement of it, shows of how little value mere symptoms are in the diagnosis of diseases.

Abercrombie felt this to its full extent, and one of the objects of his treatise on cerebral diseases was to make it clear, and to warn us against future attempts in that direction. A perusal of his writings will leave upon the mind the impression that the most diverse affections of the brain may, at the bedside, present the same symptoms; that in the most extensive lesions there may be none at all, or that the whole catalogue of symptoms may appear without any lesion. But the feeling of despair which such a perusal formerly induced is now in great part dissipated by the success with which the inquiry can be made in the direction pointed out. Admitting that we shall never diagnosticate cerebral lesions by their symptoms, partly because different lesions may produce the same symptoms if the seat be the same; partly because there appear to be surplusage portions of brain tissue, as in the hemispheres, where lesions cannot make their presence known; and partly because in that monster disturbance, epilepsy, we may have a variety of states simulating organic lesion, we betake ourselves again, with renewed energy, to the study of morbid anatomy and pathology, which first caused the confusion by disturbing our ignorance, feeling assured they will at last afford us a full clue to the difficulty. To a large extent they have already afforded this clue. To begin with the last fallacy I have named, I may remark that we are better acquainted than formerly with the various forms of the epileptic state. A better pathology has prepared us to recognise in this condition a great variety of effects. Todd drew attention to epileptic hemiplegia, and in the same subjects there occurs also a remarkable form of coma, which has often led to the supposition of effused blood, or tumour, or abscess—suppositions which have been falsified by the recovery of the patient. Whilst our notion of epilepsy included nothing more than a convulsive state with unconsciousness, numerous errors in diagnosis must have occurred from this source alone. It now represents to us a condition of nerve-force, in which may occur not only the common phenomena of epilepsy, but coma without convulsion, paralysis following convulsion, sudden and transient mania, or an approach to it, as well as, according to Trousseau, some strange forms of neuralgia. A knowledge, therefore, that a patient is liable to epilepsy, or comes of a family in which such a state has directly or indirectly occurred, must make us pause in our diagnosis, and thus save us from a precipitate or erroneous conclusion. The proneness of the aged to epilepsy is a fact probably not sufficiently borne in mind in the diagnosis of these cerebral disorders. As to the second fallacy, when disease is situated in what may perhaps be called, without misuse of the term, the surplusage portion of the cerebrum or cerebellum, we are often led to suspect its presence, and as often correctly to infer its nature (and avoid the third fallacy), from a knowledge of the fact of surplusage, and of what is probable under collateral circumstances, though the symptoms of organic disease may be apparently of an insignificant kind. For instance, headache with occasional bilious vomiting in a young and healthy adult—tumour; (?) the same symptoms, with chronic suppuration about the ear, or in some distant part—abscess; (?) nearly the same symptoms, with syphilitic cachexia—syphilitic affection of the brain. (?) This is the merest outline, but the drawing is true to nature. May I say, once for all, that any peculiar shape of head, large or small, has, like the epileptic brain, long been admitted to defy diagnosis? Further, how much have we not gained in the diagnosis of cerebral disease by the known tendency of renal cachexia to induce chronic or subacute cerebritis, and of embolism to cause plugging of the vessels?

In turning from diseases of the brain to affections of the chest, we find that we are here able to combine our knowledge of the possible and the probable with direct physical signs; and consequently the diagnosis of chest affections has very steadily advanced. Old errors, however, still linger even here, and a true dynamic estimate of lung lesions is yet a desideratum. This must be supplied by improved interpretation of physical signs through attendant physiological conditions. The word phthisis, which has now too often a specific value, will dilate so as to include a whole genus of chronic affections, which, when duly recognised and classified, will afford more secure ground of prognosis, and spare us the perusal of worthless records of so-called consumption cured.

In the diagnosis of abdominal diseases, we want an increase in the number of our more cardinal facts; such facts, for instance, as that the enlarged gall-bladder changes its shape under contraction, or that of the two characteristic notches in an enlarged spleen, or that of the peculiar position of the colon in enlarged kidney, etc. At present our diagnosis is mostly one of inference, from our knowledge of the liability of the several organs to particular lesions; thus we avoid the error of supposing the presence of mesenteric disease in young women emaciated to the last degree through hysteric apepsia, by our knowledge of the latter affection, and by the absence of tubercular disease elsewhere. We infer alcoholic changes in the liver from the aspect of the face, mottled by venous stigmata and the yellowish conjunctiva, even without any direct knowledge of the state of the liver or the habits of the patient. We suspect a cancerous disease of the peritoneum in the aged from the pain with effusion. It is obviously from the perfection of physical diagnosis, aided by pathology, that we must look for the advancement of Medicine. The feelings of the patient, so-called symptoms, are of little value taken by themselves; often, in fact, their mere number and variety are a proof of the absence of disease, and it is admitted that they always need interpretation through physical inquiry.

The eye, the ear, the touch—and chemistry replacing the other two senses—are impressed into our daily service, and we

may hope that what the ophthalmoscope has effected for the eye these other means may do for other parts. To chemistry we owe much, but there are two wants we ought to express. We want analyses of the residuum of the urine, especially in disease, in which we may hope to discover new elements for diagnosis; and we further want ready clinical means for recognising what is discovered by more elaborate processes. Our hope in the direction of chemistry ought to be unlimited, seeing that changes in the urine must correspond to intimate changes in the organs and textures.

To return, however, to physical diagnosis, the fidelity with which the characters of a disease are often marked in its tissue changes must excite equally our wonder and attention. It may be no more than the tint of the morbidly vascular part—a condition apparently the most trival and accidental; and yet it returns, with unerring certainty under the like conditions, as our guide to diagnosis. The multiplied generations of the vaccine vesicle from one lymph, maintaining to this day, in all respects, the characteristics of that which first arose under the hand of its immortal discoverer, is one of the strongest evidences that I could adduce of such fidelity, and may well encourage us to the investigation of physical signs as an evidence of the pathological causes to which they are due.

But our diagnosis is not always of one morbid state. There may be grafted upon some special diathesis, as of tubercle or of gout, the effects of alcohol, syphilis, mercury, and miasm. No doubt even more complicated instances could be given, but this will suffice to show the character our diagnosis must take before we can proceed to treatment.

As health is our object, or as near an approach to it as circumstances admit, hygiene and therapeutics claim the last and highest place in our thoughts. Happily, at length, hygiene has gained strength enough to maintain an independent vitality as a science. To know and counteract the causes of disease before they become effective is evidently the triumph of our art; but it will be long before mankind will be wise enough to accept the aid we could give them in this direction. Ignorance of the laws of health and temperance of all kinds are too powerful for us. Still we shall continue to wage against them an undying crusade; and truly we may to-day congratulate ourselves that no crusade ever called forth more able and devoted warriors than are engaged in this.

The diseases of the young are in large part preventible diseases.

Epidemics carry off in great proportion the healthy members of a community.

It is futile, if not worse, to speak as some do of leaving diseases to work out their ends as agents of a moral police. Medicine allows no such prerogative to our judgment. It is enough for us that that diseases prevail to stimulate our best efforts for their prevention, without our asking a question beyond.

Nothing can stimulate science more to the investigation of therapeutics than the feeling that the diseases calling for treatment prevail in spite of our best efforts to prevent them. Where hygiene fails, properly commences the work of therapeutics; but it is painful to find ourselves occupied in making feeble and often useless efforts to combat the effects of a poison which might perhaps have been stamped out in its beginnings.

The strength of modern therapeutics lies in the clearer perception than formerly of the great truth that diseases are but perverted life-processes, and have for their natural history not only a beginning, but equally a period of culmination and decline.

In common inflammatory affections, this is now admitted to be the all but universal law. By time and rest, that innate *vis medicatrix*,

> "Which hath an operation more divine
> Than breath or pen can give expression to,"

reduces the perversions back again to the physiological limits, and health is restored. To this beneficent law we owe the maintenance of the form and beauty of our race in the presence of all that tends to spoil and degrade it. We cannot pass through the crowded streets and alleys of our cities without recognising proofs of this in the children's faces, in spite of all their squalor and misery; and, when we remember what this illustration in all its details reveals, we may well take heart, even where our work seems most hopeless. The effects of disease may be for a third or fourth generation, but the laws of health are for thousands. Bearing this in mind, I have often had occasion to remark in practice how little we can estimate the reparative powers, however able we may be to discover diseases. This is, perhaps, never more striking than in some chronic affections, which, having resisted all our efforts at cure, may have been abandoned in despair, or at length placed upon some indifferent treatment. Under these circumstances, with what interest have most of us day by day watched the lessening deviations of disease, until the balance of health has been again all but restored, unstable though the equilibrium thus gained may, from the nature of the case, have been.

Therapeutics were at one time directed only by two ideas—of strength and of weakness. Sthenic and asthenic expressed in general terms the morbid conditions requiring treatment. Of the same import, but of older date, were the thoughts derived from the then current theory of phlogiston, and the terms phlogistic and anti-phlogistic still linger in Medical treatises. From a better physiology we have learnt that perverted functions in disease, however exaggerated, are due to failure, and not to excess, of the vital powers.

Organic strength lies nowhere but in the vital circle of nutrition and function.

A rapid pulse and active delirium, like the increase of the animal heat, are signs of deficient *balance-power*—a power which we have been so slow to recognise in living organisms, that we have not yet an accepted expression for it. How different seems to us at the present day the value of the symptoms which were formerly considered indicative of strength.

For an increase of temperature we see but increased waste. Every degree of rise in the thermometer indicates to us a corresponding decline in that nervous control which regulates the functions in health, and this decline is the more important, if it be true in complex organisms, as it is in simple machines, that this combination which limits the mere working forces is the highest and most characteristic. The terms "strength" and "weakness" are valueless, as expressive of conditions so complicated as those of disease. They are deduced for the most part from the feelings of the patient, and a few superficial phenomena. They are (empty) idols, impressive only by the extent of their emptiness. Surgical treatment was greatly advanced by the imaginary discovery of the sympathetic powder, which being placed upon the instrument inflicting the wound, the injured part, by time and rest, was allowed to recover under the simplest means. We need now to import into Medicine a large part of the best Surgical principles so deduced. The Surgeon is contented to place a wounded part under the conditions of physical and physiological rest, and after attention to hygienic conditions, the *res non naturales* of our forefathers, to abide the result. This, no doubt, expresses the largest part of our treatment of common acute disease. We now know that we cannot directly control the morbid processes in pneumonia, pleurisy, or pericarditis; we know further that the means formerly considered essential to the cure of these diseases, tested by better clinical observations, were either useless or pernicious—that instead of favouring the plastic processes in inflammation, whereby the normal decline of the disease was promoted, the effused material was often more or less degraded and spoilt by the treatment employed, and remained in the affected parts, either as a foreign body, or in different degrees approaching thereto.

And this must always have been so had we continued to regard these effusions as simply foreign products; but as soon as we perceived their physiological relations, and that they had a life like the tissues from which they sprang, they took a different aspect, and it became our duty, often without much interference, to stand by and watch this course to the end. With an audience like the present, so capable of supplying the proper safeguards to these expressions, I am not likely to be misunderstood, as if the duties of the Physician were of a negative kind. There is a sufficient sphere for our activity in ways too numerous for me to mention—in the relief of symptoms where the lesion may be left to its natural course; in the treatment of the lesion itself, where we have means adapted to it, and of these we have many; in maintaining the health when the degeneration or lesion is incurable. Time would fail me if it were otherwise proper in this place to enumerate and enlarge upon the valuable applications of Medicine. The discovery of disease, the alleviation of its symptoms, the obviating its inroads, the placing our patient under favourable conditions to bear it, the guarding him against what would be injurious, and the administration of remedies often in themselves effectual for its removal, are surely services of no unimportant kind.

There is probably no human work which daily confers greater good upon society than does ours; and when we consider that from the ranks of our Profession the chief cultivators

of modern sciences have sprung, whether we speak of botany, comparative anatomy, chemistry, physiology, biology, hygiene, or social science, we may feel some justifiable pride, and be encouraged, in spite of all failures, to go on, assured that our future must be one of ever-increasing usefulness and honour.

REVIEWS.

RECENT WORKS ON GYNÆCOLOGY AND OBSTETRICS.(a)

The list of books before us contains works of considerable value by one English, one Scottish, three American, one German, and one Belgian accoucheur of eminence. It would be utterly impossible for us to attempt to lay before our readers an abstract of the contents of these works, and we therefore propose to give the chief prominence to some of those which are the least likely to have a large circulation in this country through the Medical book-clubs, and which are, at the same time, of sound practical value. The title-pages of the three American works afford evidence that in every case the writer holds official positions which give him a claim to the ear of the Profession.

The second chapter of Dr. Thomas's work treats of "the Etiology of Uterine Disease in America," and, as the same causes are for the most part in operation in our own country, we shall commence our article with a few words on this subject. Amongst the most prominent and universal causes he enumerates—

Want of fresh air and exercise.
Excessive development of the nervous system.
Improprieties of dress.
Imprudence during menstruation.
Prevention of conception and induction of abortion.
Marriage with existing uterine disease.

Although, no doubt, we are beginning to recognise the importance of fresh air and exercise for the well-being of girls as well as boys, there can be no question that in a vast majority of girls' schools the daily mechanical and objectless walk, from the given order of which no girl ventures to deviate, is a form of exercise scarcely preferable to so much time spent on the treadmill. The ambitious spirit that in America has fostered a system of education which abnormally stimulates the nervous system, while it neglects the muscular, has led, in girls more than in boys, to disastrous results.

"Girls of tender age," he observes, "are required to apply their minds too constantly, to master studies which are too difficult, and to tax their intellects by efforts of thought and memory which are too prolonged and laborious. The results are rapid development of brain and nervous system, precocious talent, refined and cultivated taste, and a fascinating vivacity, on the one hand; a morbid impressibility, great feebleness of the muscular system, and marked tendency to disease in the generative organs, on the other." These remarks, we regret to say, apply with equal if not greater force to many English schools superintended by ladies of high conscientiousness, but unfortunately ignorant of the most elementary principles of hygiene. It would be of indescribable benefit to the rising generation of girls and their successors if some kind of Medical inspection of schools were periodically insisted on, it being the duty of the inspector to point out any errors he might see or learn on inquiry regarding ventilation, bathing arrangements, diet, exercise, the amount of class work, etc. The facts recorded by Mr. Stanton and the other gentlemen whose "Reports on Schools" are now in course of publication, forcibly point at the necessity of some such inspection as that we are suggesting; and the additional fact that most of the lady-superintendents of the higher classes of schools most positively refused his proffered inspection confirms our view, if possible, even more strongly.

There can be no question that, however graceful the dress now adopted may be, it is conducive to the development of uterine disease. The diaphragm being fettered in its action by the strong pressure which the stays exert on the region of the waist, and by which they prevent any of the natural lateral expansion, presses the intestines directly downwards upon the uterus, which it thus displaces from its normal position, either forcing it on the floor of the pelvis or laying it across it. In addition to this pressure, there is the weight of the crinoline (from five to ten pounds, according to Dr. Thomas), which must be supported by the abdominal walls and the hips. The uterus is consequently exposed to an abnormal pressure during a great majority of the twenty-four hours. The extreme mobility of the uterus and the readiness with which it may be affected by pressure are well shown by "the fact that in examining it by Sims's speculum, if the clothing is not loosened around the waist, the cervix is thrown so far back into the hollow of the sacrum as to make its engagement in the field of the instrument often very difficult, and that attention to this point in the arrangement of the patient will at once remove the difficulty. When the uterus is exposed by the speculum it will be found to ascend with every expiratory effort, and to descend with every inspiration. An organ so easily and decidedly influenced as to position by such slight causes must necessarily be affected by a constriction which, in autopsy, will sometimes be found to have left its impression of the ribs upon the liver."—Pp. 55—56.

When a woman has succeeded, by years of imprudence, in altering the position of her uterus, the act of sexual intercourse becomes a source of disease. The axes of the uterus and of the vagina are normally so inclined as to provide for the passage of the male organ into the posterior cul-de-sac below the cervix, which thus escapes injury. But if the uterus be forced down, as it now commonly is, even to the distance of one inch, the position of the parts is so altered that the cervix becomes exposed to direct injury by intercourse. "How often," says Dr. Thomas, "do we see metritis occur just after matrimony, even when no excesses have been committed! It is not an excessive indulgence in coition which so often produces uterine disease, but the indulgence to any degree on the part of a woman who has distorted the natural relations of the genital organs." (*Op. cit.* p. 57.)

Dr. Thomas, after describing the dangers which very often arise from imprudence during menstruation (when, as he very truly observes, "ordinary prudence would suggest that the body should be well covered, that the congested organs should be left at rest, and that exposure to cold and moisture should be sedulously avoided"), and the injury that may arise from a parturient woman leaving her bed too early, and thus disturbing the process of involution for which perfect rest is necessary, goes on to the unattractive but important subjects of prevention of conception and induction of abortion as causes of uterine disease. He passes them over, however, very briefly, and we content ourselves with a mere reference to the subject. We suspect that the former does not prevail to any great extent in this country; the latter is, however, carried on in our large towns to an extent that would utterly astonish our respectable population, excepting our Professional brethren. While we have the decency to throw a shade over this crime, in America, on the other hand, its publicity seems to be sought after. Dr. Thomas tells us that in one number of one of the most respectable and best edited New York daily papers—one which finds its way into the first circles of society and into the hands of maidens and matrons throughout the land—he counted "fifteen advertisements well known as being those of Professional abortionists—men and women who make a business of infantile murder." (P. 59.)

Physicians often recommend (although perhaps less usually than formerly) marriage as a cure for uterine disease. Now that we can discriminate more accurately than our predecessors the different forms of uterine disease, we know that

(a) 1. "Researches on Obstetrics," by J. Matthews Duncan, A.M., M.D., Lecturer on Midwifery in Surgeons' Hall Medical School, Edinburgh, etc. Pp. 467. 1868. Edinburgh: Adam and Charles Black.

2. "The Diagnosis, Pathology, and Treatment of the Diseases of Women, including the Diagnosis of Pregnancy," by Graily Hewitt, M.D. Lond., Professor of Midwifery and Diseases of Women at University College. Second edition, revised and enlarged. Pp. 700. 1868. London: Longmans.

3. "A Practical Treatise on the Diseases of Women," by T. Gaillard Thomas, M.D., Professor of Obstetrics and the Diseases of Women in the College of Physicians and Surgeons, New York. Pp. 625. 1868. Philadelphia: Henry C. Lea.

4. "The Principles and Practice of Obstetrics," by Gunning S. Bedford, A.M., M.D., Professor of Obstetrics, the Diseases of Women, and Clinical Obstetrics in the University of New York. Fourth edition, revised and enlarged. Pp. 763. 1868. New York: Wood and Co.

5. "Obstetric Clinic, a Practical Contribution to the Study of Obstetrics and the Diseases of Women and Children," by George T. Elliot, jun., A.M., M.D., Professor of Obstetrics in the Bellevue Hospital Medical College, New York. Pp. 458. 1868. New York: Appleton and Co.

6. "Résumé du Cours d'Accouchements donné à l'Université de Gand," par le Professeur van Leynseele. Pp. 457. 1866. Gand: Muquardt.

7. "Die Nerven der Gebärmutter und ihre Endigung in den glatten Muskelfasern, ein Beitrag zur Anatomie und Gynäkologie," von Dr. F. Frankenhäuser. 1867. Jena: Manka.

8. "Pathological Anatomy of the Female Sexual Organs," by Julius M. Klob, M.D., Professor of the University of Vienna. Translated from the German by Joseph Kammerer, M.D., and Benjamin F. Dawson, M.D. New York: Moorhead, Simpson, and Bond. London: Trübner. Pp. 296.

some of these diseases are amended, but others aggravated, by the parturient act. "A displacement without inflammation, a constricted cervix which causes dysmenorrhœa, a pure endo-metritis of neck or body, or an inactive state of the ovaries which results in amenorrhœa, may be relieved; but parenchymatous metritis, peri-uterine cellulitis, or pelvic peritonitis will very often produce evil results after labour, and very generally return with renewed violence as soon as involution has been accomplished." (P. 59.) We fully agree with Dr. Thomas in his opinion that the advice to marry, when given empirically, is hazardous in its results.

If the various causes of uterine disease which we have here enumerated were avoided—if women could be persuaded to dress and to live generally in accordance with the dictates of common sense, and at certain periods to be duly cautious, these diseases might assuredly be diminished to a very great extent. Unfortunately, however, women themselves, both mothers and daughters, prefer the fragile artificial state to which they have reduced themselves, and have a horror of good physical development as being coarse and rustic; and until some more correct views can be forced into the minds of women generally, the Physicians who specially study this department of Medicine will have abundance of employment.

As none in the whole list of female disorders is more common than *amenorrhœa*, we shall make it a subject of comparison, and consider the different way in which it is treated by an American and an English author. For the proper performance of the menstrual function, three elements, Dr. Thomas observes, must exist in a perfect state of integrity—viz., 1st, the uterus, ovaries, and vagina must be perfect in form and vigour; 2nd, the blood must be in its normal state; and 3rd, the nervous system governing the relations between the uterus and ovaries must be unimpaired in tone. "Any influence disordering one or more of these may check ovulation, the great moving cause of the function, prevent the degree of sympathetic congestion necessary for rupture of uterine vessels, or oppose the discharge of blood which has been effused" (p. 480). Hence amenorrhœa may, according to Dr. Thomas, arise from any of the following conditions:—1. *Abnormal states of organs of generation*, including absence of uterus or ovaries, rudimentary uterus, occlusion of uterus or of vagina, metritis or endometritis, super-involution, pelvic peritonitis, atrophy or cystic degeneration of both ovaries. 2. *Abnormal states of the blood*, including chlorosis, plethora, blood-state of phthisis, of cirrhosis, of Bright's disease, etc.; and 3rd, *abnormal state of the ganglionic nervous system*, including atony from mental depression, from indolence and luxury, from want of fresh air and exercise, and from constitutional disease, as phthisis, etc., and absence of stimulation from non-performance of ovulation.

By the term *atony of the nervous system* in this classification, Dr. Thomas means the same condition which another eminent American Physician, Professor Hodge, of Philadelphia, has described under the name of *sedation*. "It consists in a decrease of the excitability, vigour, and activity of the nervous agency which controls the functions of different organs, and has for its cause physical and moral influences."

Dr. Graily Hewitt arranges the disorder under more varieties than Dr. Thomas. He considers separately (1) amenorrhœa in which there is no secretion, (2) amenorrhœa with retention, and (3) suppression of menstruation, which may be either sudden or gradual; and, in noticing the causes of these varieties, refers the first to chlorosis or, in rare cases, defective formation of the generative organs, the second, of course, to imperforate hymen, while sudden suppression most commonly arises from the feet getting wet or from a chill received in any other way, from fright, or from the reception of distressing news, and sometimes from sexual intercourse, gradual suppression may arise from constitutional and local causes. The chief constitutional causes are "long-continued anxiety of mind, plethora, chlorosis, anæmia, severe hæmorrhages, or long-continued discharges from the various mucous surfaces, and deposition of tubercle" ("Diseases of Women," p. 406); while the chief local causes are diseases of the ovaries, chronic peritonitis, chronic hypertrophy, fibrous tumour, etc.

Turning from the causes to the treatment, we find Dr. Thomas giving the following suggestions for cases where a rudimentary or atrophic uterus or superinvolution is discovered as the source of the affection. "The uterus should be developed by local stimulation and distension. Once every week or every two weeks it should be fully distended by a tent, in order that an increase of nutrition and consequent increase of volume and capacity may be excited. When this plan is not in operation an intra-uterine galvanic pessary may be kept *in utero* for the furtherance of the same end. It is astonishing how much development may be obtained by a persevering practice of this plan. In many instances it will restore the uterus to its original size, and cause a return of the menstrual flow. But it often requires considerable time to bring about so flattering a result." (P. 483.) We confess that we wish our author had entered more in detail into these cases, and should like to know the number of times he has thus treated an atrophic uterus. To whom, and why, is the result *flattering* — to the lady or to Dr. Thomas? Dr. Hewitt remarks that "the cases requiring this method of treatment [such as the intra-uterine galvanic pessary, which was originally suggested by Simpson in 1861] are very exceptional indeed," but that, when they do occur, the employment of faradisation promotes good results. In the case of infantile uterus in a girl aged 20, who had never menstruated, this agent was used under his direction in University College Hospital for some weeks. "The patient became vastly improved by the treatment adopted, and left the Hospital for benefit of change of air, but the good issue of the case remains to be seen." (Hewitt, *op. cit.* p. 408.)

Dr. Thomas concludes with a short sketch of the local stimuli which may be resorted to with benefit after the general condition has been improved by constitutional means. Those which he regards as most efficient are the passage of the sound once every day for three or four days before the expected time, tents of sponge or sea-tangle, cupping the cervix uteri, electricity, stimulating enemata, and baths. "As an excitant of the menstrual flow, enemata of very warm water impregnated with chloride of sodium, aloes, or soap, constitute a valuable resource. Not only does the medicinal substance irritate the uterine nerves, but the warm fluid brought in close contact with the uterus excites a flow of blood to it. Hip-baths and pediluvia have long been resorted to; they should be prolonged, and as warm as the patient can bear them." (*Op. cit.* p. 486.)

(*To be continued.*)

OBITUARY.

JOHN ELLIOTSON, M.D., F.R.S., F.R.C.P.L.

The death of Dr. Elliotson now will leave no void in the Medical world, will make no stir in the world of science, nor will it, we imagine, excite any wide-spread emotion of any kind, save, perhaps, such as attends the awakening of memories of old admirations, old affections, and old regrets. In the minds of some of our readers, indeed, our announcement that Dr. John Elliotson died last week will only, or chiefly, cause surprise at learning that he had lived till then; but in very many it will stir up reminiscences of the days when he was, perhaps, the most brilliant light in the Profession, the most eminent and popular of teachers of Medicine, and one of the most successful Physicians in the metropolis, and, at the same time, it will recall the regrets, the almost dismay, caused by his wilful and sudden fall from the high position he held as a cultivator of scientific and legitimate Medicine some thirty years ago—a fall so great and so complete that it may be said that he was from that time dead to true Medical science and art.

John Elliotson was born in London in 1792, or thereabouts, at the house of his father, a successful chemist, living at the sign of the Golden Key, in Blackman-street, Borough. He was educated at home, under the tutorship of the parish clergyman, and in due time proceeded to Edinburgh, then the chief Medical School in Great Britain. There he distinguished himself as a most zealous and indefatigable student; physiology is said to have been his favourite pursuit, and for its sake he studied hard to acquire a knowledge of German, in those days a very much more rare accomplishment of Englishmen than it now is, and he acquired so good a command of it as to enable him later to publish a translation of Blumenbach.

After spending three years at Edinburgh, he went for other three years to Cambridge, in which University he took his degree in Medicine, and then returning to London, he attached himself to the Borough Hospitals, and devoted himself with his wonted ardour and industry to the study of disease in their wards. In 1816 he became a candidate for the office of Assistant-Physician to St. Thomas's Hospital, but was beaten by Dr. Williams. In 1817, however, another

vacancy occurred, and he was successful. Desirous of making his acquirements and powers known, he applied for leave to read lectures on Forensic Medicine, then a new science. The Medical School of Guy's and St. Thomas's was at that time, however, entirely in the hands and under the government of the men of Guy's; no Physician of St. Thomas's was permitted to lecture either at Guy's or at St. Thomas's, and Dr. Elliotson's request was refused. He then went to Mr. Grainger's School of Medicine, and, in 1821, began to lecture there on Materia Medica. In 1823 one of the Physicians to St. Thomas's Hospital died, and Dr. Elliotson, of course, became a candidate for the vacancy; but the independent course he had taken as a lecturer had offended the powers at Guy's, and he was warmly opposed, and only succeeded on signing a written promise that, though forbidden to lecture within the walls, he would not lecture even anywhere without; he had also to suddenly stop in the middle of his course of lectures at Mr. Grainger's school, and he then obtained the Physicianship. There was, however, so strong a feeling as to the injustice and impropriety of the condition thus extorted from him, that a meeting of governors was held, and after a hot discussion he was absolved from his promise, the written compact was destroyed, and an official notice sent him that he was free to lecture wherever he thought proper. He thus won his fight, and at the same time won the independence of the St. Thomas's School. In 1825 the two schools were finally separated, and in that of St. Thomas's Elliotson for some years took a principal part, being co-lecturer with Dr. Williams on the practice of Medicine. Throughout the many years during which he was Physician to the Hospital he was most zealous and indefatigable, alike in the wards of the Hospital and in the theatre of the School, and gradually achieved an eminent reputation as a bold, original, and successful Practitioner and teacher. He published his translation of Blumenbach's Physiology, which quickly ran through several editions, and a work on the Diseases of the Heart, and in 1829 he delivered the Lumleian Lectures at the College of Physicians, taking for his subject "The Recent Improvements in the Art of distinguishing the various Diseases of the Heart." He was slow, nevertheless, in obtaining Professional success. All his labours and his books failed to bring him practice till one of the Medical journals published his clinical lectures. He himself has told us this. He says: "I published work after work, edition after edition, and paper after paper was honoured with a place in the *Transactions* of the first Medical Society in Europe, ... but in vain. In 1828 my practice was no more lucrative to me—was as short of my actual expenses as it had been in 1818. At that time the *Lancet* was pleased to publish, now and then, a clinical lecture delivered by me at St. Thomas's, and my practice at once doubled. The following year it published the greater part as I delivered them, and my practice doubled again. Last season it published them all, and my practice was doubled a third time." A striking testimony this to the value and importance to Medical men, at one time so hotly disputed, of the free publication by the journals of their Hospital teaching and practice!

In 1831 his connexion with St. Thomas's Medical School came to an end, and he was appointed Professor of Medicine in the University of London. His reasons for resigning his chair at St. Thomas's, and for accepting office in the University, are also given in the address from which we have already quoted above (Introductory Address delivered at the University of London, October, 1831), and they are very characteristic of the man. He had resigned the lectureship in the summer of 1830, and consented to lecture the next winter "only at the solicitation of his principal colleagues." The increasing demands of private practice had made the great distance of the Hospital from his private residence seriously inconvenient. But this was not all. "I was merely a joint-lecturer," he says, "and I fancied that while I remained thus yoked great success was impossible. But one single circumstance made my resignation a duty. I discovered that my colleague, with whom I am on the very best terms, and who is a most amiable man, in the complete course which, according to our arrangement, he delivered during the season, and I in mine, upon the same subject, inculcated both principles and practice so diametrically opposite upon almost every subject, that, to use his own expressions, 'we must have differed *toto cælo*, both as physiologists, pathologists, and therapeutists, in many most essential points of doctrine and practice.' To arrest teaching so unprofitable, so perplexing, so disgusting to the student, to arrest so ridiculous an exhibition, required no consideration. It was necessary for one to withdraw, and, as the junior, I felt it to be my duty to be the one. Thus disengaged, I heard that this chair was vacant, and I instantly desired to occupy a post so honourable—a post affording so ample an opportunity for disseminating a knowledge of my Profession." All the other Medical Schools in the metropolis were "far too limited in plan, and the instruction imparted in them of necessity superficial," while in the University of London he saw the opportunity for making a really great and complete Medical School, like the great Continental and Scottish schools; and he would reign alone and supreme in the chair of the principles and practice of Medicine. At this time the Medical School of the University possessed no Hospital, its students attended the wards of the Middlesex Hospital, and Dr. Elliotson retained the Physicianship at St. Thomas's; but the Council of the University felt very strongly the absolute necessity of having an Hospital of their own, and in this feeling had a most warm and urgent supporter in Dr. Elliotson. In 1834 University College Hospital was opened; Dr. Elliotson was appointed one of the Physicians to it, and Professor of Clinical Medicine, and was lost to the Hospital in the Borough. He had now such power and opportunities, such a field of work, as he had panted after, and he soon attained European fame and the height of his popularity. As a teacher he was, perhaps, the most popular of the time, and he raised the number of students in the class of Medicine from 90 to 197, while at the same time he commanded one of the largest and most lucrative practices in London. But he had reached his zenith, and he was soon, not to set, but to fall, and, as we have said, to fall rapidly and completely. Baron Dupotet visited the metropolis, and held *séances* to exhibit the wonders of mesmerism. At these *séances* Dr. Elliotson attended, was fascinated by the astounding manifestations, and soon began to make experiments for himself, and next to practise mesmerism in the wards of University College Hospital. In June, 1838, the attention of the Medical Committee of the Hospital was directed to the matter, and, after some consideration, they requested Dr. Elliotson to refrain from further "public exhibitions" of mesmerism, stating at the same time that they had no wish to interfere with its use as a remedial agent when he chose to employ it. To this Dr. Elliotson replied that no consideration would induce him to give up his investigations into animal magnetism; that he had not made a public exhibition of it, but had only employed it remedially; but as the development of new facts in it might be expected, he had given clinical lectures and demonstrations upon it to the pupils, and these had been attended by large numbers of eminent and scientific men, but only on special invitation and at their own urgent request. He would abstain, however, from further exhibitions in the theatre, though he should forward to the Committee the names of gentlemen who might in future apply to see the experiments, and the Committee might sanction their admission or not as they chose. Shortly after a list of applicants was sent to the Committee, who simply replied that they could not give their sanction to any exhibition so entirely foreign to the objects of the Hospital. In answer to this, Dr. Elliotson asserted his full belief in mesmerism, and his conviction that it was of great physiological and therapeutical importance, and that his experiments would cast a light over the mysteries of Nature equal to, if not greater, than that elicited from all other discoveries. The exhibitions in the theatre of the Hospital ceased, but mesmerism was practised in the wards as much as before. The effects of mesmerised water, gold, and other substances on two girls of the name of Okey were exhibited to small parties, and the clinical clerks were employed for some time daily in manipulations upon epileptic and other patients. In October and early in December the House Committee of the Hospital felt it incumbent on them to take into consideration the case of Elizabeth Okey, who, it appeared, had been, with the exception of about one month, in the Hospital ever since April, 1837. At one of the meetings of the Committee early in December Dr. Elliotson attended, and said it was necessary still to keep Okey in the Hospital, as she was too ill to be discharged. In answer to the questions of the Committee, he stated, among other things, that she was now free from attacks of delirium, except when these were brought on by mesmerism; and he acknowledged that, having heard from the nurse of the ward that Okey had sometimes given opinions as to the issue of certain cases then under treatment, he had taken her into the men's ward in the twilight, where she had prophesied respecting the termination of some of

the diseases, and these prophecies were written down, and given in a sealed paper to the apothecary. The nurse, on being questioned, said that, on approaching the bed of a certain patient, Okey gave a convulsive shudder, and, when asked the reason, replied that "Great Jacky (or Jack) was on the bed," explaining that "great Jacky" was the "angel of death." At the bedside of another patient she shuddered slightly only, because "little Jacky was seated there." Soon after, the Council of the College, on account of these proceedings, requested the Committee of the Hospital to take steps for the immediate discharge of Okey and the prevention of further mesmerism in the wards. The Committee certainly did not act with any harshness on these resolutions of the Council, for they "respectfully requested Dr. Elliotson to discharge Okey;" but the Doctor, learning what were the resolutions of the Council, immediately sent in his resignation of all his appointments.

Some time after he sent to one of the students a very long letter of farewell to them, and requested that a meeting of the students might be called, and his letter read to them. The gentleman to whom it was confided did call together his fellow-students, but only to state that, having carefully perused the ex-Professor's letter, he had felt it to be his duty to respectfully return it to the writer, in order that he might get some one else to make it public. He had felt compelled to act thus in consequence of the reflections which it contained on the character and conduct of several of Dr. Elliotson's late colleagues and friends of the College.

This we must regard as the close of Dr. Elliotson's career as a Physician. He did once more appear in a character which ought only to be assumed by pure cultivators of scientific Medicine, for in 1846 he was Harveian orator at the College of Physicians, the nomination to which he owed simply, we imagine, to his standing in the roll of the Fellows of that College. But indications of his beliefs and practice after 1839 must be looked for in the pages of the *Zoist* and like journals, and in the annals of the Mesmeric Infirmary. That he was thoroughly honest and sincere in his belief in mesmerism is not to be doubted. He sacrificed to it a present of position, place, and power such as any man might envy, and which must have been especially dear to a man of his temperament and endowments, and a future as bright and promising, to say the least, as that of any Physician of his day. But he was completely enthralled by what he believed to be the true manifestations of the power of mesmerism. He saw before him a vista of discoveries in the hidden mysteries of nature and of life, and of triumphs over disease, such as would make all past discoveries and researches pale their ineffectual lights, and, with his wonted ardour, self-confidence, and self-assertion, he saw himself the apostle of the new science, and would not brook opposition or restraint. With a like confidence and zeal he had made himself the teacher and prophet of phrenology as a great science, and if either phrenology or mesmerism had possessed the seeds of truth and vitality, he, if any one, could have fostered and forced them into growth and luxuriance. But where are they both now?

Before straying aside after false lights, however, Dr. Elliotson had done good and valuable work, which will live and make his name remembered long after his errors are forgotten. His translation of Blumenbach's Physiology was enriched and enlarged by notes and illustrations to a degree and extent only surpassed by Baly's Müller in later years. He may almost be said to have begun clinical teaching in the London Schools, and as a clinical teacher and lecturer he was successful in a rare degree. He discovered the value of prussic acid in gastrodynia, in arresting vomiting, and in enabling the stomach to tolerate medicines which it otherwise would have rejected. He was the first in this country to report on the use of quinine, and to show the safety and value of giving it in large doses. He taught us the use of carbonate of iron in chorea, the extent to which we may push the employment of iodide of potassium, and its diuretic properties. The general inertness of the antimonial powder of the Pharmacopœia was first pointed out and proved by him, and he added much to our knowledge of the uses of creosote, and of the value of sulphate of copper in non-inflammatory diarrhœa. He showed the use of strong solution of nitrate of silver in erysipelas, and of acupuncture in neuralgia. He was the first to prove that glanders is a disease communicable to the human subject, and that in perforation or rupture of the stomach pain does not necessarily continue till death. Papers on all or most of these subjects may be read in the *Transactions of the Medico-Chirurgical Society*, to which he was a frequent contributor up to 1833, when he was President of the Society. The *Transactions* contain also interesting and instructive papers of his on "Fatty Discharges from the Alimentary Canal," and on Fallopian-tube pregnancy. He was one of the earliest teachers of auscultation in this country, and the first to notice and point out several important facts in auscultation and percussion, such as the varying effects of posture in listening to a bellows murmur; the fact of a great difference existing in the sound of the same phenomenon when listened to at different parts of the chest; the importance of making patients hold their breath during auscultation of the heart; and the occurrence of a metallic tinkling in the stomach, similar to that in the chest, when the stomach is greatly distended.

This indication of his labours should suffice to show that the good work he did may well make us forgive and forget his mistakes; and much more of what the man was may be learned from what probably is the best monument to his memory and fame—the volume of his lectures published in 1829, and edited by Dr. Rogers, under the title of "The Principles and Practice of Medicine, founded on the most extensive experience in Public Hospitals and Private Practice, and developed in a Course of Lectures delivered at University College, London."

In the few remarks that follow, we can but give the impressions which the later part of Dr. Elliotson's career produced on the circle of friends who shared his opinions, and who adhered to his fortunes after what we may call his separation from the ordinary walks of the Profession.

Dr. Elliotson and his friends never could divest themselves of the feeling of grief, annoyance, and disappointment at the failure of his efforts to bring the Medical Profession to his own way of thinking about mesmerism. Look at the man, they would say: was there ever one more painfully laborious in collecting facts and tracing them to their source? See what pains he took, and how successfully, to investigate the source of glanders, in the teeth of the assertion of eminent authorities that it was impossible that it could be communicated to man. Let it be remembered that one of the patients whom Elliotson pronounced to be glandered was a tailor, and it was through his own persevering researches that he ascertained that this man had been petting a glandered horse. Another patient's only apparent connexion with animals was a rabbit-hutch, but Elliotson found out that a glandered horse was stalled on the other side of the boards against which the hutch was built. The same caution, and resolute determination to get to the bottom of phenomena, made him conscientiously slow in prescribing, and led him to repeat his visits again and again before determining on his treatment. Is it likely that this was the man to be deceived by the phenomena of mesmerism?

It is contended that the histories of painless operations under mesmerism which Dr. Elliotson and his friends were the means of bringing before the Profession were the precursors and real foundation of all that has been since done in the discovery of physical anæsthetics; moreover, that some "orthodox" members of the Profession, in their zeal against mesmerism, went so far as to assert the impossibility of occurrences which are daily witnessed in patients under the influence of chloroform—in particular that, however wrong mesmerists might be in the explanation of the phenomena of mesmeric sleep, they were not so wrong as many who denied the existence of such phenomena, or, like Dr. Marshall Hall, affirmed them to be contrary to the laws of the excito-motor nervous system. We are willing to admit this—a little *à priori* dogmatism, or spirit of partisanship, may have been detectible in the opposers of mesmerism—but this is no admission of the truth of mesmerism as a positive objective existence in nature acting independently of the consciousness of the person operated on, which we cannot believe it to be.

Dr. Elliotson was indefatigable in his experiments on the application of mesmerism to the relief of disease; but we are not conscious of a fact of generally useful application that stands out in relief. He believed largely in its general soothing and restorative virtues, and that it lulled the pain and promoted the healing of ulcers. One investigation of the old sort, however, we may mention, which, if successful, would furnish us with a remedy for a most painful complaint for which we much want one. He believed that he had discovered podophyllin to be a remedy for severe neuralgia, and especially for that form which follows herpes zoster; but the

number of cases was not large enough to establish the fact to his complete satisfaction.

In person Dr. Elliotson was below the middle height, of very dark complexion (though not of Jewish parentage, as was commonly asserted). He was lame from the result of an accident he met with in the upsetting of his carriage when travelling in Germany in 1828, and which produced an obscure injury of the knee-joint, which Sir A. Cooper believed to be rupture of the transverse ligaments. In character he was resolute and original. He was one of the first Physicians who discarded breeches and silk stockings, and dressed like the rest of the world, and this in 1826 was a bolder change than it may seem now. He was one of the first also who wore the beard. Slow and painful in diagnosis, he was most resolute in practice, and carried out the antiphlogistic system with vigour where he thought it necessary. He could not give in his adhesion to the doctrines of Dr. Todd, nor believe in the universal use of stimulants. In cholera he gave calomel largely, and repudiated stimulants and opium. The writer of this note bled a patient, in 1840, for urticaria, under Dr. Elliotson's directions, and that was not a rare example of the practice of an earlier day. When once he had made up his mind he felt it his duty to avow his convictions and abide by the consequences, be they what they might be. His consolation throughout his Professional adversity was, *magna est veritas et prævalebit.*

Like many other professional men, Dr. Elliotson was credulous in money matters, and met with large losses through investments to which he had been persuaded to trust his property. Hence, in the spring of 1865, he broke up his establishment in Conduit-street (tailors now haunt the classic abodes of Physic), and took up his residence in the family of Dr. E. S. Symes, the accomplished Physician to the Parochial Infirmary of St. George, Hanover-square, who was one of his oldest pupils, who had been his clinical clerk at St. Thomas's in the zenith of his fame, had assisted in his investigations, and reported his lectures for publication, and ever since had been his zealous disciple and most affectionate friend. There, soothed by all that care and kindness could effect, he passed tranquilly through the last stages of his life. He never left the house after the winter of 1865-66, then became by degrees confined to his room. The intense heat of this summer at last prostrated him: he was too feeble to sit upright in his chair, took to his bed, his appetite failed, and he died on July 29. He was buried at Kensal-green August 4. For many years he took neither wine nor spirits, not as believing them wrong, but unnecessary for himself; but he derived great comfort from their use again when age and weakness came on.

One word as to his religious opinions. Thirty years ago, observations on the necessity of brain for the manifestation of mind, especially if propounded with something of defiance, would be sure to earn for any man the character of materialist and infidel. Dr. Elliotson was neither. He used often to attend the lectures of Mr. Fox at Finsbury Chapel, from his admiration for the man, and his opinions were somewhat free; nevertheless he was educated in the Church of England, and never seceded from it, and in his later years, amidst the buffetings of adversity, found his greatest comfort in the solid consolations of Christianity. The Bible was his constant companion, and he died in charity with all men.

Let us add that Dr. Elliotson, though he considered them deserving of investigation, yet never gave in his adherence to the wonders of spiritualism, so-called. A foolish story has found its way into the papers about his having met Home, the spiritualist, at Dieppe, but the meeting was as casual as any other at that much-frequented bathing-place.

THOMAS ELD BAKER.

We regret to record the decease of Thomas Eld Baker, Esq., which took place at his residence, 76, Porchester-terrace, on the 23rd ult. The deceased gentleman was born at Margate in 1791, and was for twenty-four years Surgeon in the East India Company's service. In 1811 he entered as student at St. George's Hospital, under the auspices of Sir Everard Home, and attended the lectures of Brodie, Pearson, and Joshua Brookes. In 1813 he obtained the diploma of the Royal College of Surgeons, and the year following received an appointment to Bengal. He served two campaigns in the Nepaul war, was garrison Surgeon at Buxar in 1819, and Surgeon to the 10th Light Native Cavalry in 1825. By his benevolent and considerate tolerance of their prejudices—a rare qualification in those days—he won the entire confidence and regard of the natives wherever his influence extended. Amongst other literary productions, he wrote an essay "On the Art of Preserving Health in India," which was circulated by authority. He returned home in the year 1838, and retired from Professional life, devoting himself henceforth, both publicly and privately, with his characteristic philanthropy, energy, and untiring industry, to the welfare of his fellow-men, becoming a magistrate for Middlesex, treasurer of the Royal Humane Society, and holding various offices in the parish of St. Pancras. It was whilst in the discharge of his magisterial duties during the Fenian disturbances and Clerkenwell explosion in December last that his seriously declining state of health became manifest to himself and his Medical advisers, his malady assuming the form of climacteric disease, under which he gradually sank, apparently without any great suffering. A true Christian, death had for him no terrors; he was conscious to the last, and regardful of the welfare of those around him, and thus, after a life of exceeding usefulness, passed away, at the mature age of 77, a high-minded English gentleman, deeply regretted by his sorrowing family and a wide circle of friends.

NEW INVENTIONS.

BURROW'S SODA-WATER RACKS.

By the help of these racks soda-water and lemonade can be safely kept without fear of breakage, and, the air being free to circulate between each bottle, these pleasant beverages are kept cool during the hot weather. Our Professional brethren would find the racks very useful. We understand they can be made of any size, to hold two dozen bottles and upwards, to suit the requirements of the purchaser.

NEW BOOKS, WITH SHORT CRITIQUES.

On Digitalis, with some Observations on the Urine. By T. L. Brunton, B.Sc., M.B., late Senior President of the Royal Medical Society, etc. London: John Churchill and Sons. Pp. 132.

*** The labours which ended in the production of this prize thesis were undertaken at the suggestion of Dr. Douglas Maclagan, to whom the work is dedicated, and carried out with much skill by Dr. Brunton. The book contains a good deal of valuable material, especially some sphygmographic observations on the pulse under the influence of the drug.

Theory of the Treatment of Disease adopted at Ben Rhydding. By W. Macleod, M.D., F.R.C.P. Edin., Senior Physician to Ben Rhydding. London: John Churchill and Sons. Pp. 90.

*** Dr. Macleod tells us that this pamphlet has been issued, as some misconceptions have arisen as to the scheme of treatment pursued at Ben Rhydding, and he thinks that a brief statement will meet candid consideration.

Who discovered Anæsthesia? By S. Parsons Shaw. Pamphlet. Manchester: Palmer and Howe.

*** Mr. Shaw (who, by the bye, has written a capital little book on toothache, which he calls odontalgia) is anxious that poor Wells should have his due share of the credit of discovering anæsthesia, and therefore republishes a letter written by him for the *Manchester Examiner and Times.*

Revista Médico-Quirúrgica y Dentística de los Sres. Wilson y Gonzalez. Wilson and Gonzalez's Medico-Chirurgical and Dental Review. Director Dr. Erastus Wilson, Havanna. Agent in the United States, Dr. John Howe, New York. Nos. 1 and 2. New York: Printed by Hallet and Brien.

*** The publication of such a quarterly as this promises to be, should be a matter of rejoicing to Spanish Practitioners in the West Indies who are unacquainted with other languages than their own. Its contents are admirably selected, dealing among other subjects with such materials as ophthalmoscopy, acupressure, electrisation, Surgical antiseptics, quarantine, hypodermic injections, etc.—in short, presenting to the Medical public an admirable *resume* of what has been doing in Medical science.

Report on the Gaols of the Lower Provinces of the Bengal Presidency for the Year 1867. By F. J. Mouat, M.D., F.R.G.S., etc., Inspector-General of Gaols, Lower Provinces.

*** Dr. Mouat's annual and voluminous report contains, as usual, much valuable information as to the condition of Bengal from a criminal point of view. In one respect it is, to our mind, eminently suggestive. The whole work has been printed in Alipore Gaol. Why should our convicts be picking oakum, which is unremunerative work, and leave our blue-books to be paid for by the nation?

St. Andrews Medical Graduates' Association Transactions, 1867. Edited by Leonard Sedgwick, M.D., Honorary Secretary. London: John Churchill and Sons. Pp. 252.

*** The contents of this beautifully got-up volume are of a twofold nature; part will be of interest to the graduates only, but part contains papers, etc., read at their meetings, which will appeal to the whole Profession.

The Institutes of Medicine. By Martyn Paine, A.M., M.D., LL.D., Professor of the Institutes of Medicine and Materia Medica in the University of the City of New York, etc. Eighth Edition. New York: Harper Brothers. London: Sampson Low, Son, and Co. Pp. 1145.

*** This has long been known and looked upon as one of the most extraordinary books produced by American Medical authors. The amount of information which it contains, or rather does not contain, but evinces, is enormous, yet we question whether it is a book that would ever be acceptable on this side the Atlantic. The mass of figures, with regard to references, foot-notes, etc., is simply bewildering; but what can we expect when the author himself admits that it may require two sittings to master a single sentence?

On the Action, Use, and Value of Oxygen in the Treatment of Diseases otherwise Incurable or very Intractable. By S. B. Birch, M.D., M.R.C.P., etc. Second Edition. London: John Churchill and Sons. Pp. 149.

*** When to any new or little-known remedy we find attached a string of virtues, some of them evidently incompatible with others, we are inclined to put little trust in its merits. It is far better to know clearly and distinctly one particular effect than to know many inaccurately. Dr. Birch has, we suspect, contrived to put oxygen in the former rather than in the latter category.

On the Immediate Treatment of Stricture of the Urethra. By Barnard Holt, F.R.C.S., Senior Surgeon to the Westminster Hospital, late Lecturer on Surgery in the Westminster Hospital School of Medicine, etc. Third Edition. London: John Churchill and Sons. Pp. 136.

*** The third edition of Mr. Holt's work has just appeared, and, of course, carries with it the weight and influence of Mr. Holt's more extended experience. This gentleman has in all operated on 670 cases, and on 420 of these since the publication of the last edition of this work. Independent testimony to the value of this mode of operating is now sufficiently great to enable Mr. Holt's work to become, so to speak, independent of Mr. Holt. Still, his great success in some most difficult cases is a thing worthy of attention.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Thursday, July 30, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Moxey, David Anderson, M.D. Edin., Edinburgh House, Turnham-green.
Payne, Joseph Frank, M.B. Oxon., St. Mary's Hospital, Paddington.
Phillips, John Jones, M.D. Lond., Guy's Hospital.
Pigg, Thomas, M.D. St. Andrews, Manchester.
Rutter, Joseph, M.D. Lond., Brighton.
Wright, Robert Temple, M.D. Edin., 10, New Ormond-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 3rd inst.:—

Cartwright, J. A. T., Spalding, Lincolnshire, of King's College, diploma of Membership dated May 7, 1868.
Earle, T. A., Euston-road, of University College, July 24, 1868.
Grose, Samuel, Royal Marines, Woolwich, of St. Thomas's Hospital, a Fellow of the College, diploma dated June 11, 1868.
Rix, Charles J., Manchester, of the Manchester School, May 6, 1868.
Roberts, W. L., Spilsby, Lincolnshire, of King's College, May 5, 1868.
Searle, Francis F., Exeter, Devonshire, of the Dublin School, July 31, 1868.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Tuesday, July 28, 1868:—

Brocklehurst, Thomas Howard, Manchester.
Chabot, Herbert, 129, Camberwell-road.
Chapman, John, Burlington-road, Bayswater.
Green, John, Dudley, Worcestershire.
Herbert, Samuel Lymas, Demerara.
Madeley, George Sherwin, Pelham-street, Brompton.
Taylor, John Richard Algernon, Infirmary, Halifax.
Wood, Charles, Welbeck-street, London.

The following gentlemen also, on the same day, passed their First Examination:—

Boddy, Hugh Walter, Manchester School of Medicine.
Phillips, John, Guy's Hospital.
Roberts, Arthur Copleston, Guy's Hospital.
Roberts, John Dungey, Guy's Hospital.
Robinson, George, London Hospital.
Rope, Henry John, King's College Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BOROUGH, EDW., M.R.C.S., L.R.C.P.E., late Senior Assistant House-Surgeon to the Leeds Dispensary.—House-Surgeon to the Leeds Fever Hospital, *vice* Henry C. Libbey, Esq., resigned.

MILITARY APPOINTMENT.

MEDICAL DEPARTMENT.—Assistant-Surgeon Hopetown Currie Collier, from the 4th Foot, to be Staff-Assistant-Surgeon, *vice* John Collins, M.D., deceased.

BIRTHS.

DAVIES.—On July 18, at Morriston, near Swansea, the wife of Dr. Joseph Davies, of a son.

DEWAR.—On July 31, at 19, Blythswood-square, Glasgow, the wife of Donald Dewar, Esq., M.D., of a son.

DUKE.—On July 29, at Lewisham, the wife of J. C. Duke, Surgeon, of a daughter.

DUNCAN.—On July 30, at Richmond, Surrey, the wife of Thomas Duncan, Esq., M.D., of a son.

FRANCIS.—On July 31, at Troy House, Rochester, the wife of Surgeon-Major C. R. Francis, M.B. Lond., H.M.'s Indian Army, Bengal, of a son.

GIMSON.—On August 1, at 8, Grafton-street, Fitzroy-square, the wife of T. S. Gimson, M.R.C.S., of a daughter.

KOUGH.—On August 1, at Bagshot, Surrey, the wife of Edward Kough, M.A., M.B., of a daughter.

LEWIS.—On July 31, at Henfield, Sussex, the wife of Dr. C. F. Lewis, of a daughter.

MACILWAIN.—On August 3, at Matching-green, Essex, the wife of George Macilwain, F.R.C.S., of the Court-yard, Albany, of a daughter.

RATTRAY.—On July 26, at Brighton-place, Portobello, near Edinburgh, the wife of Andrew M. T. Rattray, Esq., M.D., of a son.

SANDS.—On July 31, at Wandsworth Common, the wife of J. L. Sands, M.D., Surgeon H.M.S. *Sphinx*, of a son.

SWALES.—On July 29, at 2, Alexandra-terrace, Sheerness, the wife of Peter Swales, Surgeon, of a son.

MARRIAGES.

DAY—LANGSTON.—On July 28, at King's Caple Church, William Henry Day, L.R.C.P.E., M.R.C.S.E., of Wakefield, to Matilda Emma, eldest daughter of Thomas Langston, Esq., of the Green, King's Caple, Herefordshire. No cards.

EDMOND—BISSET.—On August 1, at St. Giles's Church, Camberwell, William Edmond, 1, Pembroke-villas, Talfourd-road, Peckham, to Harriet Elizabeth, only daughter of C. E. Bisset, M.R.C.S., Peckham.

HEYGATE—HOLMES.—On July 30, at St. Stephen's, South Kensington, William Nicholas Heygate, M.R.C.S.E., of Kilworth, Leicestershire, eldest son of T. Nicholas Heygate, M.R.C.S.E., of Hanslope, Bucks, to Mary Anne, elder daughter of the late Rayner Holmes, Esq., and Mrs. Holmes, of Creswell-lodge, Old Brompton, Middlesex.

HILL—HOWELL.—At Trinity Church, Clapham, Berkeley Hill, B.M., F.R.C.S., of 14, Weymouth-street, Portland-place, third son of Mr. Comsioner Hill, Q.C., of Heath House, near Bristol, to Alice Campbell, youngest daughter of Thomas Howell, Esq., of Clapham.

HUNT—JULIUS.—On July 29, at St. Helen's, Isle of Wight, Henry J. Hunt, M.D., of 55, Lansdowne-place, Brighton, to Ada Frances, second daughter of F. G. Julius, M.D., of Richmond, Surrey.

WALKER—MACKENZIE.—On August 3, at St. George's, Tufnell-park, Samuel Edward Walker, M.R.C.S., Birmingham, to Agnes, daughter of D. Mackenzie, Esq., of Lloyd's. No cards.

DEATHS.

DALLAWAY, KATHERINE WOODWARD, second and last surviving daughter of the late John Dallaway, Surgeon, of Stratford, while on a visit at Moulsham Parsonage, Chelmsford, on July 3, in her 78th year.

ELLIOTSON, JOHN, M.D., F.R.S., at Bourdon-house, Davies-street, Berkeley-square, the residence of an old and attached friend, at an advanced age, on July 29.

MACKENZIE, WILLIAM, M.D., Surgeon-Oculist to her Majesty, suddenly, at 1, Oakfield-terrace, Glasgow, on July 30.

MILLAR, CHRISTIAN DUNCANSON DUNCAN, infant daughter of John Millar, M.D., Albany-street, Edinburgh, at Sheasdale, near Dollar, on July 23.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Horncastle Union.—Mr. H. K. Roberts, Medical officer for the Tattershall District, has resigned; area 18,779; population 4258; salary £50 per annum.

Newmarket Union.—Mr. John L. Newton, Medical officer for the Ninth District, has resigned; area 4976; population 1925; salary £75 per annum.

Wycombe Union.—The Fifth District is vacant; area 15,684; population 5162; salary £83 5s. per annum.

APPOINTMENTS.

Derby Union.—Mr. Thomas L. Gentles, L.F.P.S.Glas., L.S.A.Lond., to the South District.

Newton Abbott.—Mr. Wm. S. Steele, M.R.C.S.Eng., L.S.A., to the St. Mary Church District.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Thursday, July 30, the following College officers were elected:—*Censors:* James Risdon Bennett, M.D.; William Wegg, M.D.; Richard

Quain, M.D.; Andrew Whyte Barclay, M.D. *Treasurer:* Frederic John Farre, M.D. *Registrar:* Henry Alfred Pitman, M.D. *Librarian:* William Munk, M.D. *Members of Council:* Charles Handfield Jones, M.B. (in the room of Dr. F. J. Farre); Walter Hayle Walshe, M.D. (in the room of Dr. J. R. Bennett). *Examiners:* Anatomy and Physiology, John William Ogle, M.D.; Henry Hyde Salter, M.D. Chemistry, Materia Medica, and Practical Pharmacy, Edward Henry Sieveking, M.D.; William Marcet, M.D. Midwifery and the Diseases peculiar to Women, Charles Blakely Brown, M.D.; William Overend Priestley, M.D. Medical Anatomy and the Principles and Practice of Medicine, George Owen Rees, M.D.; Edmund Lloyd Birkett, M.D. Surgical Anatomy and the Principles and Practice of Surgery, John Birkett, F.R.C.S.; Timothy Holmes, F.R.C.S. *Curators of the Museum:* George Hamilton Roe, M.D.; Frederic John Farre, M.D.; William Wegg, M.D.; Francis Sibson, M.D.

MEDICAL CHARITIES.—John Terrett, Esq., of Tewkesbury, left the residue of his property, amounting to about £13,000, to five trustees, upon trust, after the death of his sister, for various charities in the town, including the Dispensary and lying-in charity. On Miss Terrett's death, in 1866, it was found that the gift was defeated by the operation of the Mortmain Act, and that the money devolved to the Crown. The trustees therefore petitioned the Lords of the Treasury to recommend the Crown to grant the property to the trustees for the charitable purposes expressed in Mr. Terrett's will. Her Majesty has been pleased to make the grant in compliance with the petition, and a scheme for the distribution of the charity has been approved by the present Attorney-General, which authorises the trustees to contribute £25 per annum to the Dispensary, which has already an income derived from previous gifts, £50 per annum to the Rural Hospital, and £40 per annum to the lying-in charity. The late Mr. Terrett also left a legacy of £500 to the Medical Benevolent Fund, £500 to the Asylum for the Blind at Edgbaston, near Birmingham, 500 to the Society for the Instruction of Deaf and Dumb Children at Edgbaston, and £1000 to the Gloucester Infirmary. It is interesting to know that Mr. Terrett's father was a Surgeon who practised in Tewkesbury for many years.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JULY, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	16·83	0·064	0·075	0·000	12·0	2·5
West Middlesex	15·30	0·047	0·024	0·000	11·5	2·5
Southwark & Vauxhall	16·85	0·055	0·030	0·001	12·0	2·5
Chelsea	18·16	0·064	0·103	0·001	12·0	2·5
Lambeth	17·17	0·047	0·033	0·002	11·5	2·5
Other Companies.						
Kent	27·16	0·018	0·075	0·000	17·5	6·5
New River	16·67	0·042	0·052	0·000	12·0	2·5
East London	16·50	0·042	0·015	0·001	12·0	2·5

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

CHANCELLORSHIP OF THE EDINBURGH UNIVERSITY.—An influential meeting of members of Council and graduates of the University of Edinburgh took place at St. James's Hall on Thursday, July 30, for the purpose of promoting the election of the Lord Justice-General as Chancellor of the University. Dr. Balfour Stewart presided. Professor Turner attended as a deputation from the Grand Committee in Edinburgh, and explained the object which they had in view in convening a meeting of Edinburgh graduates resident in London. He stated that they had reason to believe that there were a large number of graduates in London not yet pledged, who, if canvassed either personally or by letter, would give in their adhesion to the Lord Justice-General. In the same way they proposed to canvass the provinces of England. For this object it was necessary to elect a London Committee, with representatives from the principal provincial towns. A Committee was then elected, which consisted of the following members of Council, with power to add to their number:—*Chairman:* Dr. Sieveking. *Vice-Chairmen:* James Copland, M.D., F.R.S.; T. Graham Balfour, M.D., F.R.S.; Balfour Stewart, LL.D., F.R.S.; Charles Murchison, M.D., F.R.S. *Secretary:* Dr. Duckworth. *Members of Committee:* Frederick Churchill, M.B.; T. Spencer Cobbold, M.D., F.R.S.; Robert Cross, M.D.; Thomas Crawford, M.D., Staff Surgeon-Major; Richard Davy, Esq.; Colin C. Grant, Esq., advocate; Thomas Hamilton, M.B.; Alexander Halley, M.D.; E. S. Haviland, M.D.; Gordon Jenner, Esq., barrister; J. Peddie Steel, B.A., M.D.; Henry J. Stokes, M.D.; J. Stewart Tulloch, M.D.; C. J. Workman, M.D.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Rara Avis shall have a list next week.

We have to thank the proprietors of the *Birmingham Daily Gazette* for their prompt kindness in sending us slips of their report of the British Medical Association at Oxford.

Athanasius contra Mundum.—We should be most glad to publish the letter if it were not for our readers.

A Brighton Surgeon is thanked. When the cloven hoof, tail, and horns are concealed, we are not apt to suspect the Evil One.

The Fellowship of the Royal College of Physicians.—The proposed regulations for the Fellowship of the Royal College of Physicians provide:—

"Before the Council prepares the list of Members to be proposed for the Fellowship, it shall be open to receive for consideration the name of any member or members of a certain standing, recommended by two or more Fellows, with a statement of the grounds of their recommendation. Further, if not satisfied with the list of names recommended for election by the Council, it shall be open to any of the Fellows to add to the names on the list. The lists, so altered, shall be suspended in the Hall of the College for a fortnight; at the end of which time a *comitia majora* shall be held, and shall proceed to a ballot, and all those members shall be elected to the Fellowship whose names have a majority of the votes of the Fellows present."

Sufferer.—We believe the iron exists in the unique form of protochloride. We have no personal knowledge of the spring; but the late Dr. Kennion thus treats of it in the sixth edition of his *brochure* just published "On the Harrogate Waters." This able Physician remarks in the preface—"The discovery in the summer of 1865, by Dr. Sheridan Muspratt, of the existence of *chloride of iron* in the spring, which now commonly (and very deservedly) bears his name, forms an important era in the history of Harrogate. The mineral springs with which it abounded had already achieved a wide reputation, and were without a *rival* in England; but the 'Muspratt chalybeate' is without a *rival* in the world. In less than two years it has, by its remarkable therapeutic powers, won for itself a Continental reputation." Dr. Kennion also states—"Few events will prove to have conferred a more lasting benefit upon Harrogate than the discovery of the chloride of iron water. The amount of good which already has been effected by its use *is beyond expression.* Cases which have for years resisted the influences of ordinary chalybeate medicines have yielded to the influences of this spring; and in respect of this discovery Dr. Muspratt's name may be deservedly added to the list of benefactors of his country."

ETYMOLOGY OF THE WORD "HALLE."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I hope you are not serious in adopting the Romance word *aller* as the root of the much older German *halle.* The verb *aller* has no very clear parentage, though it is most probably to be traced to *aditare.*

I am, &c. VOX ET PRÆTEREA NIHIL.

EVAPORATION IN HOT WEATHER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In order to arrive at some estimate of the amount of evaporation taking place during this dry weather, I placed a vessel filled with water in the thermometer stand belonging to the Observatory. In the ten days from July 9 to the 19th, 14 oz. of water had sunk ·750 inch less in depth. The rainfall during this period was found to be only ·380 inch in the rain gauge, and the difference of ·370 inch showed the depth of evaporation. On computing out these data with the size of the vessel, there would have resulted, on a larger scale, a loss of water on the square acre of 7790 gallons during the ten days.

On repeating the observation for the week from the 19th to the 26th ult., there was found a decrease of ·750 inch of water, and the rainfall only amounted to ·260 inch in the rain gauge. The computation per acre again showed a great increase of evaporation, amounting to 10,316 gallons of water, and the loss in depth was ·490 inch.

The observations for the week ending August 1 exhibited a still greater amount, and were: evaporation ·585 inch, rainfall ·040 inch, which would give ·545 inch of estimate of depth and 11,274 gallons per acre of water lost. The evaporation from and drying of the soil would no doubt reach a certain limit, and leave the rivers and lakes to supply the remaining exhalation of water. In fine, it may be asked, where has all this moisture been wafted to, and why does not the sea give us a fresh supply?

I am, &c.

Aberdeen, August 4. W. T. BLACK, Surgeon-Major.

ACTION OF CHLORINE ON LEAD.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will some competent chemist inform me whether, or to what extent, chlorine acts upon and destroys lead? The question is one of very

great importance, for nearly all our soil pipes are made of that metal, and yet we are continually urged by sanitary authorities to deodorise our water-closets by means of chloride of lime. Within the last few years I have suffered so much inconvenience from the corrosion and decay of a soil pipe, that I would gladly, if possible, save others from similar domestic misery. After having gone to great expense in opening and retrapping my drains, the bad smells still persecuted me, and at last I myself found out the cause of all. A portion of the soil pipe of the water-closets, which was concealed by a curious and unsuspected arrangement of the floors, was exposed to view; when it was found to be pierced with holes, some large enough to admit the thumb, and through these the fæcal gases had found vent, and so had invaded the whole house. For years past, while this unknown decay of the pipe was going on, I had constantly used chloride of lime, in hopes of at least deodorising my enemy; and now I wish to know whether, by doing this, I had been causing, or at least increasing, the perforation of the pipe. My house was built about a hundred years ago, and the pipe was probably that which was originally fixed when the water-closets were constructed. The question I ask relates to a subject of vast importance, for millions of people depend upon the integrity of their soil pipes for preventing the most subtle poison contaminating the air of their dwellings.

July 28. I am, &c. J. D.

Carbolic Acid in Melbourne.

Melbourne, May 23, 1868.

Dear Sirs,—An unfortunate experiment, resulting in the death of the principal performer, as to the efficacy of a so-called antidote for snake-bites took place here some few weeks since, of which I send you a report. The cure of persons bitten by the venomous snakes of Victoria has long been a favourite subject for experiments among the Medical Profession here, and I have long entertained the opinion that carbolic acid, taken internally and used as a caustic to the wound, would be found to be beneficial, and perhaps a specific cure. That I am right to a certain extent is proved by the fact that a friend of mine, Dr. Boyd, of Warrnambool, successfully treated two cases of snake-bite with carbolic acid. I am not aware of more particulars than that the first case was a young lad bitten by a tiger-snake (the most venomous those colonies produce), and Dr. Boyd, six hours after the boy was bitten, administered ten drops of pure acid in brandy and water every few minutes. He writes:—"The effect was magical. From a pallid countenance, slow pulse, and semi-comatose condition, the patient rallied to a bright expression, ruddy glow, and quick pulse, and the recovery, though slow, was continuous and certain." I am now engaged in prosecuting further experiments regarding the power of carbolic acid over snake virus, and write to you to see if you can assist me in any way—give me any hints or suggestions, which I shall be very glad to receive and adopt.

Since I have had a report of Dr. Boyd's treatment published, two other Medical men offer, as an original suggestion, carbolic acid as a cure for snakebite.

Apologising for troubling you in this manner,

I am, dear Sirs, very truly yours,

(Signed) John W. Hood, B.Sc., M.D.

To Messrs. F. C. Calvert and Co., Manchester.

BOOKS RECEIVED—

Wood's Bible Animals, part 8—Pharmaceutical Journal, No. 110—Edinburgh Medical Journal, No. 158—Practitioner, August—Macleod on Ben Rhydding—Schools Inquiry Commission, vol. 10.

NEWSPAPERS RECEIVED—

Dundee Advertiser—West Surrey Times—Medical Press and Circular—Huntley Express.

COMMUNICATIONS have been received from—

Mr. Henry Richard; Dr. Livett; Dr. Braxton Hicks; Dr. Muspratt; Mr. Balmanno Squire; Mr. E. Kough; Dr. T. K. Chambers; Dr. Ede; Sir J. Simpson; Dr. Macloughlin; Dr. Barnes; Mr. Bruce; Dr. J. Ogle; Mr. W. O. Chalk; Dr. Beigel; Dr. B. W. Foster; Mr. G. Street; Mr. D. Devereux; C. J. G.; A Brighton Surgeon; Dr. Charles Kidd; Mr. E. Bellamy; Dr. Edward Casey; Mr. W. E. Ditchett; Mr. J. W. Black; Dr. J. Hughlings Jackson; Mr. J. Chatto; Dr. F. Oppert; Dr. G. E. Day; Mr. T. M. Stone; Mr. J. Lewis; Dr. Cholmeley; Messrs. Lindon and Graham; Dr. Bayes; Dr. Sedgwick; Rara Avis; Dr. R. Martin; Dr. Andrew Allison; Dr. Treutler.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 1, 1868.

BIRTHS.

Births of Boys, 1078; Girls, 1028; Total, 2106.
Average of 10 corresponding weeks, 1858-67, 1842·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	859	806	1665
Average of the ten years 1858-67	732·3	706·7	1439·0
Average corrected to increased population	..	..	1583
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	6	13	2	4	6	57	5
North ..	618,210	2	12	10	2	6	21	76	10
Central	378,058	..	3	7	..	5	2	45	2
East ..	571,158	3	12	3	3	10	14	65	12
South ..	773,175	..	13	14	2	7	9	141	9
Total ..	2,803,989	5	46	47	9	32	52	384	38

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·801 in.
Mean temperature	67·6
Highest point of thermometer	90·1
Lowest point of thermometer	49·4
Mean dew-point temperature	54·7
General direction of wind	W.S.W. & S.S.W.
Whole amount of rain in the week	0·23

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 1, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Aug. 1.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Aug. 1.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2106	1441	1665	90·1	49·4	67·6	0·23	23
Bristol (City)	167487	35·7	115	75	*81	..	..	..	..	..
Birmingham (Boro')	352296	45·0	238	171	265	86·0	46·0	64·9	0·04	4
Liverpool (Borough)	500676	98·0	359	290	342	87·5	52·4	65·8	0·02	2
Manchester (City)	366835	81·8	246	208	*256	91·5	46·0	65·0	0·19	19
Salford (Borough)	117162	22·7	83	59	87	..	..	..	..	..
Sheffield (Borough)	232362	10·2	164	122	168	86·5	49·5	65·2	0·00	0
Bradford (Borough)	108019	16·4	64	55	99	..	..	..	..	..
Leeds (Borough)	236746	11·0	250	120	176	90·0	44·5	63·8	0·00	0
Hull (Borough)	108269	30·4	75	56	85	86·0	45·0	63·2	0·35	35
Newcastl-on-Tyne, &c.	127701	23·9	83	68	63	78·0	51·0	62·8	0·05	5
Edinburgh (City)	177039	40·0	112	85	85	79·7	51·0	63·9	0·00	0
Glasgow (City)	449868	88·9	346	262	258	81·0	47·3	61·7	0·05	5
Dublin (City and some suburbs)	319985	32·8	175	157	140	84·5	44·3	62·8	0·48	48
Total of 14 large Towns	6391080	34·7	4416	3163	3770	91·5	44·3	64·2	0·13	13
					Week ending July 25.	Week ending July 25.				
Vienna (City)	(1863) 560000	..	.	..	377	..	..	74·3†	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·801 in. The barometrical reading increased from 29·51 in. on Tuesday, July 28, to 30·16 in. on Saturday, August 1.

The general direction of the wind was W.S.W. and S.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 69·2°.

APPOINTMENTS FOR THE WEEK.

August 8. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

11. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

14. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ADDRESS ON THE

RELATION OF FOOD TO WORK DONE BY THE BODY;

AND ITS

BEARING UPON MEDICAL PRACTICE.

DELIVERED AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT OXFORD,

By the Rev. S. HAUGHTON, M.D., F.K.Q.C.P., F.R.S., Fell. Trin. Coll., etc.

INTRODUCTORY.

MAN, like other animals, is born, grows, comes to maturity, reproduces his like, and dies; passing in his lifetime through a cycle of changes that may be compared to a *secular* variation, by a metaphor borrowed from the science of astronomy; while, in his daily life, he passes through a smaller cycle of changes that may be called periodic.

From the time of the publication of Bichat's "Essay on Life and Death," it has been admitted that man and other animals possess a double life, *animal* and *organic*, presided over respectively by two distinct, though correlated, centres of nervous force; of these, one *thinks, moves*, and *feels*; the other merely *cooks*, receiving the food supplied, changing and elaborating it into elements suitable for the use of the animal life.

In the lower forms of animals, the organic life becomes almost coextensive with the whole being of the creature, which simply digests, assimilates, and excretes; but barely feels or moves. In the higher forms of animals, and more especially in man, the animal life dominates over the organic life, which becomes its slave, and it exhibits the remarkable phenomena of *mechanical force*, of *geometrical instinct*, of *animal cunning*, and finally, in man himself, produces *intellectual work*, rising to its highest form in the *religious feeling*, that recognises its great Creator, and bows in humility before Him. It is a simple matter of fact, and of every-day observation, that all these forms of *animal work* are the result of the reception and assimilation of a few cubic feet of oxygen, a few ounces of water, of starch, of fat, and of flesh.

The general question of the relation of food to work would involve a consideration of the possibility of throwing a bridge across the gulf that separates the organic from the animal life, so as to connect the products of nutrition (taken in its widest sense) with the work of every kind accomplished by the animal life, whether mechanical or intellectual. We resemble the spiders of the heather on a summer morning, that float their gossamer threads into the air from the summit of a branch, in the hope that some stray breath of wind may fasten it to a neighbouring tuft, and enable the hungry speculator to extend the range of his rambles and his chance of food. Already a few feeble threads connect the chemistry of our food with the *mechanical work* done by our muscles; when these have been securely fastened, from the higher vantage ground acquired, our little bridge of knowledge may possibly be extended to embrace the phenomena of the geometrical instinct of the bee, or the cunning of the beaver; and our successors may even dare to speculate on the changes that converted a crust of bread, or a bottle of wine, in the brain of Swift, Molière, or Shakespeare, into the conception of the gentle Glumdalclitch, the rascally Sganarelle, or the immortal Falstaff. At present such thoughts would be justly regarded as the dreams of a lunatic, and I must crave your indulgence for having mentioned them. The history of science is, however, filled with such dreams; some never realised, others converted by time into realities so commonplace, that the genius of their originators is habitually forgotten or underrated.

During childhood and youth, the food that we eat is used for the double purpose of building up the tissues of the bones, the muscles, the brain, and other organs of the body; and of supplying the force necessary for work done, whether mechanical or intellectual. In adult life, the first use of food almost disappears, for the bones, the muscles, the brain, and other organs, have already reached their full development, and act simply as the media of communication between the food received and the work developed by it.

Let us take, as illustrations, the muscles and brain, regarded as the organs by means of which mechanical and intellectual work is done. These organs resemble the piston, the beam, and the fly-wheel of the steam-engine, and, like them, only transmit or store up the force communicated by the steam in one case, and by the products of the food conveyed by the blood in the other case. The mechanical work done by the steam-engine must be measured by the loss of heat experienced by the steam in passing from the boiler, through the cylinder, to the condenser; and not by the loss of substance undergone by the several parts of the machinery on which it acts. In like manner, the mechanical or intellectual work done by the food we eat is to be measured, not by the change of substance of the muscles or brain employed as the agents of that work, but simply by the changes in the blood that supplies these organs—that is to say, undergone by the food used, in its passage through the various tissues of the body, before it is finally discharged in the form of water, carbonic acid, or urea.

The Divine Architect has so framed the animal machine, that moves and thinks, that the same blood, which by its chemical changes produces movement and thought, also repairs the necessary waste of the muscles and brain, by means of which movement and thought are possible; just as if the steam that works an engine were able, without the aid of the engineer, to repair the wear and tear of its friction and waste spontaneously; but no greater mistake is possible in physiology than to suppose that the products of the changes in the blood, by which mechanical or intellectual work is done, are themselves merely the result of the waste of the organs, whether muscles or brain, on the exercise of which that work depends.(a)

The ancients, who derived all their knowledge from observation, and not from experiment, were well aware of the double duty imposed upon food in early life—of producing both the secular and the periodic variations of the body; or, in other words, of promoting growth, and of developing work. Their practical knowledge is summed up by Hippocrates in the aphorism—"Old men bear want of food best; next those that are adults; youths bear it least, more especially children; and, of these, the most lively are the least capable of enduring it."(b).

The food consumed in twenty-four hours, including air and water, undergoes a series of changes of a chemical character before leaving the body, in the form of one or other of its excretions. Some of these changes develope force, and others expend force, but the algebraic sum of all the gains and losses of force represents the quantity available for work. This work must be expended as follows:—1. The work of growth (*secular*). 2. The work of maintaining heat (*periodic*). 3. Mechanical work (*periodic*). 4. Vital work (*periodic*).

During childhood and youth the work of growth is positive, for a certain proportion of the food used is employed in building up the tissues of the body instead of being expended in actual work; it is, in fact, "stored up" in the body, as *vis viva* is stored up in the fly-wheel of machinery, and constitutes a reservoir of force that may be called upon at an emergency requiring sudden expenditure of force, or in case of illness, or in the gradual wasting of old age.

In adult life, and in old age, the work of growth ceases completely, except so far as is necessary to repair, from day to day, the small wastes of the organs employed in work; so that nearly the whole of the food employed is expanded on the *periodic* work of the body.

Hence we can readily see the reason for the aphorism, which asserts that food is more necessary for the young than for the old, and more required by those of a lively disposition, either of mind or body, than by others.

Hippocratic Doctrine of Innate Heat.

Hippocrates was well aware of the connexion between food and animal heat, although he erroneously regarded the animal

(a) The very skill with which provision is made for the repair of the waste of the organ used as the instrument of work may mislead the observer into supposing that the work itself may be measured by the waste of its instrument. Thus it has been shown by Mr. A. Macalister that the heart, which has imposed upon it the necessity of working day and night without ceasing during life, is furnished with double the usual supply of blood through the *coronary* arteries, which are injected twice for every single beat of the heart. If, indeed, it were possible to assume that all muscles wasted equally for equal quantities of work, and also to measure separately the products of that waste, we might then assume the waste of the organ as the measure of its work. Neither of these assumptions, however, can be admitted, for it can be shown that different muscles act under different conditions, more or less advantageously, so that equal wastes would represent unequal works; and also, it is impossible to separate in practice the products of waste of muscles from those of the general changes of the blood.

(b) Γέροντες εὐφορώτατα νηστείην φέρουσι, δεύτερον οἱ καθεστηκότες, ἥκιστα μειράκια, πάντων δὲ μάλιστα παιδία, τουτέων δὲ αὐτέων ἃ ἂν τύχῃ αὐτὰ ἑωυτῶν προθυμότερα ἔοντα.—Aph. I. 13.

heat as an innate property of the body that caused an appetite for food, instead of being itself produced by food; if we transpose his cause and effect, *mutatis mutandis*, all his maxims as to animal heat are true. Thus, he says—

"Growing animals possess most innate heat, hence they require most food; . . . . but the old have least heat, and therefore require the least fuel."(c)

"The cavities of the body are naturally warmest in winter and spring; . . . . in these seasons, therefore, most food must be given; and since there is more innate heat, more nourishment is required; as may be seen in youths and athletes."(d)

These maxims, when translated into modern language, express the well-known fact, that the chemical changes of food that take place in the body produce animal heat, and that the necessity for food to supply mechanical work is greatest with the young and active, while the necessity for the production of animal heat is greatest in the cold seasons of the year. The direct connexion of food with mechanical work is expressed in the following maxims:—"There should be no labour when there is hunger"(e) and its converse "Let labour precede meals."(f)

On principles such as those just given, the training of the athletes was conducted; and they were compelled to undergo a regular course; commencing with blood-letting, and active purgation,(g) and consisting of systematic muscular exercise suited to the nature of the contest intended, accompanied by a dietary, of which the chief ingredients consisted of biscuits and pigs' kidneys, washed down by a minimum of water.

It is, truly, not much to be wondered at, that those who survived the training were formidable in the boxing ring or racecourse.

The relation of animal heat to respiration is referred to by Hippocrates in a remarkable maxim:—"Those persons have the loudest voices who have most [innate] heat, for they inspire the largest quantities of the cold air, and the product of two great quantities must be itself great."(h)

Galen believed the heart to be the centre of "innate heat," but he was well aware that increase or diminution of respiration caused increase or diminution of heat, and was intimately connected with it. Thus he says:—"Since, therefore, the heart is, as it were, the hearth and fountain of the innate heat, with which the animal is pervaded," &c.(i) "The necessity for respiration is the greatest and most imperious guard of the innate heat."(k) "Those persons in whom the innate heat has been much cooled breathe but little and slowly."(l)

Lavoisier's Theory of Animal Heat.

The doctrine of "innate" heat taught by Hippocrates and Galen ruled in Medicine for 1500 years after Galen's death until it received its death-blow from the genius of Lavoisier, who demonstrated, in his celebrated memoir read before the French Academy of Sciences in 1783, that the source of animal heat is to be found in the combustion of the carbon of the body by the oxygen of the air received into the lungs by respiration. Lavoisier's experiments were repeated and confirmed in 1822 by Dulong and Despretz, and have formed the starting-point for all modern investigations on the relation of food to work.

As already stated, the work done by food in the body may be divided into—1. The work of growth; 2. The work of animal heat; 3. Mechanical work; 4. Vital work.

Lavoisier arranged his experiments so as to exclude almost all kinds of work done, except that of animal heat. A guinea-pig was placed under a bell glass inverted over a surface of mercury, and a current of fresh air was allowed to circulate through the apparatus, being passed at its final exit through tubes containing caustic potash, which arrested the carbonic acid produced by the animal. In this manner it was easy to ascertain the carbonic acid excreted, by the increase in weight of the tubes of caustic potash during the experiment.

Lavoisier found that his guinea-pig, in ten hours, burned, on the average, 3·333 grms. of carbon; and this quantity of carbon he estimated from other experiments as capable of melting 326·75 grms. of ice at the freezing temperature. The same guinea-pig was then placed in an ice calorimeter, and left in it for ten hours, during which time the heat of its body was found to have melted 402·27 grms. of ice at the freezing temperature.

If we use, instead of the coefficient of combustion of carbon employed by Lavoisier, that now generally adopted from the experiments of Favre and Silbermann, the quantity of melted ice represented by $3\frac{1}{3}$ grms. of carbon would become 364·78 grms. instead of 326·75 grms.

We are, therefore, entitled to say that the heat of combustion of expired carbon determined by Lavoisier is equal to—

$$\frac{36478}{402{\cdot}27} = 90{\cdot}68 \text{ per cent.}$$

of the animal heat developed, which is regarded as 100.

Two years later, in 1785, Lavoisier laid before the Royal Society of Medicine of Paris an account of further experiments, also conducted on the breathing of guinea-pigs, by which he showed that of 100 parts of oxygen absorbed by those animals, 81 only reappeared in the form of carbonic acid, and 19 parts disappeared altogether. Lavoisier considered that these 19 parts of oxygen were employed in the body in the combustion of hydrogen, the product of such combustion being water.

If we use Lavoisier's data just given, and the known atomic weights of carbon, oxygen, and hydrogen, we shall have, for 81 parts of oxygen in the form of carbonic acid, and 19 parts of oxygen in the form of water, the following quantities of carbon and hydrogen consumed by the respiration of a guinea-pig in the same time:—

$$\text{Carbon} = \frac{6 \times 81}{16}$$

$$\text{Hydrogen} = \frac{19}{8}$$

Multiplying these numbers by the heat co-efficients of Favre and Silbermann, we find:—

$$\text{Heat produced by carbon} = \frac{6 \times 81}{16} \times 8080$$

$$\text{Heat produced by hydrogen} = \frac{19}{8} \times 34462$$

It has been already shown that the heat developed by the combustion of carbon in Lavoisier's experiment amounted to 90·68 per cent. of the heat emitted by the animal: hence the heat produced by the combustion of the hydrogen will amount to—

$$90{\cdot}68 \times \frac{19 \times 34462}{8} \times \frac{16}{6 \times 81 \times 8080}$$

= 30·24 per cent. of the heat emitted by the animal. By adding together the heats due to the carbon and hydrogen, we find that Lavoisier's experiments, when fairly interpreted by the data of modern science, give the following results:—

Heat produced by the combustion of carbon and hydrogen	120·92
Animal heat	100·00

Finally, in 1789, Lavoisier published further experiments, by which he showed conclusively that the consumption of oxygen by the body is notably increased by three causes—1st. By a lowering of the external temperature. 2nd. By the act of digestion. 3rd. By muscular exercise.

The experiments of Lavoisier were repeated in 1822 by Dulong and Despretz, and their results, when corrected, like those of Lavoisier, by using the modern heat coefficients of carbon and hydrogen, are as follows:—The mean of Dulong's experiments on 16 animals and birds is 90·6 per cent. of the animal heat given out—the lowest number, 85·5, belonging to

(c) Τὰ αὐξανόμενα πλεῖστον ἔχει τὸ ἔμφυτον θερμὸν, πλείστης οὖν δεῖται τροφῆς, ... γέρουσι δὲ ὀλίγον τὸ θερμὸν, διὰ τοῦτο ἄρα ὀλίγον ὑπεκκαυμάτων δέονται.—Aph. I. 14.

(d) Αἱ κοιλίαι χειμῶνος καὶ ἦρος θερμόταται φύσει. . . . . ἐν ταύτῃσιν οὖν τῇσιν ὥρῃσι καὶ τὰ προσάρματα πλείω δοτέον. Καὶ γὰρ τὸ ἔμφυτον θερμὸν πλεῖστον ἔχει, τροφῆς οὖν πλείονος δέονται. σημεῖον αἱ ἡλικίαι καὶ οἱ ἀθληταί.

(e) Ὅπου λιμὸς, οὐ δεῖ πονέειν.—Aph. II. 16.

(f) Πόνοι σιτίων ἠγείσθωσαν.—Epid. VI. Sect. iv. 28.

(g) Ἕλκεα ἐκφύουσιν ἢν ἀκάθαρτος ἐὼν πονήσῃ.—Epid. VI. Sect. v. 32.

(h) Οἷσι πλεῖστον τὸ θερμὸν, μεγαλοφωνότατοι, καὶ γὰρ ψυχρὸς ἀὴρ πλεῖστος. δύο δὲ μεγάλων μεγάλα καὶ τὰ ἔκγονα γίνεται.—Epid. VI. Sect. iv. 22.

(i) ἐπεὶ τοίνυν ἡ καρδία τῆς ἐμφύτου θερμασίας, ᾗ διοικεῖται τὸ ζῶον, οἷον ἑστία τέ τίς ἐστι καὶ πηγὴ, κ. τ.λ.—De usu partium, lib. vi. ch. 7.

(k) ἡ χρεία τῆς ἀναπνοῆς ἡ μεγίστη μὲν καὶ κυριωτάτη φυλακὴ τῆς ἐμφύτου θερμασίας ἐστίν.—De diff. Resp. lib. i. ch. 4.

(l) ὥσπερ καὶ ὅταν μικρὸν εἰσπνέωσι καὶ βραδέως, οἷς ἱκανῶς ἔψυκται τὸ ἔμφυτον θερμόν.—De diff. Resp. lib. i. ch. 20.

a kitten 60 days old; and the highest number, 99·4, belonging to a puppy 50 days old. M. Despretz obtained an average of 92·3 from 16 mammals and birds; his highest number being 101·8, derived from an old female rabbit; and his lowest number being 84·2, derived from 4 owls.

The foregoing experiments left no doubt remaining in the minds of men of science as to the substantial truth of Lavoisier's doctrine of animal heat; and led immediately to a number of supplementary experiments, amongst the most remarkable of which were those of Regnault and Reiset.

Regnault directed his attention especially to the distribution of the oxygen absorbed by animals between the carbon and hydrogen of their blood, or tissues, which had been laid down by Lavoisier in the proportion of 81 to 19. He found that the proportion was not a fixed one, but varied with the food in a very instructive manner.

The average of his experiments on fourteen animals, including worms, lizards, and insects, as well as birds and mammals, was—Oxygen combined with carbon, 81·7; oxygen combined with hydrogen, 19·3—a result identical with that found by Lavoisier. The highest proportion of oxygen combined with hydrogen occurred in the case of chickens fed on meat, and amounted to 32 per cent.; and the lowest proportion occurred in the case of rabbits fed on bread and oats, and amounted to 1 per cent. only.

Still more recent experiments, made with improved apparatus and methods by Pettenkofer and Voit in Munich, show, like those of Regnault, that the proportion of the oxygen employed in forming carbonic acid to the whole oxygen absorbed, varies with the food, ranging in the case of a large dog from 52·4 to 148·2, according as the animal was kept altogether without food, or fed upon a mixed diet of meat and sugar. These investigations have also shown that, under ordinary conditions, it is probable that a dog consumes nearly all the oxygen absorbed in the formation of carbonic acid.

Before leaving the subject of animal heat, it is worth while to estimate its amount in a manner that will bring it into comparison with ordinary mechanical work.

In Lavoisier's experiment with the guinea-pig, 402·27 grms. of ice were melted in ten hours; from this fact we find, assuming the latent heat of ice at 142° Fahr., and 772 as Joule's coefficient for converting British heat units into foot pounds—

Mechanical work equivalent to the daily animal heat of Lavoisier's guinea-pig =

$$\frac{402{\cdot}27 \times 24 \times 142 \times 15{\cdot}432 \times 772}{7000 \times 10}$$

$$= 233310 \text{ ft. lbs.}$$

As the average weight of a guinea-pig is 4 lbs., the preceding amount of work, representing animal heat, would be sufficient to raise the weight of the animal through a vertical height of

$$\frac{23310}{4 \times 5280} = 11{\cdot}05 \text{ miles.}$$

Ranke has shown, by experiments made upon himself, under various conditions of food and fasting, by means of Pettenkofer and Voit's apparatus, that his daily excretion of carbonic acid varied from 660 grms. to 860 grms. His weight was 67 kilos., from which fact, and the assumption that an English mile is 1600 metres, we obtain, employing the contents already given, the height through which the combustion of this quantity of carbon would raise the weight of 67 kilos. in 24 hours—

$$= \frac{760 \times 6 \times 8{\cdot}080 \times 423}{22 \times 67 \times 1600} = 6{\cdot}609 \text{ miles.}$$

The extreme values of the carbonic acid acid excreted, viz. 660 grms. and 860 grms., would correspond to the heights of 5·74 miles and 7·48 miles respectively.

Pettenkofer and Voit succeeded in producing a range of carbonic acid excreted by a large dog, weighing 33·3 kilos., from 289·4 grms. to 840·4 grms.; the minimum corresponding to the tenth day of fasting from solid food, and the maximum corresponding to a diet of 1800 grms. of meat, 350 grms. of fat, and 1410 grms. of water.

It may be easily shown by a calculation similar to the foregoing, that these excretions of carbonic acid correspond to the mechanical works of lifting the weight of the dog through vertical heights of 5·03 miles and 14·62 miles respectively.

Combining together the preceding results, and expressing them all in the natural units of the weights of the animals lifted through a height, we find—

Work due to Animal Heat.

1.	Guinea-pig	11.05 miles
2.	Man	5·74 „
3.	Man	7·48 „
4.	Dog	5·03 „
5.	Dog	14·62 „
	Mean. . . .	8·784 „

Source of Muscular Work.

As soon as it was satisfactorily established by Lavoisier and his successors that the natural combustion of carbon and hydrogen in the blood was sufficient, and rather more than sufficient, to account for the animal heat, it became a matter of great interest to physiologists to ascertain, if possible, how much of the work developed in the blood by chemical changes is employed in producing animal heat, how much in mechanical work, external and internal, and how much in vital or mental operations.

At the outset of this inquiry, it received a misdirection from the conjecture thrown out by Liebig, that the excretion of nitrogen (in the form of urea) gave necessarily the measure of the wear and tear of the muscular tissues themselves, which are composed of proteinic or nitrogenous compounds. This conjecture led to Liebig's celebrated classification of food into *Heat-producing* and *Flesh-forming* foods, which has been unhesitatingly received until lately, in this country, by physiologists and Physicians.

Before investigating the truth or falsehood of Liebig's theory, it is worth while to state the most recent results obtained as to the muscular work per day of which man is capable.

From numerous observations, of which some were made by myself on the daily labour of hodmen, paviors, navvies, and pedlars, I have obtained the following mean:—

Daily labour of man = 353·75 ft. tons. = 109549 kil. met.

This quantity of work is the exact equivalent of the work done by a man of 150 lbs. weight in climbing through one mile of vertical height, and is, as I have already shown, less than one-eighth part of the work expended in producing and maintaining animal heat.

Even if we add to the external muscular work that of circulation and respiration, which may be estimated at 133 ft. tons, the whole work done by the muscles, voluntary and involuntary, of a hard-worked labourer will amount to less than one-sixth of the work expended in maintaining the temperature of his body at 100° Fahr.

I was led to believe, from my investigations as to the quantity of urea excreted in various diseases, that a certain minimum quantity equivalent to 2 grs. per pound avoirdupois of body weight, was excreted quite independently of muscular exertion, and I proved that death was preceded in many chronic diseases by a fall in the urea excreted to 2 grs. per pound. These investigations were made chiefly on patients dying of advanced kidney disease, in which the excretion of albumen had nearly or altogether ceased, and on patients dying of phthisis.

Pettenkofer and Voit found that the excretion of urea in a dog reduced to 29 kilos. by ten days' fast was reduced to 8·6 grms. And, since

29 kilos. = 63·8 lbs.
8·6 grms. = 132·7 grs.

Excretion of urea = 2·08 grs. per lb. of body weight.

Ranke obtained a precisely similar result from observations made upon himself, after long fasting continued for several days.

If these views be well founded, it is plain that part only of the urea excreted can be regarded as due to muscular exertion, for 2 grs. per lb. (or 300 grs. for a man weighing 150 lbs.) must be set aside as a constant due to vital work, independent of muscular work altogether. Hence it would follow, supposing the muscular exertion to be measured by the increased excretion of urea produced by it, that the urea will not increase as fast as the muscular exertion, but it ought to increase regularly, although at a slower rate. With a view to settle this important question, I devised the following observations upon myself in the month of July, 1866, which prove conclusively that an increase of muscular exertion, amounting to fourfold, is not accompanied by any corresponding increase in the excretion of nitrogen, in the form of urea.

I had previously ascertained by repeated experiments, extending from 1860 to 1865, that my excretion of urea (under

ordinary conditions as to exercise, which did not exceed five miles per day) ranged from 465·09 grs. per day to 537·47 grs. per day, the mean being 501·28 grs.

This quantity of urea I regarded as my natural physiological average, and it was so well established that I thought I should obtain an important result by comparing it with the average found from several days of unusual muscular exertion. I accordingly walked for five consecutive days in the hilly districts of Wicklow, noting carefully the horizontal distance traversed each day, and the vertical height traversed up and down. The vertical heights were reduced to horizontal distances, on the assumptions (which are well founded) that 20 is the proper coefficient for converting one into the other, and that the work of descent is half the work of ascent.

During the five days of observation the work done, expressed in horizontal miles of walking, was as follows:—

First Day.

	Miles.
Miles walked	11·4
Height ascended 1800 ft. =	10·2
	21·6

Second Day.

Miles walked	12·0
Height ascended 2400 ft. =	13 7
	25·7

Third Day.

Miles walked	11·6
Height ascended 1400 ft. =	8·0
	19·6

Fourth Day.

Miles walked	9·3
Height ascended 1400 ft. =	8 0
	17·3

Fifth Day.

Miles walked	10·4
Height ascended 1600 ft. =	9·1
	19·5

From the preceding statement it follows that the average work done each day was 20·74 miles of horizontal walking—the result of which upon the urea excreted was to be compared with the result already mentioned, as a physiological constant determined under circumstances in which the daily muscular work never exceeded five miles of horizontal walking.

In order to determine the urea, I collected each day all the urine passed, and kept one-fifth part of it; and at the close of the fifth day examined the mixture formed from the five days' urine.

It was found to contain 501·16 grs. of urea per day—a result identical with the physiological quantity previously found by me under totally different conditions, viz. 501·28 grs.

I was much surprised at this result, for I had previously believed in the theory laid down by Liebig, which attributed the excretion of urea to the disintegration of muscular tissue.

It might be objected to the preceding reasoning that there can be no doubt as to the capability of the combustion of proteinic compounds represented by 501·28 grs. of urea excreted to produce mechanical force sufficient to explain the muscular exertion of walking 20 or 21 miles per day, as may be shown in the following manner:—

1. The urea excreted bears to the proteine consumed the proportion of 24 to 79, as appears from their chemical compositions—viz.,

Urea	$C_2 H_4 N_2 O_2$	60
Proteine.	$C_{36} H_{27} N_4 O_{12}$	395

2. In 100 parts of proteine there are 53·7 parts of carbon, and 7 parts of hydrogen; the total heat due to the combustion of 1 grm. of proteine is, therefore,

	Heat units.
0·537 grm. of carbon	4·3389
0·070 grm. of hydrogen	2·4123
	6·7512

This number, 6·7512, represents the maximum quantity of heat units (m) that could be produced by the combustion of 1 grm. of proteine; but the term depending on hydrogen in it should be reduced to $\frac{5}{6}$ths of its amount in consequence of the hydrogen already combined with oxygen in the proteine. Hence we find—

Combustion of 1 grm. of Proteine.

	Heat units.
Carbon	4·3389
Hydrogen	1·3402
	5·6791

3. In 100 parts of urea there are 20 parts of carbon, and $6\frac{2}{3}$ parts of hydrogen; the total heat, therefore, due to the combustion of 1 grm. of urea is

0·20 grm. carbon	1·6160
0·067 grm. hydrogen	2·3089
	3·9249

The term depending on hydrogen, in this result, should be reduced to $\frac{1}{4}$, in consequence of the hydrogen already combined with oxygen in the urea.

Hence we find—

Combustion of 1 grm. of Urea.

Carbon	1·6160
Hydrogen	1·1544
	2·7704

4. From the three preceding statements it is easy to see that, for every gramme of proteine consumed, 0·8416 heat units are contained in the urea excreted; so that the digestion of 1 grm. of proteine gives out 4·8375 heat units.

It is easy to see that 501·28 grs. of urea excreted correspond to 1650 grs. of proteine in the food, or to 106·92 grms., and the total work due to the digestion of this quantity of food may be found by multiplying it by the "digestion coefficient" already found, and by 423, which is Joule's coefficient for converting heat units into kilogrammeters. Hence we have—Work due to production of 501·28 grs. of urea = $106·92 \times 4·8375 \times 423 = 218786$ k. m. = 704 ft. tons.

This amount of theoretical work produced by nitrogenous food, is more than double the work actually done during the walking excursion.

The average work was 20·74 miles horizontal per day, which may be considered as the exact equivalent of lifting my weight (knapsack and clothes included = 150 lbs.) through one mile of vertical height. Hence the work actually done by me was

$$\frac{150 \times 5280}{2240} = 354 \text{ ft. tons.}$$

I have elsewhere shown that the work done by the heart per day amounts to 122 ft. tons, which should be added to the external work, as well as the unknown work due to the muscles used in respiration, probably amounting to one-sixth of the heart's work, or 21 ft. tons; adding these quantities, we find

External work	354 ft. tons
Circulation and respiration	133 „
	487 ft. tons.

This quantity represents 69 per cent. of the applied work, which was shown to be 704 ft. tons.

The amount of muscular work accounted for is 354 ft. tons, which is almost exactly half the whole theoretical work supplied by the food that goes to form urea—viz., 704 ft. tons; but it has been already shown that 2 grs. of urea per pound of body weight is required to maintain the vital work, including circulation and respiration; this would give from 240 grs. to 260 grs. of urea out of the 501 grs. available for vital work, so that one half of the available work may be considered as expended on vital work, and the other half as expended on external muscular work. This supposition, however, requires us to believe that the muscles act without loss by friction. This is not admissible, for I have elsewhere endeavoured to show that there is a loss in the force applied by the muscles of various animals, in consequence of the friction of their tendons, amounting—

In man to	35 per cent.
In the mastiff to	41 „
In the kangaroo to	61 „

Hence it may be regarded as certain that the available force represented by 501 grs. of urea is not sufficient to account fully both for vital work and for the external mechanical work expended by me during the experiments jus described.

(To be continued.)

(m) Heat unit = 1 kilog. of water raised 1° C.

ON

URETHRAL FEVER AND ITS MALARIOUS ALLIANCES.

BEING PART OF THE ADDRESS IN SURGERY AT THE ANNUAL MEETING OF THE BENGAL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

By J. FAYRER, M.D., F.R.S.E.,
Senior Surgeon, Medical College Hospital, and Professor of Surgery, Calcutta.

I HAVE said that, to a certain extent, I believe the general health of the majority of our patients is compromised by malaria, that certain tendencies to disease are thereby impressed, and that the phenomena of other disordered conditions are modified and characterised by its presence. I probably express no novel view of this matter when I say that an ague fit is perhaps one of the least frequent forms in which malaria expresses itself, and that a thousand other symptoms, affecting chiefly the nervous and the vascular systems, indicate its operation as distinctly as the best marked quotidian or tertian could do. It is certainly in my experience that persons may be, so to speak, saturated with malaria, and yet never have had fever until the change of climate, or the sea voyage, that was to renovate the broken-down general health, developed it, much to the astonishment of the sufferer; or the accident that to another would have proved slight, gives rise to an attack of fever which prostrated the patient completely. I think that I have remarked the influence of malaria in another instance, which must be within the experience of almost every Surgeon who has practised in Bengal, and that is the great tendency to fever of a paroxysmal character after catheterism—a condition which, when developed, may be called urethral fever.

It is well known to Surgeons everywhere that the passage of a bougie or catheter is sometimes followed by constitutional disturbance very similar to an attack of ague—viz., rigors followed by pyrexia and profuse sweating; or if the actual ague fit be absent, there is often a state of lassitude, with muscular pains and debility, loss of appetite, nervous exhaustion, and turbid urine, showing elimination by the kidneys of phosphates, or nitrogenous detritus, a low febrile condition, with a dry tongue and herpetic eruptions about the lips; this condition may last for some days and finally pass away, leaving the patient weak and broken down in physical, as well as mental, strength. These symptoms may occur even when there is no urethral disease, after the passage of an instrument for the purpose of relieving or exploring the bladder, and they may assume any intensity, from that of a simple transient feeling of malaise to the most deadly paroxysm of fever. I say may, because it is not always that any constitutional disturbance follows catheterism; fortunately, in a large number of cases, no such untoward result occurs. In certain individuals—nor is it possible, that I am aware of, to say in whom—it will happen; but in those who suffer from stricture of the urethra, it appears that the proclivity is most marked, and in such cases the passage of an instrument may give rise to constitutional disturbance of the most serious character, especially, as I am inclined to believe, in the malarious climate of Bengal.

It was supposed by Sedillot that the morbid changes found in cases of ordinary urethral fever were due to septic absorption, and that they only occurred when the mucous membrane of the urethra had been lacerated in the operation. But it can hardly be so, for they are not confined to cases where the urethra has been injured, nor are they frequently found to occur after the most severe operation on the urethra through the perineum. It is, I believe, chiefly in cases of old stricture that the most formidable symptoms arise, and happily it is rare that the passage of a bougie or catheter is followed in ordinary cases by anything worse than an ague-like paroxysm. But in certain old strictures, where there is a combination of organic obstruction with spasm, and probably a thickened bladder, and kidneys and prostate in an incipient state of disease, we must bear in mind this morbid tendency, and not only endeavour to prepare the patient by rest, sedatives, and other appropriate treatment, but effect the dilatation as gently and carefully as possible when we commence the treatment.

The pathological condition under consideration has been explained to be due either to reflex action from the urethra through the nerve-centres, or to septic absorption from the lacerated mucous membrane of the urethra. I cannot altogether accept the latter explanation, although I think it possible that in some cases it may be the case, for the results are generally quite disproportionate to the injury; and in the most striking examples the symptoms of constitutional disturbance follow too rapidly after the operation to admit of such an explanation. I should rather attribute it to reflex action through the nervous system, and it is, perhaps, one of the best examples of what our predecessors called "constitutional irritation," expressed in one case by the mildest, in another by the severest disturbance, and even death. Though the precise method or channel by which this is brought about may not be apparent, it is not more difficult to comprehend than that tetanic spasm of the muscles of the jaws should follow the insertion of a thorn into the finger, convulsions attend the cutting of an infant's tooth, or hæmorrhoids give rise to a pain in the sole of the foot.

The true cause of this urethral fever is to be sought for in common with those that explain the phenomenon of fever generally, such as the cold, the shivering, and the hot fits; and however the first impression may be produced—whether by retention in the blood, or the absorption into it, of some morbid material, or by the irritation of certain peripheral nerve filaments and reflex action through the nerve-centres, thus affecting the whole economy—the phenomena and results are similar. I have selected two cases as strikingly illustrative of the worst consequences of this accident; though such are fortunately not frequent, they serve to show what may occur in the treatment of stricture, and are the severest expressions of a condition which, as in other fevers, may be, in one instance, a mere chill, in another a rigor that precedes death.

Case 1.—A healthy-looking Englishman, J. E. N., aged 38 years, cook of a ship, admitted June 14, 1867, with irritable organic stricture of the urethra. He was in the First Surgeon's Ward of Medical College Hospital about two years ago for the same complaint, and was discharged relieved after three months' treatment. The stricture was of a very irritable nature, and had great tendency to contract after dilatation. No special treatment was resorted to, except slow dilatation of the stricture by the bougie; division of the stricture was proposed as the only chance of giving permanent relief, but not submitted to. Since his discharge the urethra has contracted again. He has been in another Hospital for some time, where, he says, the stricture was split by a dilator, but without permanent benefit. The operation was not attended, however, with much constitutional disturbance. He was in a Liverpool Hospital also a few months ago for stricture of urethra, where instruments were passed. He has been in the habit of passing No. 6 catheter himself when he feels difficulty in micturating.

15th.—The stricture was dilated with Holt's dilator. No. 12 catheter was passed afterwards, and urine withdrawn. There was slight difficulty in introducing the catheter on account of the spasm. ℞ Quinine, gr. v.; tinct. opii ♏ xxv. immediately. Fomentations every four hours. 6 p.m.—Has passed only a few drops of water since the operation, with much straining. Bladder not distended; slight oozing of blood from the urethra. Has considerable pain and fever, which was preceded by a rigor. Catheterism was gently, but not successfully, tried, on account of spasm. Diaphoretic mixture, with tinct. hyoscyami every three hours; opium suppository. Fomentations every four hours.

16th.—Has, with much straining, succeeded in passing a few drops of urine; complaining of pain all over the abdomen, which is tense, hard, and tympanitic; tongue dryish and furred at the centre; no more bleeding from the urethra; extremities rather cold; pulse very weak. Can retain neither food nor medicine. A catheter was passed; no urine found in the bladder. Ordered turpentine stupes to the abdomen, and fomentations every two hours. Opium, gr. j. every three hours; castor-oil and turpentine enema; mustard plaster to the abdomen; twenty leeches to the abdomen; brandy and soda-water frequently. 2 p.m.—Leeches have fallen off after drawing blood freely; no more vomiting; two stools; pain in the abdomen easier; pulse very weak; has not made water; not drowsy. Very restless and thirsty; quite conscious up to the last. Died at 5 p.m.

Post-mortem Examination.—Urethra dissected out. There was some ecchymosis in the bulbous portion of the urethra,

and a small clot of extravasated blood outside it. The stricture was in front of the membranous, extending into the bulbous, portion of the urethra. Two old false passages led downwards to the bulb, but did not perforate it; urethra otherwise entire. At the seat of stricture the urethra was slightly split, but only in the mucous membrane. Abdomen opened. Small intestines somewhat congested; no peritonitis or effusion of lymph in the abdomen. Both lungs much congested, the right having two or three tubercular deposits in its apex; the bases of both œdematous and not crepitant. Heart adherent to the pericardium by old ligamentous bands. Right ventricle contained some dark fluid blood. Liver enlarged and fatty, weighing 4 lbs. 1 oz. Kidneys much congested, capsules tearing off easily. Bladder thickened, contracted, and empty. No sign of inflammation or mischief of any kind about the bladder or in the pelvis.

Remarks.—This may be regarded, at first sight, as death caused by uræmia. But the symptoms were not such as to justify the supposition. The fever and great prostration after it, with the tympanitic state of the abdomen, made me think at first that some injury had been done to the peritoneum, and that peritonitis was the result; but the post-mortem showed that such was not the case, and that there was nothing whatever in the urethra to account for it, excepting through the medium of the nervous system. The perfect consciousness and clearness of intellect until the moment of death are also opposed to the supposition that death was caused by uræmia.

Remarks by Dr. Colles on the Post-mortem Examination.—Bladder and part of urethra of J. E. N., aged 38, admitted June 14, with stricture of years' standing. Holt's dilator used on 15th; patient died on 16th. No peritonitis was found. The heart was united to the pericardium by old adhesions; its muscular tissue was healthy; no fatty degeneration; valves healthy. Lungs somewhat congested. Kidneys highly engorged with blood; the tubules in the cortical portion full of imperfectly formed epithelial scales. Bladder is healthy; somewhat thickened. Urethra contains two false passages, just in front of the prostate, going a little way beneath the mucous membrane. Nearer the bladder is seen the superficial rupture of the mucous membrane caused by the dilatation.

Case 2.—P. H. R., a healthy-looking East Indian trader, aged 41 years, was admitted on June 21, 1867, with stricture of the urethra of thirteen years' duration. He passed water formerly in a very fine stream, but for the last four years in drops; it dribbles day and night, soiling his dress. Never had complete retention of urine. Catheterism was once tried about two years ago unsuccessfully. Had no perineal abscess or fistula. On the day of his admission, catheterism was tried, but the instrument could not be introduced into the bladder. The stricture was hard, and occupied the bulbous and the front of the membranous portion of the urethra. 6 p.m.—Has had fever since 2 p.m., preceded by a rigor; passed water more freely; slight bleeding from the urethra. Effervescing draught, with tincture of hyoscyamus, every three hours.

22nd.—Fever still continuing; pulse 96; tongue moist; bleeding from the urethra has stopped. Diaphoretic mixture ℥j.; potas. bicarb. gr. x. every three hours; milk, sago, and soup; iced water.

23rd.—Two stools. No fever. Slept well. No thirst. Feels weak, otherwise better in every respect. No. 5 catheter passed into the bladder, commencing from No. 2. ℞ Quinine gr. x.; tinct. opii ♏ xxv. statim.

24th.—Has had fever since last night, but no rigors. Passing urine as before in drops. 6 p.m.—No fever now. Had a rigor. Bowels open. Quinine gr. v. every four hours.

25th.—Had shivering again in the night. Pulse 100, full. Two stools. Some pain in the perineum, no swelling. Tongue clean. Continue diaphoretic mixture. Fomentations to the perineum.

26th.—Pulse 100. Temperature 102°. Fever still continuing. No more shivering. One stool. Continue medicine. 5 p.m.—Passed four thin stools. Complains of a griping pain. Tinct. opii ♏ xxx. statim. 7 p.m.—Pulse 108, very weak. Temperature 102°. Vomited three times. Tongue clean and moist. Has taken very little food. Passed water. Omit all medicines. Mustard plaster over the stomach. Beef-tea and brandy, half an ounce of each every hour, soda-water and ice.

27th.—Two stools in the night passed in bed-clothes. Tongue warm and moist. No vomiting. Made urine. Extremities cold. Pulse imperceptible at the wrist. Carotid 140. Respirations 52. Temperature in axilla 102°, hand 92°, mouth 102°. Mustard plaster over the heart. Brandy ℥iv. Æther. chlorici ♏ xx.; spirit. ammon. aromatici ♏ x. every half-hour. 4 p.m.—Pulse in the carotid 132, at the wrist *nil*. Temperature 103°. Respiration 48. Two stools, consisting of a slight brownish fluid. No more vomiting. Extremities cold. No reaction yet. Quite conscious. Eyes somewhat congested. Occasionally delirious, but for the most part conscious until just before death. Died at midnight.

Post-mortem Examination.—Coats of the bladder hypertrophied. Its inner surface much congested. Ureters dilated and thickened. Kidneys partially congested and fatty. The stricture was in front of the membranous portion of urethra. Lungs healthy, hypostatically congested. There were no clots in the right cavities of the heart. Some atheromatous deposit in the tricuspid and mitral valves. Slight suppuration in the bulbous portion of urethra.

Notes on the Post-mortem Examiuation by Dr. Colles.—Bladder, urethra, and kidneys of P. H. R., an East Indian, aged 41, admitted June 21, with stricture of thirteen years' standing. For four years he has only passed water in drops. No. 2 catheter was passed on 23rd. He died on 27th. The stricture is seen just at the bulb; there is slight laceration of the mucous membrane, and a shallow old false passage which existed on admission. The bladder is thickened and sacculated; its mucous membrane is full of ridges and pits, the former, when the viscus was opened, being of a dark purple colour from intense congestion, with patches of extravasation of blood. Both ureters slightly dilated. Kidneys: Cortical structure pale; on pressing papillæ of the tubular portion, some purulent-looking fluid escaped, consisting wholly of large flattened irregular epithelial cells, with large nuclei and nucleoli, and, mixed with these, bodies which may be either free nuclei or pus cells. The structure of the cortical portion shows numerous epithelial cells, mixed with granules, singly or in masses. The liver was pale, rather friable, and with the lobules ill-marked. The cells under the microscope are seen to be full of fat globules (which are also scattered through the parenchyma), and with their nuclei indistinct. The muscular fibres of the heart were not fatty.

Remarks.—This was a case of urethral fever induced in a strong, healthy-looking man by the simple passage of an instrument. There was no injury. There was evidence neither of pyæmia nor of embolism. Death occurred as in the collapse of any exhaustive disease. It is true that he had diarrhœa the last two days of his life, but this was, I believe, due to the same cause as the collapse generally, and when death was approaching. In neither of these cases was there any injury done to the urethra that could be considered sufficient in itself to cause death, nor were there any indications of pyæmia or embolism. In one case a slight tear in the urethra where the stricture had been split, in the other slight suppuration about the seat of dilatation, but nowhere any inflammatory changes to suggest blood-poisoning or embolism. It is true that both were men more advanced in life than their ages of 38 and 41 implied, and that in the one case the liver, and in the other the kidneys, were somewhat fatty; but there was nothing in either that indicated, before the operation was performed, any structural or organic disease, and they both were quite as healthy and strong in appearance as the majority of persons who undergo surgical treatment. In neither case was any violence used in dilating the stricture, nor was there at the time anything to indicate suffering or unusual injury—far less indeed than we frequently see inflicted in the dilatation of obstinate strictures that slowly yield to treatment, and are unattended by constitutional disturbance. It is evident that catheterism has a tendency to induce this condition of fever through reflex action, and that it may do so, in certain constitutions, especially where old strictures exist in malarious persons, if the viscera be in the least diseased. I have not recorded any other cases, as it seems to me that these sufficiently illustrate the most serious consequences that may result from catheterism. It is almost our daily experience that the operation is followed by a rigor, in some cases by a severe attack of fever; and I can recall to my memory several instances in which it was followed by serious internal changes—in one an abscess in the wrist joint, in another in the eye-ball, and in a third in the liver. Can we in any case predicate that such constitutional mischief will follow? I fear not. But it behoves the Surgeon in all cases to be most careful to use the instrument with as little violence and with as much patience as possible, and to avoid, if he can, inflicting injury on the lining membrane of the urethra. In cases of stricture, and especially those that are

old and irritable, rest for some time before and after the passage of the instrument, with the use of antiperiodics and sedatives, may be productive of much benefit; above all, if the first attempt at catheterism have developed the tendency to febrile disturbance, it is right to wait until that has entirely passed away, before any attempt be resumed to pass the instrument. Patience is most essential, and no urgency on the patient's part should induce the Surgeon to force the dilatation, which is more likely to be followed by delay than speed. The increase in size of the instruments passed should be gradual, a new number every second or third day. "Festina lente!" should be the motto to guide us in such cases, and we may rest assured it will prove to be the best economy of time as well as of labour.

ORIGINAL COMMUNICATIONS.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,
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"Coarse" Disease of the Brain and Optic Neuritis.

I wish to make a few remarks with regard to some points in the last of Dr. Clifford Allbutt's interesting papers on Medical Ophthalmoscopy.

The great value I attach to Dr. Allbutt's opinion makes me anxious to explain more clearly, if I can, certain views I have put forward on the pathology of cases of optic neuritis (chiefly *Roy. Lond. Ophth. Hosp. Rep.*, part iv. vol iv., part iv. vol. v.) As a unit of the body Medical, I must first say, however, that Physicians cannot but feel highly indebted to Dr. Allbutt for his admirable and highly original exposition of the new means of research in cerebral and other diseases. I suppose Physicians will now begin to use the ophthalmoscope.

I have used the term "coarse disease" as a general expression for the changes I have—with only two exceptions, and one of these I now consider doubtful—found *post mortem* in cases of optic neuritis. I have not left what I mean by coarse disease uncertain. I have published cases of optic neuritis associated with tumour, syphilitic "deposits," large and small abscess, hydatid cyst, remains of blood-clot, etc. The expression is but a generalised statement to the effect that optic neuritis has, in my experience, almost invariably occurred with obvious local and gross changes inside the head. I have never seen merely local softening, large or small, in the brain of a patient who, during life, had had optic neuritis. The term is, I think, convenient, and not misleading. It implies, for instance, that "syphilitic deposit" does not produce optic neuritis, convulsion, etc., in its special character as a *syphilitic* lump, but in its most general one as a foreign body, just as a lump of any other coarse kind does, and thus that "syphilitic epilepsy," "syphilitic optic neuritis," etc., are really not syphilitic. But whilst believing that blood-clot, tumour, syphilitic "deposit," etc., agree in so far that they may all produce variously compounded quantities of optic neuritis, convulsion, cerebral "fever," etc., I hold, as every one else does, that each of these kinds of disease has symptoms special to itself—in accordance, for instance, with its bulk, position, with the age and general health of the patient, and with other circumstances. And I have remarked that blood-clot is rarely followed by optic neuritis, while tumour is nearly always attended by it.

I have not held that the coarse disease is the cause of the optic neuritis in the sense in which a clot in the corpus striatum causes hemiplegia. I have named the changes constituting the coarse disease "local," and those of the optic neuritis, convulsion, etc, "diffused."(a) A lump of disease—say an abscess in the hemisphere distant from the corpus striatum—*need* not produce any obvious symptoms of any kind. I have urged that when convulsions, amaurosis from optic, and that wider condition which is called cerebral "fever," *do* occur with such disease, so placed, they depend not on loss of function of the part destroyed, but on changes diffused from the local disease. A correct understanding of the way in which "amaurosis" results from disease in the brain is a most important matter to psychologists as well as to Physicians. To take another instance, a clot which, in its character of a destroyer of elaborate structure, *at once* produces more or less defect of Intellectual Expression and hemiplegia, may afterwards, I think, in its character as a "foreign body," cause optic neuritis. Although I use the word "cause," I do not pretend to know how it happens that coarse disease sometimes is, and sometimes is not, associated with optic neuritis.

I have myself drawn attention to the possibility that my experience of optic neuritis, since it is only that of a Physician, may be one-sided. I see those patients who are more severely ill, and it may be that optic neuritis does frequently occur from local softening not dependent on "coarse" disease. But I confess my impression is that it is almost solely the result—*i.e.*, the indirect result—of coarse intracranial disease.

In an article I am writing on cerebral "fever," I shall consider, as carefully as I can, the whole of the secondary symptoms accompanying coarse disease of the brain, and among them amaurosis from optic neuritis. There is, of course, no novelty in the view that convulsions occurring with coarse disease —*e.g.*, tumour—do depend on secondary changes. My object is to learn how they spread.

Arterial Regions of the Brain.

I do not pretend to be able yet to explain the manner of the spreading. Dr. Lionel Beale describes an experiment which, taken in connexion with certain views he has advanced, seems to me to show what is the probable manner. He says (b)—"If a small artery be brought into focus, and the tip of one of the toes be very lightly touched, the artery is seen to contract immediately, and somewhat irregularly, in different parts of its course. Sometimes a few blood corpuscles are firmly compressed, and for several seconds the vessel remains so strongly contracted that not a corpuscle passes along it. By performing this instructive experiment the observer may realise the effects of the wonderful contractile power of the coats of the smaller arteries, and demonstrate conclusively that the afferent nerves distributed to the skin of the foot generally influence the nerve centres from which the nerves ramifying amongst the muscular fibres of the arterial coats take their rise." "This is," Dr. Beale truly observes, "a beautiful instance of reflex nervous actions affecting the vessels."

The normal play of this vascular nervous system will regulate quiet nutrition. My speculation is that in a corresponding way the nutrition of structures lying in an arterial region may be altered to the extreme of disease. Were, in Beale's experiment, the touch very often applied, the nutrition of an area much larger than the point touched would be impaired, and similarly the almost constant "irritations" of a lump of disease would *impair* the nutrition of parts beyond what the lump can directly *destroy* by its bulk.(c) It is true that no ganglionic centre has been discovered in the arterial regions of the brain, but Beale's researches (d) seem to me to bear out the view he holds, that nerves from capillary regions do regulate the blood stream in the delivering arteries, although, perhaps, by a circuit geographically wider than the arterial system governed. However Lister's experiments "render it probable that *there is*, in addition [to the influence of the cord, etc.], a co-ordinating apparatus *in the part itself*, which,

(a) I remarked (*Royal London Ophthalmic Hospital Reports*, vol. v. part iv.)—"I purposely avoid the use of the word 'softening' in speaking of the changes about brain tumours," and yet I have since lapsed into the usual language.

(b) "How to Work with the Microscope," Fourth Edition, p. 135. See also Beale's Croonian Lecture (1865).

(c) The illustrations I have previously given (*London Hospital Reports*, vol. i. p. 466; *Medical Times and Gazette*, August 13, 1864; and *Lancet*, vol. i. 1867) are, (1) the production of certain convulsions (corpus striatum epilepsy) by gross disease lying in the distribution of the middle cerebral artery but not involving the motor tract; (2) the vaguer phenomena which occur in those cases where a subjective sensation of smell precedes other temporary symptoms—*e.g.*, loss of consciousness, etc.—implying, I think, an "epilepsy" of parts in the region of the anterior cerebral artery. My speculation of the limitation of arterial contraction to vascular regions is, of course, but a particular application of the doctrines of Brown-Séquard and others.

(d) "In many instances ganglia are seen in connexion with the nerves ramifying amongst the muscular fibre-cells encircling the vessels. I have seen such upon the vessels of all the viscera and those of the palate of the frog: they are to be detected on the iliac arteries in considerable number. The results of Mr. Lister's experiments render it probable that ganglia exist in connexion with the arteries of the limbs." (Beale, *op. cit.*) It may be added that there is one arterial region with ganglia—viz., the heart.

under special conditions of *direct* irritation, is capable of *independent* actions." (Turner's Paget, p. 33. The *italics* are mine.)

Again, there is an *observable* local rhythm in the veins of the wings of healthy bats (see Paget, p. 224). The researches of Lister, Beale, etc., show, I imagine, that just as there is a rhythm betwixt the nutritive changes of the whole body and the beats of the heart, so there must be one betwixt each part and its contractile arterial trunk—*its* heart. The beats of the heart are observable, and their Time is comparatively exact, as the general nutrition of the body is fairly uniform. The nutrition of parts not uniformly exercised, as the brain, will necessitate a far more complex Time.(e)

It is not supposed that an arterial region is altogether independent. For whilst a lump of coarse disease is sometimes attended by symptoms referable to changes in its own arterial region, there are other cases—*e.g.*, cerebral "fever"—in which the heart of the whole body becomes affected, as shown, for instance, in a certain kind of irregularity of the pulse. There is federation. We may imagine that the stronger the stimulus, the wider the area of contraction.

Localisation.

In this journal, December 14 and 21, 1867, I wrote very briefly on localisation, taking as one illustration hemiplegia of the common form, and referring slightly in the same connexion to convulsions beginning unilaterally. What follows must be read in connexion with the articles of that date, and I would especially draw attention to the quotations from Spencer's "Psychology," as the doctrine on localisation I here try to illustrate further is, I believe, the one he has put forward.

I now speak of Convulsion beginning unilaterally (which is, I think, the mobile counterpart of the unilateral palsy just mentioned) in more detail. These convulsions—sometimes called epileptic, but oftener epileptiform—may begin in the face, in the arm, or in the leg. I think it a matter of some significance that they usually begin in the arm (this part usually suffers more in hemiplegia), and, when so beginning, the hand is the part of this limb nearly always attacked at the onset, and mostly—this is my experience—the thumb and index finger are those of the digits which suffer first. The order of frequency in the parts first affected is according to the order of "intelligence," so to speak. Although the face, arm, and leg are *each* represented in *every* part of the corpus striatum and optic thalamus, the muscles concerned in the most elaborate operations will be, I suppose, those most largely represented *throughout* these centres, either in quantity, by the greater number of origina fibres in connexion with their muscles (or secondary centres for muscles), or possibly—perhaps in addition—in power, by the greater number of ganglion cells which the more complex or more widely associated movements they engage in will necessitate. But there is, no doubt, something more than such a localisation of superiority. For, saying nothing of cases where the fit begins in the whole of the fingers, or even in the outer finger; the foot is sometimes the part first convulsed. These rarer cases are, I presume, the mobile counterparts of the cases of hemiplegia in which the leg suffers more and longer than the arms, and when hemiplegia follows fits which begin in the foot, I believe—but I speak doubtfully; I have rarely seen hemiplegia in these cases—that the leg suffers more than the arm. It seems, then, that there will be also a localisation of speciality—perhaps for the leg in the thalamus—certain parts of the motor centre specially superintending certain movements. So, then, whilst the face, arm, and leg are everywhere represented in the higher motor tract (corpus striatum and thalamus), there are, above an order of representation of superiority, localities for the leading representation of the most special movements in which each part engages.

I urge, then, that the exact region in which unilateral convulsions begin or region affected by sensations preceding, and perhaps developing, convulsions, should be very carefully noted in a large number of cases. One of the most important questions we can ask an epileptic patient is, "How does the fit begin?"

Similar observations should be made in cases of hemi-chorea, and for valuable remarks on the question I may refer to Dr. Russell's article, *Medical Times and Gazette*, May 30, 1868.

(e) It may be urged that symptoms follow an order of the *venous* system. There are certain coarse changes which do. Thus, I never saw an abscess in the corpus striatum, but clot often; I never saw a clot in the cerebral hemisphere above the lateral ventricle, but abscess often—*i.e.*, so far as "often" may be used with regard to a rare disease.

Conditions of Muscles in Time.

Indeed, as I have repeatedly urged, we should, for methodical progress, study the whole of the conditions of the muscular region which the corpus striatum governs, hemi-palsy, hemi-chorea, and hemi-spasm, not omitting those intermediate states which have obtained no technical names; for we have not only to observe degrees of quantity of paralysis—loss of function—from varying quantities of nervous tissue *destroyed*, but disorderly Successions of muscular movements in Time from various degrees of *instability* of nervous tissue.

In the first volume of the *London Hospital Reports*, and in many places subsequently, I urge the importance of a threefold classification of cases of disease, according to (*a*) organ damaged (anatomy); (*b*) tissue changed (pathology); and (*c*) function disordered. As I there used the terms, a case of hemiplegia might stand—(*a*) corpus striatum; (*b*) softening of nerve tissue; (*c*) paralysis of the face, arm, and leg. But (see this journal, p. 642, Dec. 14, 1867) I should now place both the motor centre in fault and the connected muscular region which suffers under "organ damaged," and reserve for function disordered the varying conditions of muscles in Time—viz., hemi-chorea, hemi-spasm, etc.

We study carefully symptoms implying defective correspondence in Space, but not the accompanying defective correspondence in Time. Spencer says (in the just issued first part of his "Psychology"), "The cerebrum is generally recognised as the chief organ of mind, and mind, in its ordinary acceptation, means more especially a comparatively intricate co-ordination in *time*(f)—the consciousness of a creature 'looking before and after,' and using past experiences to regulate future conduct."

It is not implied that the two correspondences are altogether separate. I suppose the successions of *different* movements in chorea show an intricate defect of both.

Dr. Russell, in his paper referred to, upholds the views I have long held that hemi-chorea depends on embolism of small vessels supplying the convolutions near the corpora striata.(g) But besides the particular nature of changes producing paralysis or allowing disorderly motility, we have to consider what may be called their abstract nature.

Just as palsy depends on destruction of nerve tissue in a motor centre, *however produced*, so disorderly "activity" of muscles depends on instability, however produced, and my opinion merely is that embolism is the *most frequent* cause of the local instability allowing choreal movements. Similarly we may, in cases of defect of intellectual expression (aphasia), without implying an actual separation, arrange the cases for study in two distinct lines departing from health—(1) degrees from defect of articulating power to speechlessness, owing to different quantities of nerve tissue *destroyed*; and (2) degrees of disordered succession of movements producing slight difficulty of articulation, or unintelligibility, or, in a higher range of evolution and association of movement and sensation, mistakes in words and incoherence. It will, I think, be found that the first class is usually caused by clot, which destroys, and the second by embolism, which may lead only to ill-nutrition. The two kinds of defects, however, are by no means altogether separate even in cases of embolism; with hemi-chorea there is probably always some paralysis.

Case of Corpus Striatum Epilepsy (Hemi-spasm).

In the *Lancet*, vol. i. 1867, and in many places elsewhere, I published remarks on regional palsy and spasm. I wish now to make a brief note on the symptoms of one case which helps to confirm the view I have advanced that there is a Corpus Striatum Epilepsy, the analogue of Corpus Striatum Paralysis. What follows must be read with former papers.

The case seems to me to be valuable also as evidence towards the verification of the important hypothesis Dr. Broadbent has advanced as to the mode of connexion with the corpora striata of the muscles acting bilaterally. (See Dr. Broadbent's original paper, *Med. Chir. Review*, April, 1866; also *Lancet*, May 5, 1866, Ranking's *Abstract*, vol. i. 1866.)

To take the intercostals as the illustration, Dr. Broadbent thinks that the spinal nuclei in which the nerves for the intercostal muscles "end" are connected by a commissure, and that thus the two nuclei—one of each side—become prac-

(f) It is to Paget that we are indebted for what we know of that phase of the relation of nutrition—absorption of force—to function—*occasional* expenditure of force—which I have called the Time of a part.

(g) See *Lond. Hosp. Rep.* vol. i. 1864; *Lancet*, Nov. 26, 1864; *Med. Times and Gazette*, Jan. 28, 1865; and report of Obstetrical Society's meeting in this journal, Aug. 1, 1868.

tically one nucleus. This unified double nucleus is, he thinks, connected with each of the corpora striata. In hemiplegia from disease of the corpus striatum, these muscles escape; for when one of the corpora striata is destroyed, its fellow will still act on the common nucleus, and thus govern the bilateral muscles of both sides. Now "discharge" of a *single* corpus striatum should, if this hypothesis be correct, put them in action on both sides. This is, as I pointed out in the paper in the *Lancet*, vol. i. 1867, the case with regard to the trunk muscles, and the following report verifies the principle as Dr. Broadbent has applied it with regard to the unilateral and bilateral muscles of the face also.

I need report no more of the case than refers to the subject in hand. It is recorded in greater detail, but without comment and for another purpose, in a paper "Cases of Disease of the Nervous System," *Lond. Hospital Reports*, vol. iv. I am indebted to Dr. Anthony Roberts for permission to see this patient. It is convenient to give the autopsy first. There was blood in the arachnoid "cavity" on the left side. The bulk of it, however, lay in one spot over the frontal convolutions, and was so placed as, I imagined, to squeeze the corpus striatum, which body at the autopsy seemed to be otherwise undamaged. It is to the local anæmia which this mechanical pressure brought about that I attribute the local (h) *instability of nerve-tissue permitting the occasional disorderly* expenditure of force which constitutes the permanent factor in "epilepsy," as I use the term, the addition of the words "corpus striatum" being to state where in this epilepsy the mistimed disorderly expenditure occurred.

An old woman fell down stairs on a Saturday evening. She seemed to suffer very little from her fall, being apparently well soon after and all next day. On Monday she was found on the floor insensible, and was discovered to be paralysed of the *right* arm; the head and eyes were turned to the *left* side. I could make out no facial deviation, as the patient kept mouthing. So far, then, there was palsy of muscles of the right side which the corpus striatum governs, the bilateral muscles escaping. It is true there was no discernible palsy of the leg, nor afterwards any spasm of it. This might be considered as a discrepancy, although I think the leg escaped simply because, the affection of the corpus striatum being slight, the part least represented in the corpus striatum escaped, or suffered so slightly that its suffering was not detected. It is not possible, even when a patient is quite conscious, to demonstrate slight palsy of one leg when he is lying in bed. We can then only discover it by getting him up to walk.

Next day there was turning of the eyes to the right, and she had occasionally seizures in which the paralysed unilateral muscles and the unparalysed bilateral ones were involved. I describe the one fit of which I have the best account.

The right arm was in spasm, so was the right cheek; so was the right orbicularis palpebrarum, and the head and eyes were turned to the right. So far, then, omitting consideration of the leg which did not move, the unilateral muscles which the left corpus striatum governed were involved. Now for the bilateral muscles which *each* corpus striatum governs in health, which *one* will govern when its fellow is damaged, and which are put in action when *either*, being "unstable," is discharged.

The bilateral muscles of the thorax were fixed, both masseters were tightened, both cheeks moved (the right being drawn up), and both orbiculares palpebrarum were involved, and both sides of the occipito-frontalis acted. With regard to the last-named muscle, its action was, on the right side, partly counteracted by the orbicularis palpebrarum, the eye being closed, but on the left there was a more even struggle between the two. According to Broadbent's hypothesis, the orbicularis palpebrarum should be most represented in its corresponding (opposite) corpus striatum, as it is a muscle which we can use on one side only; but still it will be represented in each, as we generally close both eyes at the same time. Now, I have noted (*Lond. Hosp. Reports*, vol. ii. 1865, p. 309) that in some cases of hemiplegia the patient may be able to close the eye on the non-paralysed side alone, but not the eye on the paralysed side, on which side he can only close the eye by a "bilateral effort"—*i.e.*, when closing both. This small fact I had noticed before I had heard Dr. Broadbent's hypothesis, which seems to account so well for the singularity. The differing degree of spasm in the case above given is still further confirmation.

(h) As implied in a previous paragraph, the "instability" may be caused in other ways. The same kind of convulsions occurs with gross disease in the region of the middle cerebral artery, and with conditions implying plugging of branches of that vessel.

Remarks on Broadbent's Hypothesis.

Broadbent's hypothesis, *mutatis mutandis*, helps us towards a clearer idea of the most general nature of the defects of intellectual expression, and strikingly the explanation of the involuntary utterances of those patients who cannot speak voluntarily. The fact that patients who cannot speak voluntarily can utter words involuntarily shows that there are sensori-motor processes for words *somewhere* in their brains. And just as "innate" bilateral movements are represented in each of the corpora striata, so acquired processes, when they have become automatic, may also be represented doubly. I may refer to remarks on this point to an article on the "Physiology and Pathology of Language," June 23, 1866, and especially to quotations I have given from the writings of Baillarger. I have there suggested that observations should be made on speechless patients under chloroform, but I have never had a case of the kind in which a severe operation was needed. M. Baillarger quotes from Gratiolet a statement to the effect that the frontal convolutions on the left side are in *advance* of those on the right in their development. Hence, if this be so, the left side of the brain is *sooner ready for learning*. It is the elder brother, and takes the lead through life.

Moreover, it will be found, I think, that cases of double hemiplegia confirm Broadbent's hypothesis. With regard to this, however, I will content myself by urging those who observe defective bilateral movements with hemiplegia—particularly difficulty in swallowing—to inquire carefully if the patient has not been previously paralysed on the other side. Again, at an autopsy on a patient known to have been paralysed of *but one side*, and who had had difficulty in swallowing, we should search *both* sides of the brain for evidences of disease. For it is a fact that much of the motor tract may be *destroyed* without the production of hemiplegia, or, at all events, without permanent hemiplegia.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

TWO CASES OF HEATSTROKE.

(Under the care of Dr. BENNETT.)

J. N., aged 28, a bellhanger by trade, residing at Vauxhall, was admitted into St. Thomas's Hospital August 5, 1868. Has been out of work for six weeks, during which time he has been in the habit of travelling several miles a day, with the hope of obtaining employment. For this purpose he walked to the East-end of London on the 3rd inst., on the 4th to Notting-hill, and on the 5th he started for Norwood to answer an advertisement, but before he had walked halfway he fell down unconscious, and in this state was brought into the Hospital.

On admission he was much prostrated, complaining of severe pain in the head and numbness of the fingers. It required some persuasion to obtain any information from him. He appeared dull and languid, apparently not quite rational. Complained of being very hot. He was nervous and low-spirited, being under the impression that somebody had injured him. He had a sense of formication about the arms, which he is constantly rubbing and carefully inspecting. The hands and finger nails were somewhat livid; this seemed to give him some anxiety. During the examination he had a slight fit; eyeballs prominent, fixed; pupils at first dilated, and afterwards much diminished; head somewhat raised above the pillow, and fixed. This state did not last more than about a minute. He appeared a strong able-bodied man; never had any serious illness before. Had never been subject to fits, and had always been quite temperate. His tongue was moist, slightly coated; complained of thirst; bowels costive; skin comfortably warm; perspired freely about the legs; alæ nasi active; respirations deep and laboured, 40 per minute; heart sounds natural; pulse 88, weak. Ordered cataplasma sinapis epigastrio. Calomel. gr. ij.; pulv. opii gr. ss. statim; mist. potassæ citr. ℥j. 4tis horis. Ice to the head. Soda-water.

August 6.—Better; not so low-spirited; breathes naturally. Less pain across the forehead; bowels have been freely open.

Was complaining of pain at the hypogastrium early in the morning, but after passing a pint and a half of urine he was much relieved. Pulse 72, weak; tongue covered with a white fur. Urine acid, phosphates, sp. gr. 1018; no albumen.

12th.—Is now convalescent.

Case 2.—S. C., aged 16, general servant at Lewisham, was admitted into St. Thomas's Hospital August 5, 1868. On the 3rd inst. she took two days' holiday, and went by an excursion train to Ramsgate, which left Blackfriars-bridge at 5.30 a.m. She did not get to bed at all the night before. On arriving at Ramsgate she saw the sea for the first time; she immediately felt chilled, and fancied she was in the water, arms became quite blue, and the feet and hands felt numbed. She became unconscious, fell down, and was carried to a Doctor's. After recovering consciousness she walked back to the station, where she remained for some hours till the train started to convey the party back to London, where they arrived at 1 o'clock the next morning. In the meantime she had only taken a biscuit and some tea. She was conveyed to a "home" at Walworth, where she was put to bed, but could not go to sleep because she felt so giddy, with a severe burning headache, and everything before her seemed to be moving like the waves of the sea.

She was unconscious when admitted, but after the bath she revived and answered questions intelligently. She still complained of muscæ volitantes; was rather nervous; pupils small, active; conjunctivæ suffused; tongue dry, furred; was thirsty; bowels open; felt very cold before the bath, but perspired freely after it; breathing natural; heart sounds healthy; Pulse 96, of good strength. Ordered—Pil. rhei c. hydrarg., ice to the head, mist. potassæ citr.

August 6.—Better. Quite rational; tongue still furred; bowels open.

12th.—Is now convalescent.

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Medical Times and Gazette.

SATURDAY, AUGUST 15, 1868.

THEORIES OF CHOLERA.

THE ZYMOTIC THEORY.

Dr. Farr having just completed his official report on the cholera epidemic of 1866, we take the earliest opportunity of giving our readers, who may possibly not be able to obtain the volume itself just at present, some idea of the way in which the various theories of the causation and spread of cholera are handled by a writer having the fullest knowledge of all the facts gathered during the late as well as previous epidemics, and possessing in a remarkable degree the ability requisite for analysing and marshalling the evidence so as to bring out in their strongest light the conclusions derivable therefrom.

The water theory of the diffusion of cholera naturally occupies the most prominent position in the report. It is, so to speak, the child of Dr. Farr's adoption, and it was incumbent on him to show, as he does most undoubtedly, that it was not advanced haphazard, but was forced upon him by the circumstantial evidence supplied early in the East London outbreak as well as by the observations recorded during previous visitations of cholera. We do not propose to deal with the water theory at present, because the whole subject has been so fully discussed in our columns, and the views we have expressed agree so nearly with those contained in the report. We prefer rather to present first, as succinctly as possible, some account of the theories of choleraic *causation* as well as of *diffusion* which Dr. Farr has, with much patient labour and skill, brought together.

And first of the zymotic theory. The researches of Pasteur, Pacini, Chaveau, of Thomson, Hassall, Beale, and Frankland, furnish abundant evidence of the substantial foundation of this theory. They establish the analogy (but not the identity) between the phenomena of zymotic diseases and the phenomena of fermentations.

Here let us begin by quoting the words in which Dr. Farr sums up his conclusions:—

"To sum up the zymotic theory. It is now held by naturalists that each organ of the body has its proper life; and that it consists of minute centres of action, which have been called cells, globules, organic units, germs, granules, and other names. The cells, like the supposed vesicles of the clouds, are now shown to be solids, and Beale proposes to call them 'germinal matter,' which is perhaps a description rather than a name. 'Monad' would serve to designate these living particles, but as it, as well as the other names proposed, have been already appropriated, these units of force and life may be designated *biads*. Nearly alike under the microscope, *biads* differ infinitely in power and variety; for instance, the brain-cells of man in an early stage of development resemble the pus globules of ordinary inflammation. 'Masses which could not be distinguished from one another [even by Dr. Beale], manifest the most remarkable differences in power.' . . . 'By chemical analysis every kind of germinal matter (*biad*) yields one substance resembling fibrin, another allied to albumen, fatty matter, salts, and water.' Of these *biads* all bodies are built up.

"It is only with particular kinds of these *biads*, then, that we have to do in *zymosis*; and to give definite form to the theory, while *vaccine* lymph may be briefly called *vaccinine*, the granules of Chaveau may be named *vaccinads*; while those of *varioline* (small-pox lymph) are named *variolads*; those of *syphiline*, *syphilads*, and those of *chlorine*, *chlorads*, the choleragenic molecules of Pacini.

"It is life in this low form, where it is developed in isolated particles at war with those which constitute men, that generate zymotic diseases. An epidemic is the war of a conquering host of innumerable particles of life. It is therefore subject to the laws of growth and decay, both in the individual man and in communities."

In our next we shall follow Dr. Farr's account of the nature and behaviour of those forms of low life which wage war so successfully with our higher life in their epidemic invasions.

IS PREVENTION BETTER THAN CURE?

In Wilkie Collins's remarkable novel of "Armadale," there figures a member of our Profession in no very favourable light, and the artist who illustrates the work, by a subtle touch in one of his sketches, skilfully assists the author in his delineation of the character. The scene to which we refer represents the interior of the study or surgery in which this worthy—whose names we forget, but he had two—received his patients; in the background were shelves on which stood rows of wide-mouthed glass jars, the dim outline of whose contents always gave to us the idea that they were intended to represent the embryonic stages of existence—an idea which received full confirmation from the motto inscribed above them, "Prevention better than Cure." We thought at the time that the picture was rather broadly suggestive, but trusted that the full force of the artist's design would convey itself only to Medical men, and we were happy in the thought that such principles and such a line of practice could only be entertained or even discussed by such individuals as the disreputable Doctor, whose doings and sayings were very important incidents in the tale.

But we were mistaken. The London Dialectical Society, on July 1, at a crowded meeting, at which were several ladies, Dr. Chapman, Dr. Drysdale, Dr. Edmunds, and Mr. Bradlaugh, with Lord Amberley in the chair, discussed the topic of how families can be limited without injury to health, so as to obviate the evils of over-population and the poverty and misery consequent thereon. Lord Amberley considered it to be entirely a Medical question, an opinion which was coincided in by Dr. Drysdale, who considered that the question, How could married persons limit their families without injuring their health? was mainly a Medical one, and that it required much calm thought and discussion, and mentioned that a few years ago, he had in France met with two young couples in one hotel, both married about five years, and both without children. On interrogation, he received the same answer from both husbands—that they were not yet rich enough to afford children. Dr. Drysdale considered this to be one solution of the difficulty of over-population, if not the best. A Mr. Nasmyth followed on the same side, and said it was a mere question of fashion—that in England it is the fashion to have large families, and in France to have small. In fact, they manage these things a great deal better in France.

We cannot find words sufficiently strong to express our utter abhorrence and condemnation of the idea of discussing such a question as a purely Medical one. It is *not* a Medical question, and will never become so until others, some of which we shall attempt to indicate, shall have been established in the affirmative.

1. Are we the absolute and irresponsible controllers of the circumstances of our own existence?

2. Is the subtle principle which we call life so much our own property that we have the right to decide for or against its transmission to others to come after us, when we have, by the indulgence of our own instincts or passions, called into action natural forces, which if uninterfered with, would pass through the various stages of embryonic development?

3. Is the *relative* over-population of one country or continent only to be remedied by such measures, so long as many vast tracts of land presenting every requisite for human habitation are allowed to remain *absolutely* uninhabited?

When these questions of morality and political economy, and others of like nature, are affirmatively disposed of, we may then, as Medical men, begin to consider by what devices we may fly in the face of natural laws without detriment to health; and, having come to a decision on the matter, we may expect to see a branch of trade, which now under the wholesome restrictions of the law is limited to dens of obscenity and vice, and of which we are hardly conscious unless when it is dragged into light by the public prosecutor, fostered and protected and introduced into our families and homes by the Medical Profession. We have no fears that that day will ever come. But for the honour of our Profession, for the truest and best interests of our country, and in the name of public decency and domestic purity, we feel it to be our duty to give no uncertain note on this question, and to protest in the most solemn manner as responsible to a higher power, against the possibility of infringing natural laws without entailing upon ourselves "sundry diseases and divers kinds of death."

The difficulty of over-population is to be removed by no such clumsy expedient, which, being pushed to its logical conclusion, would put an end to all effort for the relief of sickness and the preservation of life. The country is already over-populated—every birth gives one more mouth to be filled. On the other hand, every death removes one of the encumbrances; therefore the course of action is plain. Let us keep down the number of births by cunning devices, as they are said to do in France and America, and let us at the same time withdraw all support from charitable institutions, so as to encourage the death-rate, and the surplus population will soon be disposed of, and we shall have everything in our own way.

We hardly expect the social dialecticians to go that length with us; but if they be not prepared to do so, we urge them to pause before they involve themselves in further discussion of a question which can only be solved by earnest, long-continued, and well-directed effort to *comply* with, instead of trying to evade or oppose, the natural laws by which our present sphere of existence is regulated. What we require is education of all classes in the nature and mode of operation of those laws, a higher standard of moral and religious feeling, a more intense appreciation of the duties of self-denial and self-sacrifice, and a stronger conception of our relations with, and duties towards, God and our neighbour. When these have been attained, we shall hear no more of surplus population.

THE WEEK.

TOPICS OF THE DAY.

THE growing feeling of discontent with the present mode of election to the Fellowship of the Royal College of Physicians has found utterance in the proposal which is to be moved at the next quarterly Comitia by Dr. C. J. B. Williams. The exact terms of Dr. Williams's motion appeared in our last number. It provides that the Council, before preparing the list of Members to be recommended for the Fellowship, shall be open to receive any names recommended by two or more Fellows, with a statement of the grounds on which they are recommended. Moreover, if the list be not considered satisfactory, it shall be open to any of the Fellows to add to the names on the list. The list so altered is to be suspended in the College for a fortnight, at the end of which time a ballot is to be taken, and those candidates are to be elected who receive a majority of votes. Such a mode of selection would be an enormous improvement on the present, and we hope that it, or some scheme closely resembling it, will receive the support of a large majority of the Fellows.

There seems to be just now a lull and pause in electioneering activity as far as it has extended to the Universities. Mr. Bagehot's retirement from the contest in the University of London has cleared the way for Mr. Lowe, whose return, we presume, is tolerably certain. Dr. Richardson has issued a short address to the electors of the Edinburgh and St. Andrews Universities, embodying the line of policy which we have already stated he is prepared to adopt. A subscription has been started to defray the necessary expenses of his election, and we are informed that he is daily receiving fresh promises of support from the Medical part of the constituency. In addition to the Medical men whose names we have already quoted as seeking seats in the New Parliament we see that Mr. Alfred Smee intends again to try his fortunes in the Conservative camp at Rochester.

Mr. Kinglake's account of the neglect of the Russian wounded by the Allies at the Alma has called forth an indignant protest from Dr. Holmes Jephson. Dr. Jephson states that he was at the time serving as a Medical Officer in the 49th Foot, and that he was occupied throughout the night after the Alma and the whole of September 21 in attending to the wounded Russians, who lay strewed about the camp. In this duty, Dr. Jephson states that Dr. Prendergast, then Lord Raglan's Staff-Surgeon, and the late Assistant-Surgeon Browne, of the 94th Regiment, also actively laboured. Mr. Browne, indeed, was promoted for his services on the occasion.

We are sorry to note the death of M. Boucher de Perthes, of Abbeville, at the advanced age of 80. M. de Perthes was one of those few fortunate discoverers who, after having seen their discoveries treated for a long time with no little neglect and contempt, live yet long enough to find the truth of their statements acknowledged and themselves famous. His discovery of the flint implements in the drift is the most important to history, archæology, geology, and anthropology, which this age has seen. It is the end of a chain which, care-

fully followed, has already led to enormous modifications of the general opinion as to the age of man on the earth and his primeval condition, and not improbably will yet lead to as great modifications in the received computations of geological time. M. de Perthes' unrivalled collection of flint implements from the Abbeville drift is placed in the Gallo-Roman Museum at St. Germain.

The magnates of the city of Edinburgh have determined to confer the freedom of the city on Sir J. Y. Simpson. No doubt this is intended as a quiet mode of censuring the decision of the curators in the contest for the Principalship of the University.

The Colonial Legislature at Capetown has before it a Bill to prevent the spread of contagious diseases in that colony. Its provisions include the appointment of Medical inspectors, the regular inspection of prostitutes, and the treatment of the diseased in Hospital. A special clause in the Act clears it from the imputation of legalising prostitution or exempting women of evil life from the action of the law. It is proposed that the Act shall extend to Cape Town, Simon's Town, Graham's Town, and King William's Town.

The contest for the Chancellorship of the University of Edinburgh is still practically undecided, for a large number of the graduates have not yet registered, and it is impossible to say what will be the number of actual voters. Mr. Gladstone's party talk largely of success, but it is believed by those who have the best opportunities for forming an opinion that the Lord Justice Inglis is far ahead of his opponent.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Medico-Psychological Association held its meeting last week at the College of Physicians, under the presidency of Dr. Sankey. Most unfortunately, the day was one of those on which the British Medical Association met at Oxford. This was a sad blunder. The smaller Society suffered much in numbers, and yet there was in the afternoon—at which part of the day only we were represented—a fair attendance. An able paper by Professor Laycock excited a good deal of interest. On his suggestion, a committee was appointed to urge on Government an inquiry into the present state of the law with regard to insanity. The Society is to be congratulated on having secured a Physician of Professor Laycock's eminence to be president. He will preside at the annual meeting, which is to be held at York, in 1869, this time the day *before* the meeting of the British Medical Association. York is but an hour's ride from Leeds, where the larger gathering is to be, and is one of the pleasantest cities in England. Besides, Medical psychology is well represented there. We hope many members of the British Medical Association will attend the meetings at York, which, under the presidency of a man of Laycock's stamp, cannot fail to be in all ways important and interesting. We need hardly say that the Association wound up its annual functions with a dinner in the evening.

WAR-OFFICE REGULATIONS *v.* HUMANITY.

An incident occurred at the Herbert Hospital, Woolwich, about a fortnight ago, which, if the particulars be as reported to us, certainly evinces a remarkable misappreciation of the objects of a Hospital, be it military or civil, as well as of the responsibilities of the official invested with the control of that Hospital. It appears that on July 23 a lad was asleep on the shaft of a wagon passing along the road in front of the Herbert Hospital; he nodded over and fell under the wheels, and thereby sustained a compound fracture of the right thigh, with extensive laceration, or almost disorganisation, of the muscles, and severe contusions about the left hip-joint. The Medical officer on duty at the Hospital went to the assistance of the unfortunate lad, and with some difficulty had him conveyed into one of the wards and placed on a bed. The Hospital being under the command of a military Governor, the Medical officer had, of course, to report the occurrence to him, and to request his sanction to the lad's being treated in the Hospital. The Governor, acting according to his military instinct of blind obedience to the letter of the law, refused to sanction the admission of the sufferer into the Hospital, and the miserable patient was accordingly bound up as well as the shattered condition of his limb would admit, placed on a litter, and removed from the Herbert to Guy's Hospital. He died on the road. Now, we do not say that the ultimate result would have been otherwise had the lad remained in the Herbert Hospital and the necessary amputation been performed; but we do say that it appears to us that the community at large, who, by their taxes, contribute to the support of the Herbert Hospital, have a right to complain that any member of their body, however humble his position, should have been sent away from the doors of a military Hospital, where the necessary attendance and appliances were available for the immediate treatment of his injuries, to die on the road to a distant civil Hospital, because he was not a soldier. We are strongly of opinion that if the Herbert Hospital were under the management of the Medical authorities instead of a military governor, no such lamentable event could occur, and that it would be found that military Medical officers, as a rule, are capable of exercising a wise discretion in similar circumstances, so as to prevent on the one hand the unnecessary admission of civilian patients into military Hospitals, as well as, on the other, such a catastrophe as we have recorded. We should like to know what would be the opinion of the War Office authorities if a soldier had met similar treatment at one of our civil Hospitals.

CHOLERA AMONG OUR TROOPS IN INDIA.

We have heard from a correspondent that cholera prevails to some extent among the British troops in the North-Western Provinces and Bengal. The disease first appeared on March 3, at Berhampore, among the 2nd battalion of the 25th Regiment, but only caused three deaths. It appeared at different times in several other stations, but in none with any great severity; and there was a cessation of it for some weeks. It has, however, latterly, between May 23 and June 15, reappeared with some severity among the Royal Artillery and 2nd battalion of the 12th Regiment at Jubbulpore, causing twenty-one admissions and sixteen deaths, two officers, two soldiers' wives, and five children being among the latter. At the depôt at Chinsurah also fourteen admissions and twelve deaths, including those of one woman and one child, occurred between April 6 and May 23. An officer of the 2nd battalion of the 60th Rifles also died at Calcutta. Altogether, since the first appearance of the disease this year there have been fifty-three admissions and thirty-six deaths of all classes.

ADDITIONS TO PATHOLOGY OF THE VASCULAR AND PULMONARY SYSTEMS.

Dr. Charles R. Francis, in an interesting paper in the *Indian Medical Gazette*, points to fatty degeneration of the heart as a great source of mortality in India. Sometimes it is a cause of death *per se* of awful suddenness, but it may also be the determining cause of death after operation and in the course of (otherwise not mortal) disease. It affects the private soldier more than the officer, because, although both may eat too much, drink too much alcohol, and sleep too much without taking exercise habitually, yet the officer at times gets off to the hills, turns off his superfluous carbon, and exercises his muscular tissue. One great cause Dr. Francis believes to be diminished function of the lungs. That there is diminished function of the lungs in hot climates admits, he says, of remarkable proof. *They become lessened in bulk.* Dr. Francis was much struck with the comparative lightness of the lungs of persons who had died of cholera.

In order to test the value of this fact, in reference to Dr. G. Johnson's well-known theory of spasm of the pulmonary arteries in cholera, he tested the actual weight of the lungs of *all* Europeans dying in India, and found that in almost every case they weighed little more than 30 oz., whilst the normal weight, according to Clendinning, is from 42 to 45 oz. This opens up a new chapter in the cholera controversy.

THE BRITISH MEDICAL ASSOCIATION.

THIRTY-SIXTH ANNUAL MEETING, HELD AT OXFORD.

(*From our Special Correspondent.*)

My last letter broke off at the end of the delivery of Professor Haughton's paper on Food and Force. In theatrical phrase, his address brought down the house. As I have already observed, it was a most capital performance both in matter and manner, and well deserved the applause which it gained. The orator, indeed, was blessed with a thoroughly sympathetic audience. Your Doctor on the loose—that is, away from his patients—is the very impersonation of appreciative and enthusiastic jollity. No good thing escapes him, whether it be satire or science, trifle or venison. The Reverend Professor's figures and fun were equally relished, and the applause rose with the peroration until it might have waked the saints who are quietly dozing in the niches of the canopied roof of the Divinity School. On Wednesday afternoon the Sections got to work, and papers of greater or less interest were read, of some of which I forward you abstracts. In the evening Dr. Acland received the members of the Association, and a large number of guests of both sexes, in the new Museum. As a building, the Museum is well worth a visit. It exemplifies the applicability of iron to the purposes of Gothic or quasi-Gothic architecture. The pillars supporting the roof and galleries, from which spring numerous ornamental shafts, are all of iron. On the present occasion the building was brilliantly lit with gas, and looked exceedingly well. The only fault which a critic might find is that the general effect of the interior is interfered with by the great number of supporting shafts which, although beautiful in themselves, cut up and divide the contained space. There are a vast number of good biological specimens in it, but these, as well as the marble statues of eminent men which it contains, it is not my present business to describe. For the special purposes of a *conversazione* the building is capitally adapted. Professor Lionel Beale on this occasion exhibited a set of microscopical preparations unrivalled, I believe, in number, beauty, and character. The descriptive catalogue of these specimens, "illustrating the structure of certain tissues and organs of man and animals in health and disease," makes a goodly pamphlet of more than twenty pages, which is supplemented by a number of exquisitely engraved illustrations. Professor Clifton showed Helmholtz's apparatus for investigating the nature of sound, and M. Marey the sphygmograph and cardiograph. The most recent acquisition by the Museum is a lower jaw of the mammoth, *Elephas primigenius*, which Professor Philips said had lately been found in the neighbourhood of Oxford. The jaw has been cleverly reconstructed from fragments, but the molar teeth of this last of the northern hemisphere elephants, which differ both from those of the Asiatic and African species, are in excellent preservation.

Before leaving Oxford I paid a visit to the elder and venerable sister of the new Museum, the Ashmolean. It has a quaintness and an interest of its own which should never be lost in the new lights and splendours of its successor. I have a theory that the surest and shortest cut to immortality is unquestionably to form a museum. To leave a sum of money to found a prize is not a bad bid, but it insures a much smaller circle of admirers than the other. Who would have thought it necessary to know much about Sir Elias Ashmole had it not been for the Ashmolean, and the dodo, King Alfred's jewel, and Queen Elizabeth's boots; or of Sir Hans Sloane or Sir John Soane were it not for the handbooks to the British Museum and the Hogarth pictures; or—is it treason to add—of John Hunter had it not been for the Hunterian Museum and the Hunterian orations? There is nothing like the *si monumentum quæris circumspice* to hand a man down. The direction sounds grand, and it is remarkably easy to follow.

On Thursday morning the real business of the day commenced with the reading of Professor Bennett's Report on the Action of Mercury as a Cholagogue. The Committee whom he represents have confined their experiments to dogs, and have unquestionably proved that the administration of mercury to dogs does not increase the flow of bile. But, as Professor Stokes observed in the adjourned discussion on the paper which took place on Friday, these experiments leave the therapeutical question utterly untouched. What are now wanted are experiments on men in health and disease. I cannot but think that comparative therapeutical experiments are a very valueless mode of exercising ingenuity. When we recollect the various idiosyncrasies with regard to the action of drugs amongst mankind themselves, and the vast difference those indiosyncrasies produce, what can be the value of observations made on animals separated by long intervals from man in the scale of being?

Dr. Gull's address has already been perused with profit and pleasure by your readers. I can assure you it lost nothing in delivery. Dr. Gull teaches with authority, and not as a *ductor dubitantium*, however sceptical he may be with regard to a good deal that passes for Medical science in these days. Every word fell with a force, an *aplomb*, that made what he said tell—an excellent thing in Doctors.

Amongst the other incidents of the day was the administration of nitrous oxide gas and of nitrogen as anæsthetics by Dr. John Murray, of London, at the Radcliffe Infirmary. The latter, of course, acts simply by depriving the patient of oxygen. It is said that it may be used successfully, but its administration could hardly be prolonged for any time. Mr. Clover also gave the Association the benefit of his experience with nitrous oxide. I send you an abstract of his paper. Mr. Fox exhibited the apparatus required for producing the gas.

A meeting of the Glasgow and Aberdeen graduates was held in Convocation House, for the purpose of taking steps to insure the return of a Medical representative of the Universities at a future election. I send you a short account of their proceedings. One cannot, however, but regret that the present opportunity has been allowed to slip. Once let a lawyer be seated for the Universities, and it will be very difficult to oust him. No time could have been more propitious to return a Medical man than the first election to a newly-reformed Parliament. It seems to me that, except at the bedside, our Profession are always *unready*. They have no notion of taking advantage of "the tide, which, taken at the flood, leads on to fortune."

The dinner at Christ Church, which crowned Thursday's proceedings, passed off most successfully. By the bye, I see in the *John Bull* paper that the Doctors are charged, on the doubtful evidence of the Christ Church butler, with being huge consumers of that modern feeble innovation called claret cup, a drink which has found favour in the eyes of this degenerate generation. Now, I do think this implies a libel on our Profession. I believe that our brethren have far too good taste to become adherents of a liquor in which all the strength and virility of the grape is emasculated and neutralised by watery solutions of alkali, all its glorious essences and sapors, ethers and fragrances, benumbed and frozen with floating masses of ice, and overpowered and smothered with drastic cucumber, physic-like borage, and sickly sugar. No, Mr. Editor, if I may speak from observation, I should say that the attentions of our brethren during their stay in Oxford were more frequently directed to an examination of that ambrosial fluid—

"Oh, call it fair, not pale"—

which mediæval genius distilled and elaborated from the brown barley and the twining hop—the secret whereof, the saints be praised, hath never, even in the storm of the Reformation, been entirely lost in that ancient seat of learning.

But this is a digression. Friday morning was occupied with the discussion of the Report on Mercury, to which I have already alluded, and the meeting was brought to a close in the afternoon by a final gathering, at which some little con-

versation as to the mode of auditing the accounts of the Association took place, terminated by referring the matter to the Council. Then came the last course in the banquet, which consisted, *selon l'usage*, of butter pure and simple, garnished with the usual flights of eloquence, and served up to the entertainers, the University, the Heads of Houses, the President, the Secretaries, the Presidents of Sections, and, in fact, to every one who had made himself useful. Your correspondent wishes also to add his thanks to the Association which has afforded him so much pleasure and instruction, and also especially to the editor of that Association's Journal for the valuable facilities he afforded him of obtaining for your readers *verbatim* reports of the addresses delivered.

ADDRESS IN PHYSIOLOGY.

By Professor GEORGE ROLLESTON, M.D., F.R.S.,
Linacre Professor of Anatomy and Physiology.

I hope that you may think that the fact of my connexion with this place having put me into the honourable office of giving this address justifies me in adopting for it an arrangement, and choosing for it a set of topics, which that local position suggested to me. If I were to say that I had chosen for the subject of my address the bearings of the studies which it is the business of my life to teach here upon the interests of the Medical Profession, I should be giving my address too ambitious a title; it is but with some and with few of these bearings that I propose or feel myself competent to deal. I shall limit myself, firstly, by selecting only such topics as, having been pressed forcibly upon my own attention in my own peculiar course of labour, have come to assume, in my own eyes at least, a considerable importance, and have seemed, in consequence, not unlikely to prove possessed of interest for others also; and I shall limit myself, secondly, by abstaining from going over ground which has, within my own knowledge, been occupied by persons who have on previous occasions stood in the position which I now occupy before you.

Let me throw the heads of my address into a few short phrases, and say that I purpose, with your permission, to speak firstly of the bearing of certain portions of the very extensive range of subjects comprised under the titles Anatomy and Physiology upon certain points and problems which come before the attention of the Medical Practitioner in the course of his actual duties; and, secondly, of the illustration which some of the conclusions recently come to in biological science cast upon the validity of certain principles which are ordinarily looked upon as authoritative canons for the regulation of the reason in Medical, and, indeed, in other investigations. Under the term biological science are included, besides pure physiology, human and microscopic anatomy, comparative anatomy also; and in this place, as your visit to the Museum will have convinced you, we have given considerable, but, as we hope, not undue, prominence to this latter branch of study. I propose to speak of the bearings of biology on Medicine in each, but, owing to our local speciality just alluded to, specially in the last-mentioned of these four departments. And I must ask you to bear in mind that the very constant reference which I shall make, if not in my address, at all events in my notes, to the works and writings of others, is in like manner to be explained by my wish to have a distinctive colouring given to this address by the local peculiarities of the great educational centre in which we are assembled; for one of the most distinctive peculiarities of this ancient University is the formation within its precincts of such a library of modern science as will shortly have no superior and but few rivals in the world. This we owe to the well-advised administration of the funds of that famous Physician Dr. Radcliffe; and it is from a wish to make a sort of acknowledgment of the obligation which Medical and other sciences owe to him and his trustees, that I shall so constantly, at least in print, refer to the chapters and pages of the innumerable books which their enlightened munificence has put here at the disposal of the student. It is not, I can assure myself, from any irritable anxiety to impugn or depreciate the work of others, that I have so constantly consulted and specified their pages; nor, I trust, have I allowed myself to be tempted into the unpardonable fault of using, or rather abusing, a great opportunity by making upon it a petty personal display. Rather have I felt it to be my duty to occupy this hour, as you occupy your lives, in doing what it may be possible to do for the good of humanity. Your presence and your examples make me feel that any other course would be but impertinence; and I have therefore kept constantly before my eyes Bacon's sentence in condemnation of empty, useless erudition—*Vana est omnis eruditionis ostentatio, nisi utilem operam secum ducat.*

The title of Niemeyer's work on Medicine, the seventh edition of which has recently appeared and come into my hands, will furnish me with an excellent text for my first head—"The Connexion and Interdependence of Medicine and Physiology." That title runs thus:—"*Lehrbuch der speciellen Pathologie und pathologischen Anatomie*, von Dr. Felix von Niemeyer. Siebente vielfach vermehrte und verbesserte Auflage. Berlin, 1868." From this work I will take my first illustration of the nexus and connexion of which I have to speak; and I believe that, though I am obliged to dissent from the explanation therein given of the facts I shall refer to from its pages, the explanation which they seem to me to bear, or rather demand, shows, even more clearly than the one there given, the intimacy of the alliance which is now becoming so close between the experimentalist and the practitioner. In writing (vol. ii. p. 334) of a form of neuralgia, the pain of which those who have suffered from it themselves, or, indeed, have seen others suffering from it, will allow is not exaggerated by the application to it of the words "fast unerträgliche," Niemeyer remarks that the physiologists Dubois-Reymond and Dr. Möllendorff refer its origin to the existence of a distorted state of the *arteria carotis cerebralis*. This state of dilatation these authorities explain by a reference to certain facts in the physiology of the cervical sympathetic as discovered now some seventeen years ago by Bernard, and elucidated still further by Budge and Brown-Séquard. And in a like spirit, or at least by a reference to certain anatomical facts in the arrangement of blood-vessels, which he supposes to become dilated and distended, the great Göttingen anatomist, Henle (cited by Niemeyer, vol. ii. pp. 319-339), explains the causation of certain neuralgias. The neuralgia which is apt to haunt the sixth, seventh, and eighth intercostal spaces of the left side, he has suggested, may be explained by the peculiar arrangement of the left or smaller azygos vein in that region; and the greater relative frequency of neuralgia of the first than of the second and third divisions of the fifth cerebral nerve, he refers to the greater quantity of dilatable veins with which it is beset in passing from the inner to the outer surface of the sphenoid. Now I venture, though with some diffidence, as I find myself in opposition to such names and authorities, to dissent from the explanations thus given of these facts, which I suppose must be acknowledged, with perhaps an exception as to the relative statistical frequency of neuralgia of the first division of the fifth, to be only too real facts. By laying the physiology of the cervical sympathetic alongside of the natural history of an attack of neuralgia, we shall be enabled, I believe, to see that there are stages in each corresponding with stages in the other, but that it is a stage of spasm in the one, and not a stage of relaxation and congestion, which corresponds with the stage of pain in the other. Stimulation of the upper cervical sympathetic produces more or less immediately contraction of the blood-vessels of the head and dilatation of the pupil, and diminution of the temperature. This is the first line of operation, resulting in what Brown-Séquard ("Lectures on the Physiology and Pathology of the Nervous System," 1860, p. 142) calls "decrease of vital properties." But after a while the reverse of all this takes place, and the vessels dilate. Now, whether this be so in consequence of exhaustion, as is ordinarily said (Funke, "Physiologie," vol. ii. p. 772), or not, as Dr. Loven, who says (Ludwig's "Arbeiten Phys. Anat.," Leipzig, 1867, p. 1011) that the sympathetic is not so easily tired, thinks is of no consequence, or of little consequence, as the fact of the sequence of the events is accepted as I have stated it on all hands. Indeed, similar alternations of alteration in the calibre of vessels takes place, as is well known, spontaneously, as the phrase goes—whether rhythmically or not, still chronometrically in relation to the needs of the animal and its tissues in the arteries of the rabbit's ear (Funke, *loc. cit.* ii. p. 771, citing Schiff and Eulenfels), in the veins of the bat's wing (Wharton Jones, *Phil. Trans.*, 1852), in the arteries of the frog's web (Lister, *Phil. Trans.*, 1858, p. 653), and the occurrence of these latter alternations makes the occurrence of the former more intelligible. Now, a similar alternation from a stage of contraction of blood-vessels, of coldness of skin, of shivering, of total absence of heat, redness, swelling, or tenderness, to one of increased circulation, swelling, heat, and tenderness, constitutes two stages in an attack of neuralgia, homologous with the two described as occurring in irritation of the sympathetic. It is rare, I believe, and Dr.

Anstie teaches ("Stimulants and Narcotics," 1864), for pain, as opposed to tenderness, to persist after congestion; and pain in tissues differs as much from tenderness as remorse in a conscience differs from tenderness in that organisation, and the two things are well nigh equally exclusive the one of the other in both cases. Perhaps the mere apposition of the two sets of occurrences side by side is sufficient to justify my conclusion that the congestive stage of the physiological experiment is not the homologue of the painful one of the morbid history, mere apposition being sometimes sufficient to decide us on more difficult homologies, at least in the negative. But I may add that the argument from the *juvantia ac lædentia*, as the older Physicians and physiologists phrased it, gives some confirmation to the view which teaches that spasm and starvation go in company with pain, relaxation and congestion only with tenderness. I will put the facts before you as premises; you will piece them together with an argument for yourselves. Chloroform is the greatest of *juvantia* in neuralgia. Chloroform, indeed, and ether, in equal parts, as recommended by Mr. R. Ellis, may be safely entrusted to a safe person for self-administration; and, if taken persistently as well as prudently, may keep the attack in suspense until the enemy, from weariness or chronometric obligation, retreats or withdraws. But this great reducer of neuralgia, this great and blessed producer of "indolence," as Locke called it, is also the great reducer of muscular spasm, as we know from its action and our employment of it in cases of hernia, and, indeed, of tetanus. Now, if it relaxes muscles, which we can see in the limbs and trunk without the aid of a microscope, we may think it not improbable that it will do the like by muscles, which we cannot see without the aid of that instrument, in the wall of the arteries. Secondly, chloroform has an action differing from that of the sympathetic, in dilating the blood-vessels of the head;(a) as, indeed, also has alcohol, itself too a producer, though less directly, of the "indolence" we desire, as well as of much that we deprecate. And, thirdly, chloroform antagonises the sympathetic in its very obvious action on the pupil.

It may be bold in me to venture further in this direction; yet, as a member of the British Medical Association, and as a reader of our admirable journal, I may perhaps be allowed to say, before I return to my own more immediate subject, that the account given by Dr. George Johnson in that periodical for March 21, 1868, seems to me to indicate that epilepsy itself is but a frightful caricature of neuralgia, and of the results of vaso-motor irritation and contraction. The presence of dilatation of the pupil in all those sets of cases may be thought perhaps but a slight indication in the direction of identity of cause. High spirits and great vivacity are not rarely, in both diseases alike, precursors of an attack; while counterirritation, which both Schiff and Setschenow (b) are agreed in considering a strong and universal reflex depressant is not rarely, in both diseases alike *ex hypothesi*, dependent on reflex vascular constriction, a preventive.(c)

I will now proceed to give, in the second place, an account of a physiological experiment worked out for us, from time to time, in the laboratory of Nature, which throws not a little light on a question which, I learn from Dr. Wilson Fox's work "On Dyspepsia" (p. 141), is still a matter of debate among pathologists—the question, to wit, of the influence of perverted innervation in causing inflammatory, or sometimes even still severer morbid changes.(d) It is well known that stags, after injury to the testis, have corresponding changes wrought out in the corresponding horns. Such a specimen I can show you from the Christ Church Museum, founded by Dr. Matthew Lee, in a curious old work dedicated to him, in company with two others of the King's Physicians, by Dr. Richard Russell,(e) styled "The Economy of Nature in Acute and Chronical Diseases of the Glands" (pp. 21—24), five such experiments are recorded. In such cases as these, after the injury to the testis, the horn may or may not be shed annually; but it never thenceforward loses its "velvet," and it never becomes the dry and lowly vascular weapon of offence which, in a fortnight or three weeks from the present time, we shall see the bucks polishing their now leather-coated horns into against shrubs and trees. It remains vascular and spongy within, and coated with hairy skin outside, which may be prolonged into pendulous outgrowths. Being sensitive and fragile, and bleeding easily, it acts as a second sexual disqualification; and, as I am speaking of this correlation of growth, I may be allowed to add, that the reality is further testified to by its absence, after similar lesions, in reindeer, where both bucks and does are alike horned. Now, I submit that the unilateral correspondence of malnutrition, such as we have here, is as good an instance and exemplification of Pflüger's first law of reflex action, the law of unilateral (*gleichseitig*) transmission of stimulus as any unilateral or homolateral twitching of any muscle can be in response to any one-sided stimulus. Only the reflex action shows itself in the way of nutrition—a sort of reversed hemiplegic nutrition, it is true—and not in that of movement nor in that of secretion.(f)

(a) I find that both Mr. Durham (*Guy's Hospital Reports*, iii. vi. 1860, p. 153) and Mr. Hammond ("On Wakefulness," p. 25) are agreed that, in animals under chloroform, the veins of the brain become distended. I do not, however, lay any great stress upon this fact; firstly, because the veins may become distended under the influence, not so much of the chloroform, as of the more or less partial hindrance to respiration which its inhalation implies; and, secondly, because we have, as yet (Funke, vol. ii. pp. 769-773), no very distinct evidence for the production of effects on the veins by the sympathetic. But, taking the facts as given, we must allow that venous fulness, though inferior, doubtless, to arterial replenishment, is still, as the growing prostate of the aged, the rank hairs shooting up round old ulcers, and the cock's spur transplanted to the cock's comb, show, a more or less favourable condition for growth and nutrition; whereas pain is connected always with malnutrition and ordinarily with atrophy, and is now always spoken of as a "depression" rather than as "an exaltation of function."

(b) Setschenow's words are these ("Neue Versuche," p. 23, 1864):—"Es giebt endlich bei meinen Gegnern einen Versuch, an dessen Richtigkeit ich keinen Grund zu zweifeln habe, an welchem die einseitige Trigeminus-Reizung eine starke allgemeine Reflex Depression hervorrief." These words seem to furnish something like a *rationale* of the picking of the nose in helminthiasis, as also of much of that irritation of the fifth nerve at its periphery which so-called "nervous irritable" persons practise on themselves in the way of "tricks."

(c) These views I came to entertain without any knowledge—or perhaps I should rather say without any conscious recollection—of those which Dr. Radcliffe had put before the world in his lectures delivered at the College of Physicians, and published in 1864 in his work on "Epilepsy, Pain, and Paralysis." I have not altered what I had written in consequence of my consultation of this most valuable work, to which I resorted after seeing a reference to it in Dr. Anstie's book. This latter work I have already quoted in the text, and I found it most useful and suggestive to me. I believe, indeed I hope, that what I have written is more or less in accordance with Dr. Radcliffe's views. But it is as much inferior for purposes of consultation—and, indeed, in other points of view also—to what Dr. Radcliffe has written, and I have read of his, on the same subject, as a skull when just removed, and that in a somewhat fragmentary condition, from a barrow, is to the same skull when pieced together and reconstructed, as you may see many such skulls in the Museum, by Mr. Robertson.

(d) The following references to authorities on this vexed question I will here append:—

Lister, *Philosophical Transactions*, 1858, p. 627.
Beale, *Philosophical Transactions*, 1865, part i. p. 447.
Virchow, *Archiv*, vol. xvi., 1859, p. 428; "Cellular Pathology," Chance's translation, pp. 311-312.
Paget's "Surgical Pathology," Turner's edition, p. 237.
British Medical Journal, 1868, p. 402.
Anstie, *Lancet*, 1866, vol. ii. p. 548.
Simon, "Holmes's System of Surgery," vol. i. p. 62.
Bernard, "Leçons Physiol. Pathol. Syst. Nerv." vol. ii. p. 518.
Brown-Séquard, "Lectures on the Physiology and Pathology of the Nervous System," p. 143.
Budge, "Handbuch der Physiologie," p. 794.
Funke, "Handbuch der Physiologie," vol. ii. p. 776.
Donders, "Spec. Physiologie," p. 140.
Billroth, "Die allgemeine chirurgische Pathologie und Therapie," 1868, p. 72.
Niemeyer, "Lehrbuch der Pathologie und Therapie," 1868, ii. pp. 320, 340, 428.
Handfield Jones, "Functional Nervous Disorders," p. 11; Lectures in *Medical Times and Gazette*, 1865.
Samuel Moleschott's "Untersuchungen," Band ix. p. 18.

(e) It may be interesting to record here, in passing, that Dr. Richard Russell lived at Reading, that he was a friend of Dr. Chapman and of Dr. Frewin of this very place, and that the copy of his work to which I have referred, and which exists in the Christ Church Scientific Library attached to the Christ Church Museum, and deposited with it in the University Museum Buildings, died in 1760, eleven years before Dr. Russell's death, belonged to Dr. Chapman. Now these facts and dates render it not improbable that this very specimen may have been given by Dr. Russell to Dr. Chapman, probably together with this copy of his book. It is unfortunate that so much should be left to speculation; but this digression may be justified by the moral which it conveys to the effect that we are bound, when receiving a specimen into a museum, to put on record forthwith, for the benefit of our successors, a note of its history and donor. Dr. Russell was the author of several other works besides the one I have quoted. Their existence has escaped the notice of Dr. Munk, in his interesting volumes, "The Roll of the Royal College of Physicians," vol. ii. p. 132. Their titles are:—1. "De Tabe Glandulari, sive de usu Aquæ Marinæ in Morbis Glandularum, Dissertatio," in 1 vol. 8vo. 2. "A Dissertation concerning the Use of Sea-water in Diseases of the Glands;" to which is added an Epistolary Dissertation to R. Frewin, M.D., in one volume, 8vo, price 5s.

(f) See Otto, Neue seltene Beobachtungen Sammuel, vol. ii. p. 10. Elsässer, Diff. Sex. Mann, præter partes sexuales, p. 36. Since writing the above, I have seen a note to page 22 of Mr. Paget's "Surgical Pathology," by Professor Turner, in which the fact that no disturbance of nutrition is effected by mere transplantation of the testis in cocks, is brought forward to show that no mere nervous disturbance can account for these alterations of nutrition. I do not think that these negative results, obtained from

Let me, as in the former case, lay alongside of the physiological experiment a parallel to it from pathology. This I will do by the help of Budge, who, at pages 794-795 of his "Handbook of Physiology," gives us the two following short histories, which have come under his own observation. His words run thus in translation:—"After a long-continuing stagnation of blood at the end of the small intestine and the beginning of the large, in consequence of which exudations and adhesions of the peritoneum ensued, the entire right half of the body became weaker than the left, tired sooner by exertion; the right foot became cold sooner, under the same circumstances, than the left; the right ear became much more rapidly the seat of vascular dilatation than the left; and other similar phenomena developed themselves. After a great abscess under the right gluteus maximus, and an immense loss of pus, the right hand and the entire right arm became not only evidently thinner to the eye than the left, but also actually smaller." These cases are decisive as to the interference of the nervous system in the process of nutrition; and, though organs and structures, both physiological and morbid, may and do exist and grow in animal bodies, being as devoid of blood-vessels and nerves as though they were found in vegetables, still any arguments based upon these undoubted facts can be met at once, if so we care to meet them, with the more or less accepted physiological axiom, "The interdependence of parts augments with their development; the solidarity of organs increases and is more intimate with each superaddition of a fresh factor to the entire economy." But these cases do not, of course, touch the question of the way in which this nervous influence comes to act on the tissues, whether mediately through the blood-vessels, or immediately on the tissues with which they are supposed, in the case of the salivary glands, by Pflüger, though not, as I apprehend, by Dr. Beale (*Phil. Trans.*, 1865, p. 447), to become continuous. Nor does such an experiment as that of Bidder, in which a salivary gland under nerve-stimulation picked out two-thirds of the entire quantity of iodide of potassium in the circulation, to one-third picked out and secreted in the saliva of its fellow not so stimulated. For a more innervated gland is also a more vascular gland; and of the two antecedents, greater nerve-current and greater blood-current, we have no right from this experiment to say that the one rather than the other is the cause of this particular consequent; and much probability will come to attach itself to Virchow's views, according to which innervation is not proven to increase nutrition directly, but works only mediately by its influence on the blood-vessels, in the minds of persons who may be averse to multiplying causes by cases such as these. We go to a case, as I suppose most of us may, and as myself have gone, and we find one side of the body frequently hot and the other cold. This latter, the friends will tell us, is the paralysed part. We find that it is not; and Bernard's experiments enable us to understand why it is so. An excellent case to the same effect, showing how increase of vital properties may take place in the entire absence of any connexion with the upper part of the cord or brain, may be given from a paper of the late Sir B. C. Brodie's, in the twentieth volume (1837) of the *Medico-Chirurgical Transactions*. A man was admitted into St. George's Hospital, in whom there was a forcible separation of the fifth and sixth cervical vertebræ, attended with an effusion of blood within the theca vertebralis, and laceration of the lower part of the cervical portion of the spinal cord. Respiration was performed by the diaphragm only—of course, in a very imperfect manner. The patient died at the end of twenty-two hours; and, for some time previously to his death, he breathed at long intervals; the pulse being weak, and the countenance livid. At length, there was not more than five or six respirations in a minute. Nevertheless, when the ball of a thermometer was placed between the scrotum and the thigh, the quicksilver rose to 111° of Fahrenheit's scale. Immediately after death, the temperature was examined in the same manner, and found to be still the same.

The larger size of a horse's hoof, the nerves of which had been divided, should probably be similarly explained by the greater afflux of blood which would set in thither temporarily until the continuity of the nerve was re-established. (Ogle, *Med. Times and Gazette*, Nov. 3, 1866.) And, finally, such an occurrence as the inflammation of skin, cartilage, or cornea, after its own secret will, and not in the line of an irritated nerve passing through it (Virchow's *Cell. Path.*, Chance's Translation, p. 299), seems to speak plainly enough to the self-sufficiency of animal cells to respond to what Niemeyer calls "Insulte," without appealing to any higher powers for assistance—just, in fact, as though they were as little animal as truly vegetable, and as independent of any cranio-spinal centre as the gall-producing oak or willow.

But, in spite of all this, I am inclined to think that the direct action of nerves on cells is a *vera causa*; and, even if our highest microscopic powers do succeed in proving that nerve-tissues are never continuous with any other tissues in any part of their distribution, it must still be recollected that such intervals as may be demonstrated will be, if not insensible, at all events infinitesimal; and nerve-force may well be sufficient to act across such gaps as these. I can appeal for my justification to Professor Lister's experiment, recorded in his paper on the Cutaneous Pigmentary System in the Frog (*Phil. Trans.*, 1858, pp. 636-639), in which certainly the nervous system is shown to have some control over the molecular movements of concentration and diffusion, quite independently of the blood-vascular system. The cessation of the circulation in a frog's web entails the concentration of the pigment; therefore Professor Lister took a pale frog —*i.e.*, one in which the pigment was already concentrated; and, tying a ligature above the ankle, so as to eliminate the condition of cessation of the blood's circulation, he thus eliminated the condition of nerve-influence from the cranio-spinal axis by amputation above the ligature. *Cessante causâ, cessat et effectus;* the nerve-force is removed; and the pigmentary diffusion, which it had held in check, is set up, and continues until superseded by the post-mortem concentration which ordinarily takes place, and produces that lightening of the dark hue usually seen in the frog after death. This experiment, which I have not given in full, nor in Professor Lister's own words, is a very striking one; and I hope I may remark, without offence to any representatives of the great German fatherland, to which physiology owes so much, that much that has been recently written and worked there might have been spared, had Mr. Lister's papers been as well known to them as they will be to their successors. They seem to me to mark an era in the literature and in our knowledge of the essence of inflammation.

Here, if I may be allowed to digress somewhat, I would remark that Professor Lister's suggestion made in 1858 (*loc. cit.* pp. 619 and 640) as to the possibility of the existence in the limbs of a ganglionic apparatus co-ordinating molecular and other movements at the periphery, sometimes independently, sometimes subordinately to the cranio-spinally placed nerve-centres, may seem to have found a justification in Prof. Beale's demonstration in 1865 of the ending of the muscular nerves in nucleate reticular plexuses. Assuredly, the discovery of these networks bearing nuclei does away with the necessity for any further carrying on of the apparently interminable discussions as to the existence of an "ideo-muscular," as opposed to a "nervo-muscular," contractility. But I will take this opportunity of saying that there are not wanting purely physiological considerations, which, though not by any means amounting to demonstration, do nevertheless lend some little probability to the "neuro-muscular" explanation of those movements which take place in muscles separated from all connexion with central nerve organs. Firstly, these movements are, within my experience, more marked and frequent in the muscular tissues of young animals; and the history of the development of nerves would lead us to expect to find a greater degree of independence in the peripheral nerve-system than we should look for in the adult organism, for nerves do not grow from cells in the direction of what we know in the adult state and under low powers of the microscope as their branches; but, as Von Hensen has shown (Quain, *Elements of Anatomy*, 7th edition, p. clxiv.), two nerve-cells are connected by a fibre, and it is by the withdrawal of the one cell from the other, and the elongation, so to say, of the interconnecting fibre, that the peripheral and central ganglionic systems respectively assume their adult relations. And just so, I may add, in certain annelids and lamelli-branchiata, we have, as we not rarely do have in the lower animals, a stereotyped though but partial adumbration of what is but a single scene in the moving diorama of the development of the higher; and we find the peripheral nerve-system studded with eyes or other sensory organs, and possessed of a prominence and importance relatively to the central nerve ganglia which is only temporarily seen in the development of more perfect creatures.

experiments on half-a-dozen birds, can outweigh the positive facts of unilateral correspondence in malnutrition which have been so frequently observed in mammals. (See Hunterian Catalogue, Osteological Series, vol. ii. p. 591.)

Secondly, many of the cases of death in adults, in which this irritability is found to exist most commonly and markedly, are cases in which, from very various reasons, the functions of the intracranial nerve-centres are put into abeyance at a very early stage in the process deathward. Such are (see Nysten, cited by Brown-Séquard, *Proceedings of Royal Society*, 1862, p. 211) cases of decapitation, of asphyxia, and of sudden hæmorrhage from a large artery. Now we know that movements do continue in a portion of intestine which has been deprived of its mesentery, and we ascribe the production of these movements to the presence in the walls of the intestine of the plexuses demonstrated to us by Meissner and Auerbach; if we may ascribe like effects to like causes, we may ascribe the post-mortem twitching of muscles to Professor Beale's neuro-muscular apparatus. In like manner we should expect from similar reasons, and we do find as a matter of fact, this same neuro-muscular irritability greatly prominent in the small-brained cold-blooded vertebrata, and in hibernating mammals. In all of these animals alike, the central nerve-system is small relatively to the entire mass of their bodies; whilst in birds, or at least in the more highly organised of the class—for birds, like other bipeds, differ as to the mass and use of the brain (see Parker, *Zool. Trans.*, v. 1862, p. 207)—the brain may hold a more favourable relation to the entire mass of their bodies than in any other class of animals; and in birds, as is well known, with some few reptile-like exceptions, such as the peewit, muscular irritability ceases almost with their last act of inspiration.

Whilst speaking of this condition occasionally found in the muscles after death, I am tempted to say a few words of the empty condition of the arteries, which is almost constantly found after death. I observe that Von Bezold has explained this well-known phenomenon as being due to a last nervous impulse communicated to the small peripheral vessels from the brain. His words are (*Untersuchungen aus den physiologischen Laboratorien in Würzburg*, p. 358, 359, 1867)—"Sicher ist aber ein ungemein wichtiges Moment hierbei die Innervation der Muskeln in den kleinen Gefässen des Körpers. Man stelle sich vor, dass in der Agonie, in Todes-Kampfe, das Vasomotorische Central Organ im Gehirn noch in Krampfzustände versetzt wird, welche mit Pausen der Erschöpfung abwechseln. . . . . Ausserdem ist gezeigt worden, dass jenes letzte Ueberpumpen des Blutes aus den Arterien in die Venen, bei den Saugethieren wenigstens, unter dem Einfluss einer letzten Thätigkeit des Gehirns geschieht." Surely all these "Vorstellungen" would have been spared, if Professor Von Bezold had been acquainted with Mr. Lister's papers, or even with those points in them to which I have referred. Indeed, that his view is untenable, is clear from a consideration of the fact that the circulation can be kept up, and will, like the muscular irritability, persist in a decapitated animal for a long while after death, if artificial respiration be put in play. The empty state of the arteries *post mortem* is most probably to be explained by the action of the peripheral nerve-system on the arterioles; though Dr. Alison would have explained it by the attractive *a fronte* force of the tissues around the capillaries; but Von Bezold's view of the source of the nervo-muscular action of the peripheral vessels is, I apprehend, more untenable and less plausible than most theories which have had their day and ceased to be.

The following short history seems to me to be a good instance of the action, or rather of the want of action, of the peripheral nerve-system upon the arterioles. A man, who came some years ago under my own care, had had a bullet pass through his arm just above the elbow, so as to sever the musculo-spinal nerve. The scars of exit and entrance were in the lower third of the arm. Under ordinary circumstances the soft parts of the lower arm maintained their normal consistence; but their power of resisting changes of temperature was greatly impaired, as well of course as the sensibility of the parts supplied by the injured nerve. I recollect seeing the swollen state of the inner side of the hand one cold raw morning when the man was on sentry duty, and had his hand chilled down by the musket he had to carry. Now, I apprehend that this turgescence is to be explained by saying that the local or peripheral nerve-system of the affected parts was competent under ordinary circumstances to regulate the calibre of the arteries; but that its activity was liable to be depressed, as under the circumstances related, into actual abeyance, in the absence of any possibility of any assistance being supplied to it from the cranio-spinal nerve-axis. Thus, under the depressing effect of cold, which seems to work here much as it does in checking the regeneration of artificially amputated parts in snails and in salamanders (Müller's "Physiology," by Baly, i. p. 404), the peripherally placed ganglionic system was put into abeyance; and turgescence of the vessels it ordinarily supplied with "tone" ensued. Just similarly in mammals, the skin of which has been covered with an impermeable varnish, and in which death is as much due to the chilling down which the destruction of the non-conducting power of their hairy integument entails, as to the penning in of its various acrid and volatile and other secretions, œdematous and vascular congestion are to be observed in the skin, as well as in other organs (Ranke, "Physiologie," p. 456). The flame of mammalian life, like the flame of inorganic combustion of hydrocarbon, can only be sustained at a high temperature; a certain reduction is as fatal to the one as it is to the other in the Davy lamp, and the vitality of the more exposed peripheral is more easily depressed than that of the more protected central nerve-system.

I should be paying but a poor compliment to the judgment which has provided a microscopic exhibition for the instruction and entertainment of this evening, if I were to dwell at any length upon the relations borne by histology to Medicine and Surgery. And, secondly, if I were to dwell in the least adequately upon the importance of a knowledge of microscopic zoology to the diagnosis, and what is better than the diagnosis, and even than the therapeutics, the prophylaxis of diseases of all kinds from those which are considered trifling or contemptible by most men, except those who suffer from them, up to those which excite world-wide anxieties, such as trichiniasis or cholera, I should have to extend my address to a length you would shudder to think of. Upon one single point I will make a few remarks; and the purport of these will be to show how the manipulation of such an instrument as a catheter may find, if we are to do justice to our patients, its regulative condition in the manipulation and revelations of the microscope. I had myself recently cause to suspect that the determining condition of the triple phosphatic opalescence of the urine was to be looked for and found in the presence of some of those organisms which Pasteur has proved and hygienists have believed to be the real causative agents of fermentations and putrefactions. One accepted view of the causation of this most mischievous metamorphosis is, that the coats of the bladder, in consequence of altered innervation, as after spinal injuries, act upon the urine as so much dead matter acts on blood in causing its coagulation, or as the tissues round about the capillaries act when they are in an abnormal condition upon the rows of blood-corpuscles within those canals; and by this "catalytic" agency break up the urea and throw down the ammoniaco-magnesia phosphates. Another view ascribes the like effect to the "fermentation" working of the abundant catarrhal mucus, which is in some cases flaked off from the inner walls of the bladder. Now, neither of these views suggests a *vera causa* for the effect they profess to account for. Blood coagulates when in contact with non-vitalised matter, and blood-corpuscles arrange themselves in *rouleaux* under similar circumstances. But Mr. Lister, who has shown us so much which bears on this matter, has shown us also, and that in the last number but two (July 18, 1868) of our *Journal*, that urine will remain for an indefinite period undecomposed in a properly constructed, which happens to mean a properly contorted, receptacle, even though that receptacle be as little vitalised as glass. And Niemeyer has shown, what I dare say many who are now honouring me with their presence have observed, but, I think, not recorded, that urine often retains its acidity through protracted cases of vesical catarrh, and in spite of cumuli of clouds of "fermentative" mucus; which are, therefore, as little of *veræ causæ* as is "catalysis" itself. But the presence of vibrios in the urine, and that before it leaves the bladder, is a *vera causa*—*i.e.*, a present condition—and therefore possibly a cause, or connected with the cause, of the phenomena to be investigated (see Beale "On the Urine," p. 196), and the idea that the alkalescence in question depended upon them—an idea which I had not the time to find an opportunity for verifying for myself—I find has been verified for the benefit of others by Niemeyer, with the assistance of Traube and Teuffel. "In the course of last year," says Niemeyer (*l. c.* ii. 66, 1868), "I arrived, partly by means of an observation of Traube's, partly by means of experiments and observations of my own, which have been published by Teuffel in the Berlin *Klinische Wochenschrift*, at the conviction that it was not the vesical mucus, but lower organisms, which probably get into the bladder by means of the introduction of badly cleaned

catheters, and excite there the alkaline fermentation of the urine." Now, whether the vibrios find their way into the bladder exclusively on dirty catheters or not, I apprehend that the addition of some carbolic acid to the oil used for lubricating these instruments, whether they be guilty or not of what is here laid to their charge, will be a piece of practice calculated to prevent the alkalescence which the vibrios cause by preventing these vibrios themselves from entering on their evil activity. Mr. Lister's paper, just alluded to, will show that this is an experiment which may very safely be tried. If carbolic acid can be safely introduced into a wounded pleural cavity, assuredly we need not hesitate about the passing it into a bladder. Thus many scientific researches, undertaken in the first instance for the elucidation of speculative truth, and for the rectification not of unsound organs and functions, but of unsound theories and explanations, and prosecuted throughout by the aid of the most refined methods and instruments, come ultimately to bear upon such matters as catheterisation and alkalescent urine. I would not, however, be thought to undervalue the worth of researches carried on at whatever cost with the sole object of procuring those correct notions as to the way in which processes, even wholly beyond our power of modification, have been, and are being, carried on. It is a great and positive gain when we get rid of one false hypothesis, one single false formula which, by frequent repetition, has attained to the dignity of a philosophic axiom, and acquired a sort of prescriptive right to "warp us from the living truth." The chemists, as I am informed, are conspiring to effect what the old Greeks would have called a "catalysis" of the kingdom of "catalysis" itself, and its banishment to the limbo of vanity, there to herd with phlogiston and many other and younger as well as older unsubstantial *idola theatri;* and though these alterations of theory may not as yet have affected the oxygen we breathe, nor even have enabled us as yet to regulate with any greater precision the processes of fermentation with which we have for so many ages had an empirical familiarity, they have given us at least a warning as to maintaining always that proper diffidence as to the all-sufficient validity of our theories, by whomsoever promulgated or endorsed, which is so constantly of avail in actual practical work. The phenomena, let me add, to account for which the hypothesis of pangenesis has been recently (Darwin, "Animals and Plants under Domestication," 1868, ii. p. 403) put forward provisionally, are, and will, we may believe, always remain, beyond our control, but there will be no one, I suppose, who will not feel an interest in observing how the revelations in the all but infinite divisibility of "germinal matter," which we owe to Professor Beale, may come to bear upon the explanation of the marvellous phenomena of reproduction and hereditary transmission; nor can I leave this subject without remarking that it is in great probability upon the self-multiplication of such infinitesimal particles as this hypothesis of pangenesis postulates that processes to the naked eye, the very reverse of genesis, have been found to depend; and the Blue-book on the Cattle Plague ("Third Report of the Commissioners," etc., p. 151) will show you that here, too, we are dependent on the employment of the very highest powers of the microscope; and it is scarcely necessary to add that its employer was in this case Professor Beale.

If I have been short in speaking of the advantages which the histology of modern days has conferred upon its therapeutics, I might be shorter still in dealing with my third head —the dependence, namely, of the healing art upon the facts of anthropotomy—that is to say, upon the naked-eye knowledge of the structure with which it has to concern itself. Some little, however, I must say with your permission. Some persons are inclined to think that there is some sort of antagonism between the interests of microscopic and those of naked-eye anatomy; and hints more or less obscurely expressed may be found to this effect here and there in writings even of the present day. It is in much the same spirit that persons are found to say that the sending of missionaries to the heathen abroad entails so much curtailment of similar work at home, and that others will say that the starting of any fresh charitable institution necessitates the subduction of so much from the funds available for those already on foot; and that others again will say that the encouragement of natural science is "inimical"—that is the word they employ —to the progress and cultivation of literary and classical studies. Now, all these views depend upon the radically false assumption that intellectual and moral activities are limitable and measurable by certain quantitative conditions, just as a man's expenditure is or ought to be limited and measurable by his balance in the bank. This analogy is a wholly fallacious one, but it has nipped many an excellent project in the bud. A truer analogy is furnished us by the history of those infinitesimal scraps of germinal matter of which I was just now speaking, which are hard to destroy even with floods of carbolic acid and copperas, and which possess a faculty of self-multiplication wholly unparalleled, within my experience, in the history of the metallic objects of which we were just now speaking. Activity and earnestness, in fact, which are some of the best things, resemble some of the worst in being eminently contagious. The example of a strenuous labourer in one field spreads into the weedy acres of his slothful brethren on the right and left; and the improvement of the microscope has but been accompanied by a more thorough and accurate working out of human dissection. Let us leave metaphor and general statements, and come to facts. I have in my possession a work written for the use of anatomical students in the University of Edinburgh—a place then, as now, at least on a level with the most advanced centres of such education elsewhere in Great Britain. Its title is "The Anatomy of the Human Bones and Nerves, with a Description of the Human Lacteal Sac and Duct," by Alexander Monro, M.D., late Professor of Anatomy in the University of Edinburgh, 1810. The date of its appearance takes precedence, therefore, by a dozen years at least, of the first appearance of an achromatic combination, and if the development of microscopic zeal had really been injurious to the diffusion of thorough anthropotomical knowledge, we should find here in perfection that precision and fulness which, *ex hypothesi*, are the exclusive fruits of individual attention and undistracted concentration. Now, a few weeks ago, I was pursuing some anatomical researches into the homologies of the shoulder-joint muscles, and by the suggestion of one or two of my friends, amongst whom I may mention Dr. Boycott, I took up the line of argument for homological identity which innervation furnishes. Being deep in the country, I was reduced to consult, in the absence for the moment of other books, the work I have just mentioned, for a small matter in the composition and decomposition of the brachial plexus. This is what I found to satisfy my inquiry in a book expressly treating, you will please to recollect, of the nerves, and written by one of those "famous old anthropotomists" who were not distracted by "microscopische Spielereien." "The fourth cervical nerve, after sending off that branch which joins with the third to form the phrenic, and bestowing twigs on the muscles and glands of the neck, runs to the armpit, where it meets with the fifth, sixth, and seventh cervicals, and first dorsal, that escape in the interstices of the musculi scaleni, to come at the armpit, where they join, separate, and rejoin in a way scarcely to be rightly expressed in words; and, after giving several considerable nerves to the muscles and teguments which cover the thorax, they divide into several branches, to be distributed to all parts of the superior extremity. Seven of these branches I shall describe under particular names." (P. 291.) These seven branches have the particular names of Scapularis, Articularis, Cutaneus, Musculo-Cutaneus, Muscularis, Ulnaris, and Radialis. Of such little trifles as the connexion of the second and third cervical sympathetic ganglia, which give off heart-nerves, with the arm-nerves, upon which connexion the pain down the inside of the arm in heart-disease, Niemeyer (ii. 338) supposes, may, and the older anatomists would have said must, depend—as the subclavius nerve and its connexion with the phrenic, and so with the shoulder-tip pain in liver disease—we have just as little mention made as we have of the nerves supplying those small muscles, the pectorales. Surely knowledge is not like a volcanic archipelago, where the upheaval of one mass of solid ground entails the submergence of another; rather it resembles some vast table-land which is rising, now and then at accelerated rates of progress, out of the waters, and has, in these days of the subdivision of property and labour, its broad and continuous surface seized upon, partitioned out by enclosures, and put under cultivation by various occupants so soon as ever its outlines are recognisable.

My last topic in this division of my address is the connexion which comparative anatomy has with Medicine and Surgery, and the bearing which a cultivation of this department of biology has, or is likely to have, upon the interests of the Profession. Of the benefits which comparative anatomy receives at the hands of Medical Practitioners there is little occasion to speak; or rather Mr. Parker's volume on "The

Shoulder Girdle," just published by the Ray Society, may speak for me; it is only less vast than valuable, and will constitute the commencement of a new epoch in the science. But what I have to speak to is not the benefits which comparative anatomy receives, but those which it can confer. And I believe that the educational working of this study is perhaps the particular line along which the best fruits for the Profession, and for the public, may reasonably be looked for. Any study which forces its students into that most valuable knowledge—the knowledge of when a thing is proved, and when it is not—is *ipso facto* an ally of real Medicine, and a deadly enemy of quackery. A person who has in any way become acquainted with what reasoning and reasons are in one subject, will be apt to look for similar reasons and similar reasoning when he has to deal with another, and especially if that other be a closely allied subject. And when natural knowledge shall have become more widely diffused through the general public, an end which we may hope to help towards accomplishing by means of our School of Physical Science, quackery, with its painful spectacles of reputation and confidence unfairly withheld and more unfairly bestowed, will cease to flourish in all its present exuberance. A worker in biology gains reputation according as he is acute enough to observe and generalise for himself, and according as he is conscientious enough to make himself master of and duly acknowledge the labours of others. It cannot be said that learning, talent, and labour are equally certain to secure prominence either for a Medical doctrine or a Medical Practitioner. The Medical doctrine obtains currency, acceptance, and popularity, and the confidence of an ill-educated public, by virtue ordinarily either of the effect on the imagination which its paradoxical character secures for it, or of the effect on the ear of the alliterative ring of the phraseology in which it is embodied. The success of persons, again, in the Medical Profession, and in some other walks of life too, may depend on personal qualities quite other than any connected with diligence, attainment, or ability—upon, say, certain peculiarities of manner, either in the way of polish or of that of roughness. The greatness of the stake, his own health, for which a man is playing when he adopts a particular doctrine or Doctor of Medicine, no doubt disturbs the balance of such powers of judgment as he may have, much as in Gessler's hopes the placing of an apple on the head of Tell's son disturbed the steadiness of the father's hand and eye. But habits of thought, as of other things, may be acquired by a proper course of education, and habits, like drill, steady a man under emergencies; and a scientific training enables a man to set about forming a right judgment in a right way and upon proper and legitimate grounds, even when nothing less than life itself is at stake. If a knowledge of such a subject as comparative anatomy, and of its external aspect, scientific zoology, is a knowledge which will give the layman more power of forming right decisions, it is perhaps needless to labour long at showing that this self-same knowledge may be of the like service to the Professional man. A sort of practical proof of its value is furnished us by the fact that in Germany a dissertation on some subject of comparative anatomy is often accepted as the thesis of a candidate for the degree of Doctor in Medicine. By such a regulation we have the obvious fact recognised that the same sort of skill in the employment of methods, the same familiarity with organs, tissues, and functions, the same reasoning powers, are employed in investigating the problems of life wheresoever existing. The second aphorism of the *Novum Organon* applies to the one as to the other line of investigation, that of human, and that of brute biology—*Instrumentis et auxiliis res perficitur;* and alike in both, *nec manus nuda nec intellectus sibi permissus multum valet.* Comparative anatomy, finally, besides thus benefiting the public firstly, and the Profession secondly, is of use to human biology and Medicine as such, inasmuch as it casts so much light upon the problems which the more highly evolved organs, functions, and other relations of our own species, render in a much higher, and, indeed, sometimes in the highest degree difficult or impossible to investigate. Answers to what are riddles in human anatomy and physiology are often to be found given in very simple language in the structures and functions of the lower and lowest animals. Of such hints furnished by the brute creation towards the proper solution of certain problems which concern each and all of us in dealing with our own species, I will herewith, by your permission, give a few. Of the use of rest towards the repair of injuries, I presume there is little doubt; but the best established teaching is all the better for the support of a few concrete examples. Now, in what animals do we find the greatest capacity for repair of injuries, and for the reproduction of lost parts and limbs? Precisely in those in which the whole of life is carried on at the lowest rate, and in the nearest approximation to rest which is compatible with animality—in those animals, to wit, which breathe water, and have but its scanty percentage of dissolved oxygen to sustain their animal functions. The metamorphoses which an animal may have undergone, or may have to undergo, have very little directly to do with its power of recovery from injury, or of regenerating a lost limb. No animals go through more complex metamorphoses than do many of the Crustacea, and nearly all the Echinodermata; yet assuredly no other class has a larger capacity for the reproduction of lost fragments of their bodies. Now, the latter of these classes is exclusively, and the former all but exclusively, aquatic. The more perfect again, an insect's metamorphosis—*i.e.*, its power of building up tissues and organs—the more perfect ordinarily, or rather the more profound, has been its quiescence as a pupa. Indeed, the very exception here proves the rule, and proves it to be a good one; for such hemimetabolous insects as, like May and dragon-flies, come in their imago state, do differ almost as much from their larval forms as the imagos of many holometabolous insects do from their larvæ, are during those preparatory stages as completely aquatic as any crustacean (Westwood, "Introduction to Entomology," vol. ii. pp. 29-38; Carus and Gerstaeker, "Handbuch der Zoologie," p. 29). I am aware that there is such authority as Mr. Paget's ("Surgical Pathology," ed. Turner, p. 123) and Mr. Darwin's ("Animals and Plants under Domestication," vol. ii. p. 15) in favour of regarding the power of repairing injuries as standing in an inverse ratio to the amount of metamorphotic change through which an animal has gone; and I must therefore take the more pains to show that my explanation, to the effect that this happy power depends mainly upon the peacefulness and quiet with which the various processes of life are carried on ordinarily, and after the mutilation, is the truer one. My opponents' case would rest on such facts as these which follow. I will give them first, and then show how they really support my views. The larvæ or tadpoles of the tailless Batrachia, but not the adults, says Dr. Gunther (Darwin, *loc. cit.*, and Owen, "Comparative Anatomy of the Vertebrate Animals," vol. i. p. 567), are capable of reproducing lost limbs. So with insects, says Mr. Darwin, *in loco*, "the larvæ reproduce lost limbs, but, except in one order" (the Orthoptera, and amongst them the Phasmidæ(g)), "the mature insect has no such power." There is, however, one common property which lies at the bottom of the power of repair both in the larval forms and in the perfect adult animal, both in the invertebrata and in the vertebrata specified. This common property is the comparative insignificance of the apparatus for aërial respiration in all alike. In the larva of the anurous amphibia, in the larva of the butterfly, and in the orthopterous insect, the lungs or the tracheæ, as the case may be, contrast to disadvantage with those of their congeners, or adult representatives, which have come to differ from them in having lost the power of reproducing lost parts. But active respiration is a prerequisite for activity of function and rapidity of rate of vital processes; and the absence of this is, according to my argument, the cause of the presence of the reparative power. The lungs are of course all but wholly in abeyance in the tadpole, and the tracheæ have no vesicular dilatations developed upon them in the caterpillar forms of any insect, nor in the adults of the non-volant orthoptera. In the Phasmidæ, the curious "walking-stick" insects, we observe just the same sluggishness, combined with great tenacity of life, which we observe among mammals in the Bruta. Let me add some more facts in further illustration of my position. The Myriapoda, which Mr. Newport has shown to possess this power of repair up to the time of their final moult, are so little like the more typical insects as to have been classed with the Crustacea by no less an authority than Von Siebold. Any one, again, who will compare the simple non-cellular lung of the adult batrachian newt, *Salamandra aquatica*, which possesses an unlimited power of repair as an adult, but not in its young stages (Bonnet, *Œuvres*, "Hist. Nat." v. pt. i. p. 294), with the lung of the adult frog, will have little difficulty in understanding how their power of repair differs out of all pro-

(g) There seems to be some little doubt whether even a phasma can regenerate lost parts after its last moult, and some authorities would not consider it adult till after such ecdysis. The Crustacea, however, moult many times after attaining the adult state—*i.e.*, a state in which they can reproduce the species.

portion more than the amount of the metamorphotic changes they severally go through. The land salamander, *Salamandra terrestris*, has, so far as I know, escaped the hands of Spallanzani and Bonnet; its adult lung being little inferior in extent and development of spongy matter to that of the adult anura. I should expect the power of regeneration to be reduced to zero, as in them. If the teaching of Comparative Anatomy has forced me to differ from the teaching of Mr. Paget, there are other facts in the same region of research which, as it seems to me, put one of his other many valuable doctrines in a clearer light than even his own clear enunciation of it. "Each man's capacity," says Mr. Paget (*Lancet*, Aug. 24, 1867), "for bearing a surgical operation may be best measured by the power of his excretory organs in the circumstances in which the operation will place him. Now, I am inclined to ascribe the very considerable, and, indeed, on my views, somewhat exceptional, powers of reproduction which two sets of air-breathing terrestrial animals, the pulmonate snails and the earth-worms, possess, to the great development of their excretory apparatus. Living, as they do, very ordinarily, in atmospheres laden with carbonic acid from decaying vegetable matters, they must get rid of the products of their waste and wear in the shape of solution in fluid; and the alkaline secretion with which the bodies of both are so abundantly slimy, furnishes just the required medium. When injured or mutilated, these animals can withdraw themselves pretty completely from the atmospheric oxygen by shedding out this secretion, and it at the same time disembarrasses their system from any excess of carbonic acid which may be generated within it. Thus they can attain the most perfect possible condition for repair and regeneration, the minimum of activity of all save the excretory organs; and I submit that it is possible that these two conditions may be connected as cause and effect, just as in the reverse direction a defeat of Surgical skill may be connected with the presence of a fatty kidney or liver, or the excitability of a nervous system. It is going perhaps too far to attempt to explain the much greater power of repair which Amphibia possess as compared with either Pisces below or Reptilia above them to the larger size and consequent smaller aggregate surface and less perfect aërating power of their blood-cells, and to the transpirability of their naked skins, which execute such important depuratory work for them, and are so closely connected and correlated with their lungs, livers, and kidneys. It is curious, however, and interesting to remark that the older anatomists, in commenting on the very obvious solidarity of these latter organs, went on—in their ignorance, I imagine—to a great extent, of the nature of amyloid and other degenerative changes in such cases, to observe that it was illustrated by the "fact" that, as the lungs grew smaller, so the kidneys grew larger in phthisis.(h) (See Funke, "De Salamandræ Terrestris vitâ," 1827, and Meckel, "Pathol. Anat.," vol. i. 613, 646.)

Verloren, as quoted by Donders ("On the Constituents of Food," translated by W. Daniel Moore, M.D., p. 24), has shown how the history of insects bears on the question which we are this afternoon to have expounded to us of the "Relation of Food to Force;" and the very title of Bischoff's and Voit's work, "The Laws of the Nutrition of the Carnivora," shows how this subject, to which I shall no further allude, but leave it to the able handling to which it has been entrusted, is dependent on the life, and the modes of life, of the lower creation. But I would say that it was from a study of the structures of the class of animals last mentioned—viz., the Carnivora—that I first came myself to be convinced that the uterine mucous membrane would, if properly looked for, be found in all animals alike to stretch after delivery over the area previously occupied by the placenta; and assuredly there is no one of the many complex and hard-to-be-investigated problems of human physiology to which we are more bound to be thankful for light whencesoever obtained; and this, though the light come, as, in justice to Dr. Matthews Duncan and Dr. Priestley, I must say it did, in the way of illustration and confirmation rather than in that of discovery. (See Zoological Society's *Transactions*, 1863, p. 289; Dr. Duncan's "Researches in Obstetrics," p. 206.)

These facts of the structural and functional arrangements of the lower animals have been used recently to illustrate some other points of uterine pathology and therapeutics in our own species. In a work by Dr. F. A. Kehrer, of Giessen, in two parts, the former of which was published in 1864, and treats of "Die Zusammenziehungen des weiblichen Genitalcanals," and the second of which was published in the present year, 1868, and treats of "Die vergleichende Physiologie der Geburt des Menschen und der Saugethiere," I find no little light thrown upon the question of relative position, whether as cause or effect, in which early and late abortions respectively stand to imperfect involution of the uterus. And I find also *in loco* a very distinct admonition as to the inexpediency of allowing fear of decomposition to terrify us into what is called "meddlesome midwifery." These extracts I think you may be interested to hear; I will simply quote them, and leave you, who are so well able to do it, to make the application of them for yourselves. "Finally, let it be remarked that in rabbits in the earlier stages of gestation I saw the fœtus with its fœtal envelopes protrude entirely out of the os uteri, whilst the placenta still remained firmly attached in the uterus; a phenomenon which indicates either that in the earlier stages of pregnancy the placenta materna is lacerable, or that the motor power of the uterus is a relatively smaller one, and one which finds its analogy in the occurrences which take place in abortions and premature deliveries in the human subject." (Heft i. p. 52.) In his second Heft, p. 166, Dr. Kehrer, in speaking of the retention of the placenta being sometimes followed by symptoms like septic poisoning, and sometimes not, has words to the following wise effect:—"What chemical changes may be set up in the retained placenta is clearly dependent hereon, whether the after-birth is shut off from contact with the air by the genitalia or not; for if air find access to it the membranes of the ova putrefy; if air be excluded, a process of decomposition, probably identical with one of maceration of the fœtus, but wanting further chemical investigation, is set up. The occurrence of the one or the other eventually is so far of importance, as thereupon hangs the after-effect of a retention of the placenta upon the general health. In fact, we observe in women, just as in the animals mentioned, sometimes only insignificant symptoms, sometimes emaciation and withering up; sometimes, as after the absorption of putrilage from the decomposing membranes, a violent, even a fatal pyæmic fever. In the face of these facts, it seems to me to be rational in ruminants, in which the cotyledon can only be detached from the uterus by considerable violence, and scarcely even then, completely to *avoid all introduction of the hand into the cavity of the uterus after delivery*, just with the object of keeping it free from the ingress of air, and to leave the separation of the placenta rather to the natural forces. We shall thus best avoid putrefaction being set up in the cavity of the uterus, and so expose the animal the less to the risk of a pyæmia." I have not quoted from the recently published works of Dr. Matthews Duncan and of Dr. Graily Hewitt, though I have specified in my notes the pages of those works which bear upon what I have just quoted from a foreign source. I have forborne to do this, not because I think those works less, but because I think them more valuable, and I presume they will be in your hands as they have passed through mine.(i)

The human anatomist who has once seen in the lower animals the structures which represent, as it were, in exaggeration or caricature, the human costo-coracoid membrane; the tuberculum pubis, with the homologue of the clavicle which is attached to it as Poupart's ligament; or the supracondyloid process of the humerus—is not likely to forget their existence when, with either scalpel or bistoury in hand, either for the ligature of an artery or the setting free of a hernia, he has to deal with their representatives in the human frame. But, if I am right in thinking that the ciliary muscle in the eye would not have secured for itself the notice which it has done of late years, had it not been for the much more obvious manifestation of a similar, if not homologous, muscular apparatus in the eye of the bird, I apprehend that I am justified in saying that every Surgeon who performs Mr. Hancock's operation of cylicotomy for glaucoma is under obligations, whilst so doing, to comparative anatomy and Sir Philip Crampton. I need not speak of the bearing of the discovery of this muscle in the human eye by Mr. Bowman upon the physiology of its adjustment to clear vision at varying distances. Pure physiology, again unassisted by comparative anatomy, has made much of pure function; but,

(h) For accounts of experiments as to regeneration of lost or destroyed parts, see Darwin, "Animals and Plants under Domestication," vol. ii. p. 15, *ubique citata*. Owen, "Comp. Anat. of the Vertebrata," vol. i. p. 567. Newport, "Phil. Trans.," vol. cxxxiv. 1844, *ubique citata*. Paget, "Surg. Path," ed. Turner, p. 123. Spence, "Batr. Ana." and "Mag Nat. Hist." for the current month, Aug., 1868, citing the Lloyd of Hamburg, p. 118. McIntosh, "Experiments on Carcinus Mœnas," p. 28.

(i) Dr. Graily Hewitt, pp. 32, 342, 397. Dr. Matthews Duncan, "Researches in Obstetrics," pp. 276, 284, 285. Cazeaux, "Traité des Accouchements," pp. 334, 349.

much as has been attempted in the way of experiment with infusions of pancreatic substance, and with the introduction of canulæ into the duct of the gland, I am inclined to think that a comparison of the relative size of the gland in the Carnivora and the Herbivora respectively, in a dog, say, and in a rabbit, points as unmistakably as any of the lines of experiment just referred to—which, by the very nature of the case, are greatly beset with several sources of fallacy—to the fact that this salivary gland is concerned as much with the digestion of albumen and fat as with that of starchy substances. With the remark that Hyrtl's discovery (*Wien. Zool.-Bot. Ges.*, 1861, cit. Henle) of the diverticular character of the glomeruli in the kidney of the selachians and amphibia bears not a little upon the existence of a similar arrangement between the vasa recta and the renal arterioles, in the human kidney, whereby, as by the direct communication shown by Schroeder van der Kolk to exist between the arteries and veins of the pia mater, the capillary circulation may be skipped, and the tissues in relation with it left at rest—I leave this part of my subject, and begin the concluding portion of my address.

In this part of my address I propose to consider, and that mainly by the light of recently attained biological results, the value of two great rules for the conduct of the understanding, each of which has a legitimate sphere of application, but the former of which enjoys more and the latter less than its deserved prominence. The first of these two regulative principles has received the endorsement of Newton, and it stands as his first "Regula Philosophandi," at the commencement of the Third Book of the *Principia*. It was known in the days of the schoolmen as the "Razor of Occam," and in later days it has been styled the "Law of Parsimony" or "Economy." Newton enunciates it as follows:—"Causas rerum naturalium non plures admitti debere, quam quæ et veræ sint et earum phænomenis explicandis sufficiant. Dicunt utique philosophi: 'Natura nihil agit frustra;' et 'Frustra fit per plura quod fieri potest per pauciora.' Natura enim simplex est, et rerum causis superfluis non luxuriat." I know that this Regula has great influence on the minds of many biologists, and I believe that this its influence is by no means always for good. This is not a subject in which authorities ought to count for much; but I may say that, while the names of Aristotle, Malebranche, Maupertuis, St. Hilaire, Goethe, Bichat, and Dugald Stewart may be quoted in approval of this rule, the names of Bacon, Mill, and De Candolle may be brought forward by those who repudiate it or curtail its application. Our motto, however, is "Nullius addictum jurare in verba magistri;" and our business is to ask, not what men have laid down, but how Nature operates. Can a phenomenon have more than one cause, or can it not? Is it possible, for example, and to put the question in a concrete and most practically interesting point of view at once, that a fever which we know can spread by infection or contagion, can also originate spontaneously? I rather incline, though but doubtfully, and after an imperfect examination of imperfect data, to anticipate that a negative answer to this latter question will turn out some day to be the true one; but I do not know that there is anything in the analogy o Nature to compel us to incline towards this negative conclusion *à priori*. Such a phenomenon, at all events, as a living animal, is often enough produced by two or more distinct processes, within the limits of the same species: as, for example, from ova of different character, summer ova or winter ova, impregnated or unimpregnated ova; by fission or gemmation through two different series of metamorphotic changes. And such a phenomenon as the production of a particular tissue may depend—in the case of adipose tissue, for example—upon the employment in Nature's laboratory of one or the other of two different chemical compounds. In each and all of these cases, the maxim which has many a time been sonorously enunciated in these Schools, "Entia non sunt multiplicanda præter necessitatem," would, if listened to, have closed our ears and eyes to at least one-half of the truth. That Bacon would have classed this maxim with his Idola Theatri, I think I am justified in saying, for in the very next section (section xlv.) of the *Novum Organon* to that in which he treats of these delusive notions, I find these words:—"Intellectus humanus ex proprietate sua facile supponit majorem ordinem et æqualitatem in rebus quam invenit;" and if I am told, as by Mr. Mill ("Logic," vol. ii. p. 379, ed. 1846), that Bacon, in the actual practice of investigation, acted as though there were no such thing as Plurality of Causes, I need only answer that herein his practice did not differ from his precepts at all more widely than does the practice of many other writers, of many practising, of many teaching Doctors, differ from theirs. I have a satisfaction in quoting the living De Candolle, who enjoys one of the first and best deserved scientific reputations of the day, in repudiation of Maupertius' famous principle of "least action." De Candolle writes thus in his "Géographie Botanique" (vol. ii. p. 115)—"Nous aimons à croire aux moyens simples, peut-être uniquement à cause du peu de portée de notre esprit."

What, then, is the legitimate application? Where does Nature really bind herself to the observance of a "Law of Parsimony?" In, as I think, three distinct lines of her operations.

Where an organ can be diverted from one and set to discharge another function, there Nature will spare herself the expense of forming a new organ, and will adapt the old one to a new use. She is prodigal in the variety of her adaptations, she is niggard in the invention of new structures (Milne-Edwards, cit. in Darwin's "Origin of Species," p. 232). The complicated arrangement of co-operating muscles whereby the bird's third eyelid is drawn across to moisten and wipe its eyeball without undue pressure on the optic nerve, is manufactured, if so we may express ourselves, out of the suspensorius muscle, which in other animals has but the simple function of slinging up the eye. The scarcely less complex and beautiful arrangement of the bird's levator humeri is the result of a modification of a subclavius muscle.

Secondly, where, by availing herself of the inorganic forces always at work and available in the circumambient medium, whatever that medium may be, or where, by the employment, as in what is called "Histological Substitution," of a lowly organised or vitalised tissue, such as elastic tissue, she can spare herself the manufacture of such expensive structures as muscle, there Nature adopts a line of practice which we call a law of parsimony. Where a suspensory muscle for the eye can be dispensed with altogether, as where there is a more or less closed bony orbit, as in ourselves, and an air-tight cavity formed by it together with the soft tissues lining it, there atmospheric pressure is trusted to to steady the eye in the socket, as it refixes the tooth loosened by inflammation, and holds the head of the femur in the acetabulum. The eye of the burrowing mole, on the other hand, loses its *recti* and *obliqui* before it verges itself into total extinction; but this very *suspensorius* it retains after the wreck of its other property, as its guardian in the undivided undifferentiated temporo-orbital fossa.

Thirdly, where matter that would otherwise be wholly refuse, and to be rejected, can be utilised, there Nature exemplifies this law by her "utilisation of waste substances." The transverse colon, with its various contents, aids and ekes out the elastic recoil of the lungs in expiration; and by its near approximation to the stomach, has, as Duvernoy long ago pointed out, the shock of the ingestion of fresh food propagated directly to it as a warning against sluggishness in the discharge of its own function. The air we use in speech, as Mr. Paget has pointed out, we could not use for breathing.

Many other instances of the "Law of Parsimony" might be given; but I know not of any which cannot be reduced under one or other of these three heads; I know of none, that is, which can be in any way held to negative the tenability of a law of "Plurality of Causes."

The second great principle for the regulation of the understanding of which I wish to speak, is one which, I believe, possesses less currency and notoriety, and is less observed than it deserves. This canon bids us, in considering a complex phenomenon, to be most careful that we omit none of the circumstances which can by any possibility be of the essence of the case. And as the possibilities of nature are all but infinite—as, for example, the investigator of problems of geographical distribution knows well that a "secret bond" may bind up together, and that inextricably, the interests of organisms removed as far as possible to all appearance from each other in the scale of life, as a fly or a plant may, by its increasing and multiplying, make half a continent uninhabitable or inhabitable by the highest mammals—I apprehend that in biological and Medical problems, by the phrase "all the circumstances which can by any possibility be of the essence of the case," we mean practically "*all* the circumstances of the case," without any qualifying limitation. But we will let Descartes, to whom the enunciation of this rule is usually and, so far as I know, rightly assigned, enunciate it for us in his own words. These run thus (*Œuvres*, tom. xi., 1826, ed. V. Cousin, p. 23):

—"Règle Septième pour la Direction de l'Esprit. Pour compléter la science, il faut que la pensée parcoure, d'un mouvement non interrompu et suivi, tous les objets qui appartiennent au but qu'elle veut atteindre et qu'ensuite elle les résume dans une énumération méthodique et suffisante." Some of the very greatest advances which have been made of late in practical diagnosis have been made in the spirit of this recommendation. The application of a chemical test to the urine for information as to the expediency of giving or withholding wine in the case of a sinking life, would have seemed to Swift, could he have had any idea either of such a procedure or of the employment of a sphygmograph for the same object, more absurd than any of the follies he ascribed to the philosophers of Laputa. But as Archbishop Whately, a name to be greatly honoured here, and, indeed, wherever else liberality, and fearlessness, and ability are held in respect, has well pointed out, the absurdities of Laputan aspirations are less wonderful than the actual attainments of modern science. And to these results science has attained, for that her votaries have known that what may seem to Swift, and such as Swift, to be but curious and dilettante, otiose, or even disgusting, may turn out ultimately to be essential elements in problems, the solution of which promotes directly and greatly the interests of man, and the glory of Him to whom nothing is common nor unclean. Could anything have seemed at first sight to be more impertinent, more otiosely curious and trifling, than to inquire during an epidemic of cholera what was the nature of the subsoil in the area it was ravaging, to what depth it was porous, and at what level the water was, and had been previously, standing in it? Yet, as I think, Von Pettenkofer has at last fought out and won his battle on these points (see *Zeitschrift für Biologie*, Bd. I. Heft iii. und iv. 1865; Bd. II. Heft i. 1866; Supplemental Heft, 1868, p. 54); and the distinguished president of our "Public Medicine" Section, Mr. Simon, who is as little prone as most men of science to take up over-readily with any new wind of doctrine, has told us ("Report of the Privy Council for 1866," p. 366 and 457) that certain of his carefully observed cases of the distribution of this disease seem to illustrate and find their explanation in Von Pettenkofer's theory. I have pleasure in adding that I see, by papers published by the illustrious Professor of Munich in the *Allgemeine Zeitung* for June last, that he has been able to show that, amongst all the other circumstances of the case at Gibraltar and at Malta, there were still to be found, all guessing and objections notwithstanding, the porous subsoil and the retreating groundwater, as factors in the complex constituting an area or arena for cholera. Let us attend to and note always all the circumstances in every complex phenomenon which we have to investigate, but let us not betake ourselves over-hastily to the process of eliminating antecedents, until we be quite sure that they do not enter as factors into its causation.

I may say, in conclusion, that attention to this seventh rule of Descartes might have saved such students of natural science as have fallen into materialism from falling into it. The physiologist, as such, has nothing to do with the data of psychology which do not admit of being weighed or measured, nor of having their force expressed in inches or ounces. This language, which I long ago employed myself (*Nat. Hist. Rev.*, April, 1861; *Med. Times and Gazette*, March 15, 1862), coincides with an utterance which I am glad to see in Mr. Herbert Spencer's recently issued first number of his new edition of *Principles of Psychology*. There (part i. chap. i. p. 48) Mr. Spencer says, "It may safely be affirmed that physiology, which is an interpretation of the physical processes which go on in organisms in terms known to natural science, ceases to be physiology when it imports into its interpretations any psychical factor, a factor which no physical research whatever can disclose or identify, or get the remotest glimpse of." But, I apprehend, if the physiologist wishes to become an anthropologist, he must qualify himself to judge of both sets of factors. There is other science besides physical science, there are other data besides quantifiable data. Schleiden, a naturalist of the very first order, compares the physical philosopher ("Materialismus der neueren deutschen Natur-wissenschaft," p. 48), who is not content with ignoring, without also denying the existence of a science based on the consciousness, to a man who, on looking into his purse and finding no gold there, should not be content with saying, "I find no gold here," but should go further and say, "there is no such thing as gold either here or anywhere else." It is interesting to note that here in Oxford, till within a few years of the present, we narrowed the application of the word "science" in what seems now to be a curiously perverted fashion. For, ignoring all the physical world as entirely as though we had been already disembodied, we used the word to denote and connote only logic, metaphysics, and ethics. By a "student of science" in my undergraduate days was meant a student of the works of Aristotle, Kant, and Sir William Hamilton. The wheel has since made somewhat of a circle; our nomenclature, like much else belonging to us, is altering itself into a closer correspondence with the usages and minds of the larger world outside; the so-called "student of science" of the year 1850 is now said to go into the "school of philosophy," and "the student of science," as our terminology runs in the year 1868, will be found at the Museum studying the works of Helmholtz, Miller, and Huxley. I do not say this by way of triumph, but rather in that of regret, little disposed or used though I am, and hope always to remain, to regret or deprecate change as such. For there is a philosophy of both subjects, and a science also in both; and I would hope that both the one and the other might still retain a lien on the two words and the two things, nor suffer its rival to establish a claim for sole possession by its own default in exercising a right of usage.

Advocates of the dignity of man are wont to regard, or to profess to regard, with something like horror, doctrines which would hint that either his bodily structures or his mental faculties, his "more pure and nobler part," may have attained their perfection in the way of gradational evolution. But it is not clear to me that the horror expressed for these conclusions is much more legitimate than the arguments with which they have been assailed by prime ministers and others in the Sheldonian Theatre close by and elsewhere within our precincts. For dignity rests upon responsibility—a man is worthy or unworthy, according as he can or cannot make a good answer when called upon by a voice, either from within or without, to account for his conduct or for his character. And just as a man is responsible for the employment of the wealth he possesses to the Government under which he is suffered to enjoy that wealth, no matter in what way he may have become possessed of it, whether by the hereditary transmission of a family estate, or in any other of several feasible and conceivable ways, so is a man responsible for the employment of his corporeal and mental faculties, howsoever he may have been allowed to become seized of them, to that larger and largest Government under which he has his being. I believe, however, that if men would take as much and the same care in these psychological questions as the physiologist does in his experiments and observations, to overlook none of the conditions and circumstances of the entire complex of phenomena upon which they undertake to decide, they would come to see that above, and often behind, but always beside and beyond the whirl of his emotions and the smoothly-fitting and rapidly-playing machinery of his ratiocinative and other mental faculties, there stands for each man a single undecomposable something—to wit, himself. This something lives in his consciousness, moves in his will, and knows that, for the employment and working of the entire apparatus of feelings and reasoning, it is individually and indivisibly responsible. Its utterances have but a still small voice, and the turmoil and noise of its own machinery may, even while working healthily, entirely mask and overwhelm them. But if we withdraw ourselves from time to time out of the smoke and tarnish of the furnace, we can hear plainly enough that, howsoever the engine may have come together, and into its present being, the engineer, at all events, is no result of any processes of accretion and agglomeration. Science, business, and pleasure are but correlations of the machinery in its different applications and activities; we are something besides all this, manifesting ourselves to others in the decisions of our will, and manifesting ourselves to ourselves in our aspirations and consciousness of responsibility.

> "And e'en as these are well and firmly fixed,
> In dignity of being we ascend."

I have heard this line of argumentation likened to an attempt to defend Sebastopol by balloons. "Whilst you are in the clouds, your city will be taken beneath your feet." But a position, though airy, may yet be unimpregnable. There are those present who will recollect how the highest placed forts of that town were never taken, but continued to the last to answer shot for shot, and shell for shell, to the Allies. The attacking forces knew not the strength of these north forts till they entered them, but when they entered them, they entered them as friends.

THE SECTIONS.

SECTION A, MEDICINE.

President—Sir William Jenner, Bart., M.D., F.R.S.
Secretaries—E. Long Fox, M.A., M.D.; W. Roberts, M.D.

In the absence of Sir William Jenner, Dr. Stokes presided.

Amongst the papers read were the following:—

Dr. Eade read a paper "On the Etiology of Phthisis." After alluding to the present state of our anatomical knowledge of tubercle, and to the recent experiments by inoculation, Dr. Eade gave his views as follows, endeavouring to show that tubercle is essentially but an expression of feeble vitality and exhausted nerve power, permitting the occurrence of an ill-regulated or unrestrained cell-growth or development. Cells (he said), more or less simple, are the original and lowest form in which animal life is presented. Higher animal structures are formed of such cells elaborated under the influence of more highly developed nervous centres. Any defect of these centres would tend to allow the body to be formed of less highly organised and vitalised tissues, with a constant tendency to revert to their original form of cells. The subjects of congenital tuberculosis are feebly and flabbily formed, and their tissues have a constant tendency to disintegrate (proneness to ulcerations) and to develope new cell structures (in lymphatic glands and as purulent discharges). The actual invasion of disease in tuberculously cachectic individuals is due to exhaustion of the nerve force of the part affected. In acquired tuberculosis (which is chiefly of the lungs), a similar exhaustion of the peripheral nervous twigs is produced either directly or more commonly by a reflex action from the surface. The part is thus at once reduced to a lower condition of life, and cell-growth is allowed to begin, either in spots, as miliary tubercle, or in parts, as tubercular consolidations. The cells are of feeble vitality, and hence tend rapidiy to degenerate. They are possibly capable of reproduction. A close affinity exists between the cause of inflammation and tuberculisation of the lungs—the difference being that in the one case the effect produced is sudden or extensive, and the patient healthy; in the other, the effect is produced more slowly, and the patient is congenitally cachectic, or temporarily lowered in nervous tone.

Dr. T. K. Chambers read a paper entitled "How shall we make our Daily Experience advance Science?" Our presence here in Oxford shows that we are all anxious to aid the progress of our common art and science. But many of us—most of us—are at the same time willing to confess that we do not know very well how to set about it. Our country cannot spare us, even if we ourselves wished to devote our lives to the mere cultivation of knowledge; and we are tempted to despair of seeing anything less than a complete devotion produce fruit. Are we justified in this despair? I think not. I think it not at all impossible to extract, from the gigantic waste of our daily routine of business, constituents of truth as important as any dug fresh from the mine of devised experiment. I believe we shall, like our manufacturing industry, advance chiefly now by utilising our waste products. Let us begin first by saving them, instead of letting them run off into the sewers of forgetfulness. I think it is the duty of a Practitioner of Medicine to take notes of every case that comes under his charge. It is especially those which superficially appear commonplace and repetitions of one another that need to be thus recorded. Rarities are common enough, and are enshrined by wholesale in the storehouses of our periodical literature; but when one comes to look for accounts illustrative of any point about the daily events of life, they are wanting. Let a man, for example, ask of those who have been giving aloes all their lives, for any evidence of the truth of the statement, which we have been repeating after Fallopius for 250 years, that the drug causes hæmorrhoids and morbid uterine hæmorrhage—in what cases it cures them, and in what it makes them worse—let him ask how often it elicits solid, how often liquid stools—in what cases the former, in what the latter—and I fear he will get none but conjectural answers Or let him ask those who are daily administering some expectorant, whether the expectoration is increased or diminished under its use, and he will hear a strange absence of consent in the reply. Let him ask how often ascarides produce symptoms, and in how many persons they are found without symptoms—whether bronchial catarrh most frequently precedes or follows measles—what is the period of latency of gonorrhœa—and, in short, almost any question about almost any common illness, and he will have it answered much more rarely from personal observation than if he inquired about some strange complication, of which not five instances are seen by a man in his lifetime. Yet it is the common diseases which are of real importance for us to lighten and shorten. Moreover, it is in common diseases only that we can learn the therapeutical value of drugs, for it is in these cases only that we know the natural course of the malady, and can judge how far it is modified by our means. Medical men are often deterred from keeping a systematic record of their private practice by the idea that to do so necessarily involves a considerable expenditure of time. I doubt the fact. Certainly the careful annotator is longer over his first visit to a patient than is a hurried prescriber; but then subsequent visits are much shortened, for the refreshing of the memory by a repetition of questions is avoided. But still the time thus spent is an important part of the question, and it is very desirable to reduce it to a minimum by mechanical contrivances. The plan I myself adopt is as follows:—I write all my prescriptions and papers of advice in a copying-book, which preserves a duplicate of them by means of transfer paper (Delarue's copying-book); and at the back of this transcript I write, usually with the patient before me, always before I attend to the next case, the history, so far at least as to explain my reasons for the advice, before I go on to the next page. The periodical indexing of these pages is an easy job for an hour of weariness; and the whole time consumed is so crumbled up that it is never missed, and neither business nor amusement can complain of the robbery. Some people suppose they can make their notes of the day's work more fully and scientifically when it is over, and they quiet in their studies. I do not like the plan so well. For one thing it interferes with the relaxation needful to keep the mind healthy and broad. That time belongs to rest, and should not be wasted on labour. An instinctive feeling of the truth of this causes a duty which is put off to such an opportunity to be put off often still further, often altogether. Again, unless an immediate note be made, the new and the strange in the day's experience are stamped in the mind deeper than the commonplace, and they are apt to take up more than their fair share of room in the diary, while personal friendship, the social standing of the patient, and other considerations, will sometimes blot out, sometimes unduly brighten, our recollections of the case. What should be recorded? Not everything of course, or there will be a want of perspective in our sketch. The best rule is to note first the prominent important features in the case in our technical eyes, those features which have guided us in our treatment, and which distinguish it from others. Other features may follow, receding from the history in inverse proportion to their prominence. A separate paragraph at the end may contain the symptoms which appear the chief to the patient, for the purpose of allusion in a future visit. What are the uses of these notes? They serve as corrections to our memories—they make available to the increase of real knowledge that which is otherwise just as likely as not to lead to imperfect, and therefore false, knowledge. They turn a stumbling-block into a stepping-stone. What a satisfaction, when a new question is raised in our own minds by some chance patient, or suggested by a colleague, to be able to answer "*littera scripta manet*"—here is the contemporary evidence of the fact! How pleasant in an hour of leisure to live over again one's days of joyful labour! But above all, how invigorating to be able to contribute true bricks to the palace of knowledge which we are uniting to build up! One of the most important matters for inquiry in the present day is the action of drugs on the human body. There are questions concerning these reagents which Practitioners only have the opportunity of testing, and in no other way can they do it so satisfactorily as by daily notes, which can with ease at any time be reduced to a tabular form. This brings me to another part of my subject—namely, the administration of medicines. I wish to offer a few suggestions which may tend to make this daily business of ours more available in increasing therapeutical science. (1) Let us aim at giving only one drug at a time. I do not say this is always possible; but, at all events, let us keep the desire in our minds, and reckon a prescription good in an inverse ratio to the number of ingredients. This simplicity conduces not only to the good of science, but of our individual patients, for it soon makes us much more ready at suiting the special remedy to the special case. (2) It is important when we change our treatment to allow a certain sufficient interval, different in different instances, between leaving off

one medicine and beginning another. The experiments of Böcker and others have shown us, first an action of the drug lasting after its apparent disappearance from the body, and secondly a reaction of the system opposite to, though weaker than, the original action. Advantage will accrue to the patient often from this rule too. For instance, hyoscyamus given for hypochondriasis or mental depression may be left off almost directly it has begun to produce its beneficial effects, and those beneficial effects will still go on towards restored health. Hydrochlorate of strychnia will continue to invigorate the peristaltic motions of the stomach and intestines, so as to produce steady digestion and evacuation, for days after such a soluble salt must have passed away. (3) It is advisable for each observer to have as short a pharmacopœia as possible. The best workmen use the fewest tools—ay, and those who use the fewest tools become the best workmen. They become more adroit with them, know them better, and are able to instruct others in their employment. (4) The union and co-operation together of those who are working at the same subject is of incalculable value. Incalculable—because you have not tried it. The skeleton of the machinery exists in the British Medical Association. Why should not each branch, or group of branches, take up a drug, and let us know after two or three years their experience of its action?

Dr. Hayden made a communication on the subject of "The Pathology and Significance of certain Endocardial Murmurs." He commenced by classifying murmurs originating within the heart under two heads—namely, those occurring simultaneously with the sounds, and usually designated "systolic" and "diastolic" respectively, and those which occur during the intervals or periods of silence. The latter are likewise of two kinds—those, namely, which are heard during the short pause between the first and second sound (this pause he distinguishes by the title of "systolic" pause, because it occurs simultaneously with the acme of ventricular contraction), and those which occur within the period of the long, or, as he prefers to designate it, the "diastolic," pause between the second and the first sound. Systolic murmurs are of two kinds—viz., those which accompany, and those which supersede, the first sound. Diastolic murmurs are similarly classified. The relative significance of these two kinds of murmur in association with the two sounds respectively was next dwelt upon, and the condition of the valves to be met with in each case was pointed out. Murmurs occurring within the time of the short pause are theoretically of two kinds—viz., "post-systolic," which immediately follow, and are in direct continuity with, the first sound, extending to a variable length into the short pause, but in most instances falling short of the second sound. Such murmurs, he showed, were of mitral origin, and due to simple valvular incompetence, without organic valvular disease. The second kind of murmur falling within this period—viz., towards its close—and immediately preceding, and continuous with, the second sound, he designates "præ-diastolic." Practically the latter kind of murmur is exocardial; he has not met with a single example of such a murmur due to an endocardial cause. Murmurs developed within the period of the long or "diastolic" pause are of two kinds—namely, "post-diastolic," which are continuous with, and as it were appended to, the second sound, but falling short of the first. These murmurs are usually aortic, and expressive of imperfect closure of the aortic valves, the consequence of incipient and as yet very partial structural change, confined to the edges of the valvular segments. Finally, the murmurs which occupy the terminal portion of the long pause he designates "præ-systolic," in preference to the title "auricular systolic," given them by Dr. Gairdner. These murmurs are by no means uncommon, are usually confined to the area of the apex, and pathognomonic of mitral constriction. Numerous examples were given of the several species of murmur mentioned, with detailed history of cases; and the classification of murmurs, with their relationship to the several phenomena constituting the cycle of cardiac action, was illustrated by diagrams.

Dr. Protheroe Smith read a paper "On Bromide and Bibromide of Mercury as Therapeutical Agents." The paper commenced by a comparative view of the relative combinations of fluorine, chlorine, bromine, and iodine with mercury, both with regard to their affinity and percentage in each compound. It was also shown that the bromides are more active than the chlorides. Then followed some remarks on the action of the elements of the compound—viz., bromide and mercury—in which was ascribed to Sir C. Locock the introduction of bromide of potassium to the Profession. The author had used the bromide and bibromide of mercury for upwards of five years, and had found the bromide valuable as an efficient cholagogue and purgative, promoting absorption of morbid tissue with less constitutional disturbance than from calomel, citing instances, and calling on members of the Association to aid him by their efforts further to investigate the subject and to prove his conclusions.

Dr. R. Martin read a paper on "Intemperance as a Factor in the Production of Epidemic Disease." That intemperance is a powerful agent in the production of epidemic disease was proved by the experience of Edinburgh and Liverpool. In 1854, typhus, which had for years raged as an epidemic in Edinburgh, suddenly underwent a remarkable declension. Dr. Christison, at the meeting of the Social Science Congress in 1863, showed that this could not be attributed to any of the ordinary sanitary improvements, such as drainage, etc. He was at a loss to account for it, but Dr. Martin pointed out that, in consequence of the introduction of the Forbes McKenzie Act, there was a remarkable declension in the amount of intemperance. At Liverpool, in 1862, there was an extraordinary outbreak of intemperance; almost immediately after there was an alarming outbreak of typhus. The outbreak of intemperance lasted for four years, the death-rate rising higher and higher every year. In 1866, in consequence of the very determined action of the magistrates, intemperance received a powerful check; almost immediately after, the death-rate, which had reached the extraordinary height of 64 per 1000, began rapidly to decline. These examples prove the potency of intemperance as an agent in promoting the spread of epidemic disease.

Dr. Balthazar W. Foster read a paper "On the Use of Ether and Etherised Cod-liver Oil in the Treatment of Phthisis." Dr. Foster began by referring to the great difficulty of digesting fatty food which distinguishes the great majority of phthisical patients. This defective assimilating power had hitherto been treated by incorrect or insufficient means. The only true method of treatment to be adopted in such cases should be directed to the organs whose secretions are at fault. Physiology teaches that the digestion of fat is specially performed by the secretion of pancreas and the glands of small intestines. Dr. Foster had long sought for a means of influencing these glands, and at last had found most ample evidence in the works of Claude Bernard that ether is capable of augmenting the pancreatic secretions to almost any degree. Bernard was accustomed in his experiments to give ether to animals in order to obtain a good flow of pancreatic juice. Applying this discovery to the treatment of phthisis, Dr. Foster had met with most satisfactory results. The ether was given in a mixture sometimes, but generally in the form of etherised cod-liver oil. Of the patients treated in this way, and all observed over some months, some over two years, 42 per cent. improved while under treatment, 30 per cent. remained stationary, and only 28 per cent. became worse; 12 per cent. of the cases treated presented all the evidence of the arrest of the disease. In no case were the symptoms and physical signs alone accepted as evidence of improvement. Every case was weighed from week to week while under observation, and only a decided increase of weight in addition to other signs received as evidence.

SECTION B, PHYSIOLOGY.

President—Professor Rolleston, M.D., F.R.S.

Secretaries—W. S. Church, M.A., M.B.; Prof. Beale, F.R.S.

The following are abstracts of some of the papers read:—

Mr. Paget read a paper "On Stammering with other Organs than those of Speech." The essential characters of stammering, in the want of concord between muscles acting to expel something and muscles relaxing to let that something pass, were shown in certain diseases of the urinary organs, and of those of deglutition. The correspondences of the several sets of cases, especially in their mental relations, and the methods of treatment that they consequently required, were pointed out.

Mr. Clover read a paper on "The Administration of Nitrous Oxide Gas as an Anæsthetic." Mr. Clover attributed the long delay between Sir Humphry Davy's suggestion of the use of this gas, to render operations painless, and its present use, to the absence of proper apparatus for making, storing, and administering the gas. He states that he has given it successfully to 387 cases, and to some five times at a sitting. No unfavourable result has occurred, except that a few of the patients recovered consciousness before

the operation was completed. He described his apparatus—a modification of his chloroform inhaler—with which he obviates the accidental breathing of air along with gas. To this is attributed the partial consciousness of the patient which has hitherto made the effects of the gas uncertain. He considers that artificial respiration would be the proper remedy, in case the gas had been too long inhaled.

Dr. Robert M'Donnell read a paper "On the Relative Claims of Bell and Magendie to the Merit of having discovered the Functions of the Roots of the Spinal Nerves." The author stated that he had been led to inquire carefully into this subject by the observations lately made by MM. Vulpian, Claude Bernard, and others, who, contrary to the opinion generally received in this country and on the Continent, claimed the discovery for Magendie. The author felt assured that, however gladly British physiologists would claim for a compatriot the honour of having made this discovery, they would prefer doing what truth and justice required. After carefully analysing Bell's writings, he has come to the conclusion that previously to 1822 (when Magendie made his experiments, and published the results), Bell's written works contained no evidence that he conceived the idea that the posterior nerve-roots were sensitive, and the anterior purely motor. He (Dr. M'Donnell) assigned to Magendie and experimental physiology the merit of having discovered this fundamental fact in physiology. He had some difficulty in obtaining Bell's celebrated pamphlet of 1811, printed for circulation among the author's friends, and having obtained it through the kindness of Professor Turner, of Edinburgh, he submitted it to the judgment of several competent persons, who were invited to give their opinions independently of each other. All agreed that in this pamphlet, upon which Bell and his supporters rest their claims to his priority, there was absolutely nothing which could, in fairness, be supposed to indicate a knowledge of the true functions of the nerve-roots.

SECTION C, SURGERY.

President—James Paget, F.R.S.

Secretaries—T. P. Teale, M.A., M.B.; W. Stokes, M.D.

The following are abstracts of some of the papers read:—

Mr. George Southam read a paper on "The Results of the Operations for Lithotomy performed at the Manchester Royal Infirmary from 1853 to 1868." The paper gave the results of thirty-eight cases of lithotomy operated on by the author at the Manchester Royal Infirmary, all of which were successful except one, the subject of the fatal case being a man in his 79th year, with enlarged prostate; the calculus extracted weighed two ounces, was spiculated, and formed chiefly of oxalate of lime and lithic acid. The ages varied from one year and nine months to 79 years, and the weight of the stones from 9 grains to 5 ounces. The cases were not selected, except that no adult has submitted to the operation where the calculus was supposed to be under the average size, and the urinary organs in a favourable state for lithotrity, of which there were seven. Full details of thirty-two cases were given, eleven of which occurred in adults; in six of these the calculi varied in weight from 1½ to 5 ounces, and in five from 5½ to 7½ drachms. Taking into consideration that the most favourable adult cases were reserved for lithotrity, the author considered a mortality of one in thirty-eight proved that lithotomy is not the dangerous operation it is commonly held to be. He did not, however, wish to disparage lithotrity, which he considered the preferable operation, where the bladder, prostate, and urethra were in a healthy condition, and the stone of average dimensions, and he generally adopted it in private practice; but where complications occur, and they are not of a nature to contraindicate operative interference, he believed lithotomy afforded the best prospect of preserving the lives of our patients. He pointed out some of the circumstances which he considered had contributed to the successful results in his cases. After alluding to the importance of preparatory treatment, several suggestions for facilitating the different stages of the operation were given. He advised free incisions through the skin, alveolar and adipose tissue, but those into the membranous and prostatic portion of the urethra should be very limited, the elasticity of the neck of the bladder in children and early manhood admitting of its free dilatation. To obviate the difficulty which sometimes occurs in reaching the urethra, he advised the direction of the knife to be altered according to the age of the patient. The pelvis of the child being smaller and placed more obliquely on the spine than in the adult, the bladder is almost an abdominal organ in early life, sinking into the pelvic cavity as this increases in capacity. Therefore, to find the urethra readily in children, the point of the knife should be directed obliquely upwards in a line with the inner border of the arch of the pubes; whilst in the adult it should be kept more horizontal. Additional facility in this stage of the operation is afforded by allowing the nail of the forefinger to grow longer than usual, which, passing more readily into the groove of the staff, becomes an excellent director for the point of the knife. Especial attention was paid to the prevention of the injurious effects of shock. Immediately the operations were completed, the patients were enveloped in a warm blanket, and on being placed in bed, bottles filled with hot water were applied to the feet and other parts of the body, until the sign of reaction set in. In the after treatment, the patients were allowed nutritious food as soon as the stomach was in a fit state to receive it. The paper was illustrated by drawings, and the calculi extracted were exhibited.

Dr. J. R. Wolfe read a paper "On the Removal of Cancer by Caustic Arrows and Carbolic Acid." *Case* 1.—Epithelial cancer in the inner canthus, involving both eyelids, of nine years' standing. Four openings were made around and one in the centre of the tumour, into which were inserted caustic arrows. On the third day the tumour came away; wound treated with carbolic acid dressing, at first strong, afterwards diluted, and with the application of carbolised wadding dipped in glycerine; healed in a fortnight; no relapse, and scarcely a trace of a cicatrix remained to show the great loss of substance which had occurred. *Case* 2.—Cancer of lower eyelid and cheek removed as in last; discharged cured in eighteen days; no relapse. The advantages of this mode seem to be—1. Little or no pain; no confinement to bed required. 2. Complete extirpation of the diseased part. 3. Gap left granulates freely, without leaving any mark. 4. It is valuable for removing tumours from regions where no skin can be obtained from the neighbourhood, and is also applicable to erectile tumours, nævi, cancer of the breast, etc., occurring in particular persons, places, or seasons of the year when the use of the knife is to be dreaded. The arrows are prepared by making chloride of zinc into a stiff paste with starch, rolling into shape, and drying. In connexion with the operation at the inner canthus, Dr. Wolfe showed that obliteration of the lachrymal sac, etc., did not necessarily induce epiphora or any discomfort, referring to the result of his own experiments on rabbits, which proved that the lachrymal gland was by no means the main source of the tears, which continued after the removal of that gland. These experiments seem to show that the conjunctiva itself secretes sufficiently to keep the eye moist—the fluid being got rid of by evaporation, while the extra secretion under irritation, mental emotion, etc., is produced by the gland, and got rid of by the lachrymal passages.

Mr. Thomas Smith, F.R.C.S., read a paper "On the Origin and Treatment of Stone in Boys." In this paper, the author referred the existence of stone in the bladder, for the most part, to defective secretion from certain organs, whereby the kidneys were forced to excrete more than their due share of refuse material; or to disarrangements of the digestive organs, whereby abnormal substances might be formed and added to the urine, or the natural urinary excreta might be formed in excess. He endeavoured to explain the frequency of stone among the children of the poor, and its rarity among those of the rich, and the equal liability of both classes to the disease in adult life. The ordinary and the unusual symptoms of stone were noticed. A case was related where the author had crushed a stone between his finger and a lithotomy staff, thus relieving the child altogether of his disease. Attention was drawn to the great difference in the mortality of lithotomy, as drawn from general statistics, and as containing the experience of individual Surgeons. As means whereby lithotomy might be facilitated, and its mortality lessened, the author recommended that the bladder should be nearly empty at the time of operation; he described a method of manipulating the staff so as to diminish the size of the wound necessary for the extraction of the stone, and recommended the use of very long and slender forceps. The introduction of a canula, surrounded by a conical plug of lint, immediately after the operation, was strongly advocated, and cases were referred to in the author's experience where he believed life had been saved by this means. The paper had appended to it a table of 20 cases of lithotomy in boys.

Dr. H. M. Tuckwell read a paper entitled "Remarks on Villous Tumour of the Rectum, and the Resemblance that it may bear in its Symptoms to Chronic Dysentery; illustrated

by two cases." The two cases brought forward in this paper swelled the list of villous tumours on mucous membranes—now a very considerable one—in which no cancerous elements were present, either in the tumour itself, or in adjacent glands. Their chief clinical interest consisted in the remarkable resemblance which they bore in their symptoms to chronic dysentery. Characterised by a sallow cachectic aspect of the patient, by a very frequent action of the bowels with severe tenesmus, by persistent and intense pain in the lower part of the back, and by slimy discharges mixed with blood; they showed how dysentery might be so closely simulated by villous tumour of the rectum that nothing but a most careful examination of the rectum would serve to distinguish the one disease from the other. In both cases the villous growth, of considerable extent and size, occupied the posterior wall and sides of the bowel, reaching from about four inches above the anus into the sigmoid flexure. It was thus quite possible, unless the rectum was examined directly after an action of the bowels, when, with the violent downward straining present in this disease, the villous processes were forced down within reach of the finger, to overlook the presence of the tumour. In neither case was there any evidence of obstruction of the bowels, so commonly met with in this form of tumour, to aid in the diagnosis. The immediate cause of death in both instances was perforation of the bowel through the base of the tumour—the opening in the one case leading directly into the peritoneum, and death following from general peritonitis; in the other case just missing the peritoneum, and leading into the connective tissue between the bowel and the sacrum, where a large abscess had formed, which terminated in pyæmia and secondary abscesses in the lungs.

Mr. Furneaux Jordan read a paper "On the Treatment of Acute Orchitis." The author referred to the variety of orchitis which was sometimes called epididymitis, which was usually acute or subacute, and which followed or was consecutive to urethral lesion, especially gonorrhœa and gleet. The treatment consisted in the application of a strong solution of nitrate of silver to the scrotum of the affected side, followed by gentle pressure. The first occasion on which Mr. Jordan adopted the treatment was in the case of an in-patient of the Queen's Hospital, suffering from gonorrhœal rheumatism of the knee. An acute synovitis of one knee was cured, as most cases are, in twenty-four hours, by nitrate of silver applied almost to vesication. Then acute orchitis set in, a strong solution of arg. nit. was applied, and in twelve hours, swelling, pain, and tenderness had disappeared. For several years he had uniformly adopted this treatment, and with unvarying success. It did not possess the heroism of a knife-plunge into the testicle or into the tunica vaginalis, but it was as quick and effective in its results as the bolder methods.

Mr. Vincent Jackson read a paper on "Amputation of the Right Arm at the Shoulder-joint, and Excision of the Scapula for Severe Injury of the Limb." The case was that of a man admitted into the Wolverhampton General Hospital, December, 1864, having previously been knocked down on the railway by the buffer of an engine, the wheel of which passed over his arm. The injuries were so severe that the removal of the limb at the shoulder-joint, followed by excision of the scapula, offered the only chance of saving life. The author drew particular attention to the fact that the scapula had been excised by sawing through the acromion process, thus saving the point of the shoulder—the first time, in fact, that this had been done, all previous excisions of the entire bone having involved a portion of the clavicle. There were only two other cases on record in which, for injury of the limb, a similar operation had been performed—one by Mr. Cumming in 1808, for a gunshot injury, and a second, also for gunshot injury, by Gaetani Bey, in 1841. The paper concluded by a reference to all the published cases in which the operation of amputation of the shoulder-joint and excision of the scapula had been performed, whether for injury or for disease, and appended to it was a table with full particulars of these cases, and also of all cases in which the scapula had been excised alone.

Mr. M. A. Adams read a paper on "A New Instrument for Investigating the Field of Vision." The instrument consisted of a hollow hemisphere of glass divided into meridians and parallels, as an ordinary globe. The eye piece was at the centre of the concave side, and the Surgeon traced the field of vision upon the exterior surface. The examination could be made with great ease and perfect accuracy. The author considered that the instrument would supply a want long felt by ophthalmic Surgeons.

Dr. Charles Taylor read a paper on "Further Observations upon an Improved Method of Extracting in Cases of Cataract." The author in his method of extracting employed two small knives about a line in breadth and bent at an angle like the ordinary iridectomy knives, one sharp and the other with a blunt or bulbous extremity. The patient is anæsthetised and the lids separated with the stop-speculum, the sharp knife is then entered at the summit of the cornea, and an incision from two to three lines in extent completed; the lens may be extracted either with an iridectomy with a mere slit in the constrictor fibres of the iris, or, if circumstances are very favourable, the iris may be left intact. The previously dilated pupil will to considerable extent maintain this condition with the small incision until the capsule is opened. Owing to the small size of the opening, also, the globe may be manipulated to any extent, and the capsule rendered tense without danger; when the cataract is loosened, the wound should be enlarged with the blunt-pointed secondary knife to either side, the eye being fixed first with one hand and then with the other; a shallow flap is thus formed through which the lens may be extruded without introducing any instrument into the eye. Owing to the precision with which the wound may be localised, a smaller flap suffices for removal of the lens than is required in the old flap method, even if the iris is left intact; but if a portion is removed, a shallow elongated flap is formed, situated well back in dense tissue, with sloping sides and transverse centre, which last occupies the summit of the true cornea; such a flap is sufficiently elastic to close without any artificial appositions or external support, strong enough to resist protrusion by advancing vitreous, and too resilient to permit of accidental reflection. When the lens is fixed by adhesions, or the hyaloid is ruptured, the author uses his wire or skeleton spoon, a mere loop of flattened wire of extreme tensity, which assists the exit of the lens without adding to its bulk; if the lens is tilted over, this may be used without dipping it into the vitreous cavity, even when the iris is left untouched. Closure of the eye with a wet pad and two days' confinement to the couch in a partially darkened room is all the after treatment required, and, as a rule, the patients return home in a week with restored vision. The advantages claimed for this method are—that the right hand may be used for either eye, so that ambidexterity is not necessary on the part of the operator, nor is there risk of that increased failure which, from the greater difficulties of extraction, has hitherto attended operations upon the left eye. That up to the last moment, indeed until success is almost certain, the operator is not committed to any special form of operation, but may extract either with or without iridectomy, or may defer the operation until after removal of a portion of the iris, utilising the experience of the individual thus gained, to the evident advantage of both patient and operator when extracting some weeks later. Numerous other advantages are claimed from the facility of execution, the ease with which accidents are met, and the small size of the wound, the greater safety and certainty of success, and the slight after treatment required. The author reports ninety cases operated on in succession, without selection, and including many persons over 80 years of age, and others suffering from various forms of senile marasmus, decrepitude, and disease, in which three eyes only were lost from suppuration of the flap.

SECTION D, MIDWIFERY.

President—Sir Charles Locock, Bart., M.D., F.R.S.
Secretaries—J. G. Swayne, M.D.; Heywood Smith, M.A., M.B.

Amongst the papers read were the following:—

Dr. J. Braxton Hicks read a paper "On Transfusion and a New Mode of Management." The author first remarked upon the small extent to which the operation had spread, the various causes of which he then proceeded to consider:—1. The want of success generally, which was accounted for by the impossibility of having the apparatus always at hand, the tendency to postpone the operation till too late, and the difficulty of knowing the exact time at which to operate. 2. The inherent impediments to it from the position of the patient, and the tendency of the blood used to coagulate: this the author considered the most troublesome and dangerous, as a clot might readily be driven into the system. This Dr. Hicks had now overcome by the employment of a solution of phosphate of soda mixed with the blood of the supplier whilst flowing. He had first tried it on the lower animals, and then in three cases in the human female during delivery. It

had simplified the operation to a great extent. The solution is well known to be tolerated by the system.

A paper, by Dr. Alfred Wiltshire and Dr. William Tyndale Watson, was read "On a Case of Ovariotomy during Acute Peritonitis, the Patient recovering." Mrs. S., aged 49, mother of nine children; healthy (with exception of varicose veins of the lower limbs) until a year ago, when the abdomen began to enlarge and catamenia became irregular. As abdomen enlarged, varicosity of veins disappeared. She had attacks of pain and tenderness from time to time. Dr. Watson attended her from March until May 1, when, after a long walk, all her symptoms became aggravated, and severe acute peritonitis set in, accompanied by rapid enlargement of the tumour. She was seen by Dr. Wiltshire on May 3, when she appeared moribund. The extremities were cold, there was incessant vomiting, and the pulse was scarcely perceptible. The diagnosis was ovarian tumour, with acute peritonitis, owing to rapid enlargement. Dr. Wiltshire, on certain grounds, urged operation, which was reluctantly acceded to by Drs. Watson and Murray, and the patient, having improved under nutritive enemata, opium, ice, and champagne, ovariotomy was performed by Dr. Wiltshire on the 4th, Drs. Watson and Murray assisting. Chloroform given. Tumour very large and non-adherent. Peritoneum everywhere brilliantly injected. About three pints of glairy serum escaped. Cyst, tapped with Dr. Murray's trocar, yielded a gallon of blood, but was still very large. In attempting its removal, it rent, and a quantity of blood escaped into the peritoneal cavity. The pedicle very small, and so rotten that ligatures came away and clamp would not hold. Hæmorrhage arrested only by transfixing and tying right half of uterus. Silver sutures used for wound in abdomen, which united by first intention without formation of a single drop of pus. Patient rapidly improved, and recovered perfectly without a rigor.

Dr. Robert Barnes read a paper "On the Diagnosis of Early Pregnancy." The author, observing that, during the first three months, it was notoriously difficult to affirm the presence or absence of pregnancy with confidence, and that the evidence was cumulative, submitted that any new sign became valuable. No one sign was trustworthy, but probability rose in proportion to the cumulation of signs. He drew special attention to a peculiar stretching of the connecting tissue which binds the cervix uteri to the base of the bladder, caused by the anteversion of the gravid womb. This stretching backwards produced a characteristic smooth elastic plane of the roof and anterior wall of the vagina. This connecting cellular tissue is remarkably extensile, so that the space between the anterior wall of the cervix and the bladder was lengthened. Other facts connected with this tissue were mentioned. The general conclusion was, that when the peculiar tense smooth plane of the vaginal roof was found in connexion with the violet colour of the vagina described by Jacquemier, the presumption in favour of pregnancy was very strong. The specific character of the violet colour depending upon pregnancy was also described. The memoir was illustrated by paintings.

Dr. Protheroe Smith read a paper "On the Treatment of Flexions of the Uterus by means of an Elastic Pessary." Having first noticed the frequent occurrence of displacements of the uterus, the recent date of their recognition, and his papers on the subject in the *British Record of Obstetric Medicine* twenty years ago, he promised a future publication of manuscripts written long since, but still incomplete. He then described and exhibited his own elastic pessary of gutta-percha, invented and employed by him twenty years ago, consisting of two rings suited to the form of the vagina, united in front and free behind to adapt itself to the natural movements of the pelvic viscera, etc., and to guide continually by its elasticity the misplaced organ into its normal position. He illustrated its use by an instructive case.

Dr. George H. Kidd read a paper "On the Treatment of Intrauterine Polypi." This paper opened by showing that we are indebted to Sir James Simpson's application of sponge-tents for the dilatation of the uterus for being able to detect or treat intrauterine polypi; but sponge-tents, it is shown, are liable to many objections. They become very fœtid when they have been a few hours in the uterus; they require prolonged and repeated applications before they open up the canal of the cervix to allow of a complete exploration of the uterus, and they dilate the os externum to an unnecessary degree before they act on the os internum; and their use may give rise to so much irritation as to be attended with fatal consequences. Instead of sponge, Dr. Kidd recommends the use of sea-tangle, with pieces of which, sufficiently long to traverse the whole cavity of the uterus, and of about the size of a No. 5 or 6 bougie, he fills the canal of the cervix as completely as it can be done without using force or causing pain. If the os should be abnormally small, it might be necessary to introduce a single tent for a few hours, as a preparation for more full dilatation; but in general the parts are so relaxed by the hæmorrhage from the polypi that five or six or more pieces can be introduced at the first attempt, and this is found sufficient to permit of a full exploration of the uterus and the removal of any polypi found in it. For extracting the polypi, the use of a single wire *écraseur* is found the most certain and simple method. The tumour is seized in a vulsellum, guided to it by the finger on the uterus; and then the loop of the *écraseur* is guided to it by the vulsellum, and adapted round its neck by the finger, when tightening the screw divides the attachment of the tumour, allowing it to be extracted along with the vulsellum by which it had been seized. Dr. Kidd stated that he had operated in this way on very many cases during the last three years, and had always found it safe and efficacious; and he concluded by exhibiting twenty-nine fibrous polypi that he had removed in this way from the interior of the cavity of the body of the uterus of an unmarried woman aged 56, at four operations; three being removed in the first operation, in September, 1867; nine in the second, in March, 1868; eleven in the third, in May; and six in the following July; when the interior of the uterus was freely painted over with strong nitric acid, with the hope of preventing their further growth; and, for so far, with good effect. The tumours were found, on microscopical examination, to be simply fibrous, differing in this respect from the recurrent fibroid tumours described by West and others; and Dr. Kidd stated that he believed the case to be unique in the annals of Medicine.

SECTION E, PUBLIC MEDICINE.

President—John Simon, F.R.S.
Secretaries—J. E. Morgan, M.A., M.D.; T. J. Dyke, F.R.C.S.

The following are abstracts of some of the papers read:—

Dr. Oppert read a paper "On Medical Education in England and abroad." Comparing the existing systems, he found that they might be classified as free and tutorial ones. The former prevailed on the Continent, where the resident collegiate system was only found in the military educational establishments. More or less detailed descriptions were given of the manner in which Medicine was studied in Germany, Austria, Italy, Switzerland, Russia, Sweden, England, Scotland, Ireland, the colonies, and America. Speaking of London, he said the means which the metropolis offered for Medical instruction were immense, but not fully made use of. Many Hospital Physicians who are teachers consider teaching as not the most agreeable part of their duties, and give it up as soon as they conveniently can. The number of those is certainly small who make teaching the business of their life, and would be much larger in some continental cities in proportion to the same number of patients. The number of House-Physicians and Surgeons might be doubled with great advantage. Their time should also not be occupied with legal dissections and some other matters. The number of *internes* in the Paris Hospitals may be about 150, there being about 8000 beds in the Hospitals, consequently one *interne* to about fifty beds. The London Hospitals contain about 5000 beds. Does not the number of resident officers come far below that of Paris? But the in-patients of London Hospitals represent only a small portion of the patients available for study and education. There are the forty workhouses with a large number of interesting chronic cases. To illustrate this by a fact: one day in April he went to the Marylebone Workhouse to examine the form of skulls of the idiots in the house, and whether he could find that newly-described form (by L. Meyer) of "cranium progenæum," where the lower teeth project over the upper ones. He saw there a case of clonic cramp of one arm, a man who constantly jerked his right arm involuntarily in an abrupt manner; he saw also a young epileptic female who referred her disease to suppressed menstruation through a cold, etc. Could not such cases be taken to the Hospitals, or the students be taken to the workhouse? And why should not a certain number of intern pupils be allowed by the boards of guardians, with the sanction of the Poor-law Board, to reside in the workhouses? The Infirmaries, or at least a few of them, could doubtless be made available for instruction in auscultation and percussion, as also in morbid anatomy. Again, there are the out-patients of

Hospitals and Dispensaries; they should long before this have been utilised for Medical education, and he hoped they would serve in future for instruction, or at least a great number of them. In Germany and Scotland it is considered an important part of the study to make the students familiar with more common cases. Their advice will be surely more asked in the commencement of practice for such than for cases which threaten life. The means for examining the patients clinically, the excretions microscopically, and making chemical analyses, are scarcely found in the metropolitan Dispensaries, and they are not at all fitted for the admission and instruction of pupils. Yet this was exactly one of the original objects of their foundation. The printed rules of the Surrey Dispensary supply a proof of this. Their utility by affording instruction is also improperly vaunted at the public annual dinners.

Dr. Edward Ballard read a paper "On the Influence of some of the more important Elements of 'Weather' upon the Absolute Amount of Sickness." The author, taking six years, compares, for quarters and months, the amount of new cases of sickness registered in opposite conditions of weather. The results he obtains are chiefly these:—1. That sickness prevailed more in those corresponding months and quarters in which the temperature was high than in those in which it was low. 2. That in the colder months of the year a daily range of temperature has little influence, but in the warmer months it is more important even than the temperature itself, a large diurnal range being more injurious to public health than a low range. 3. That in the corresponding months and quarters in which the air was comparatively dry there was more sickness than when the air was moist. 4. That the sickness was least when there was most rainfall and a larger number of rainy days, the quantity of rain falling being more important than the number of days on which it fell. 5. That, on the whole, there was more sickness when the wind was from the south-west than when it blew from the north-east, and that high winds were associated with more sickness than winds of less force.

UNIVERSITY REPRESENTATION.

A meeting of Medical Graduates of the Universities of Glasgow and Aberdeen was held in the Convocation House at Oxford on the 6th inst., at 11 o'clock, to consider the question of Medical representation of these Universities in Parliament. Dr. A. P. Stewart occupied the chair. Among those present were, Dr. George Webster, Dulwich; the Rev. and Dr. David Bell, London; Dr. Robert Martin, Warrington; Dr. John M. Bryan, Northampton; Dr. James Williams, Malvern; Dr. John Murray, London; Dr. John Tapson Louth, Penge-park; Dr. Fred. Bateman, Norwich; Dr. O'Bryen, London. The following resolutions were unanimously adopted:—

"That this meeting form itself into a provisional committee, for the purpose of watching the question of the Medical representation in Parliament of the Universities of Glasgow and Aberdeen, and of taking such steps as they may think fit to secure such representation, with power to add to their number."

"That a sub-committee be formed of an equal number of Medical graduates of the Universities of Glasgow and Aberdeen to carry out the preceding resolution, with power to add to their number."

The following gentlemen were nominated:—Dr. A. P, Stewart, President, Dr. Andrew Clark, Dr. Alexander Silver. Dr. O'Bryen; with Dr. John Murray as Hon. Secretary.

The Jubilee of the University of Bonn was celebrated two days back in presence of the Prince of Prussia, who received on that occasion the title of Honorary Doctor of Civil Law. The following also received the degree of Doctor:—In the Faculty of Law—Mr. Bancroft, United States' Minister at Berlin, and Mr. J. Stuart Mill, London; in Medicine—Mr. Paget, Surgeon, London; Mr. Charles Darwin, Naturalist, London; Mr. E. Hartnack, optician, Paris; M. Louis Pasteur, chemist, Paris; and M. A. Peterman, Geographer, of Gotha; in the Faculty of Philosophy—M. Kœmans, Professor of Ghent; M. Ferdinand Hiller, Director of the Conservatoire of Cologne; Mr. Frederic Kapp, Notary at New York; Mr. Mure, of Edinburgh; M. Regnier, Member of the French Institute; M. de Renmont, Councillor of Legation at Aix-la-Chapelle; M. de Rossi, Rome; M. Jules Schmidt, Director of the Athens Observatory; and M. Otto Struve, Professor of Astronomy at St. Petersburg.—*Daily News.*

GENERAL CORRESPONDENCE.

THE LATE TRIAL FOR MALPRAXIS—SPEAR *v.* DOIDGE.

Letter from Mr. Alfred Poland.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Medical Times and Gazette* of August 3 you give an account of the case of Spear *v.* Doidge (see, also, *Western Morning News* of Saturday, July 25, 1868), an action for damages for alleged Surgical unskilfulness. In March, 1867, the plaintiff fractured the ulna and dislocated the head of the radius of the right arm; the defendant was alleged not to have discovered the dislocation, and to have treated the accident in such a way that the limb had become perfectly useless. It is not my intention to enter into the merits of the case, but I feel bound to offer certain facts for the information of those gentlemen of the Medical Profession who gave evidence for the plaintiff in the case. The Surgeons called by the plaintiff stated that the proper treatment would be to draw the head of the bone back into its proper situation and then flex the arm to prevent its again slipping back into its dislocated place; that the arm was quite useless for all ordinary purposes of labour, and likely to remain so; that the only thing to be done now was cutting into the joint and taking off the head of the bone, which would be attended with very considerable risk, but it would give the plaintiff the use of his arm.

With regard to the first point—the drawing the head of the bone into its proper situation and maintaining it there—every Hospital Surgeon knows that this is easier said than done; although in some instances it may be accomplished, yet in others it has defied all mechanical and Surgical skill in reducing it. This has been very ably explained in a dissection of such an accident by Mr. Hilton, in the *Guy's Hospital Reports*, series ii., vol. v., p. 96, with a plate. I have given the following extract on this point:—

Dissection of a Case of Unreduced Dislocation of the Radius forwards and upwards.

"The accident occurred rather more than seven years previously to the death of the patient. He was then about 50 years of age. Many efforts were made, and various means employed, to reduce the dislocation at the time it happened, but without avail.

"The external form of the elbow presented the ordinary characteristics of displacement of the radius forwards. The joint could be flexed until the head of the bone impinged upon the anterior surface of the humerus, and extension could be carried to nearly the natural limit. Supination and pronation were limited, but the latter more especially.

"The head of the radius could be seen and felt in the front of the elbow, and the usual depression existed below the external condyle, where the head of the radius is naturally situated."

Then follows a very accurate detail of the dissection and condition of the parts in all the varied movements.

"Knowing that the dislocation of the radius forwards and upwards sometimes baffles the best efforts of the most experienced Surgeon, it seemed important to ascertain, if possible, the causes which interfere with the return of the head of the radius into the smaller sigmoid cavity.

"After all the muscles had been taken away from the arm I could not succeed to draw the head of the radius below the level of the external condyle. The chief impediments were the inability to overcome the tension of that small portion of the interosseous ligament (which is elastic) placed at the posterior part of the arm, with its fibres directed downwards and outwards from the ulna to the radius; and also, but of less influence, the tension of that portion of the external lateral ligament of the elbow-joint embracing the neck of the radius. (See plate, *op. cit.*)

"I extended the forearm, and then placed a fulcrum in the form of a piece of wood, three-quarters of an inch in diameter, across the front of the elbow, above the head of the radius, where I secured it deeply buried. I then forcibly bent the forearm towards the humerus, making my efforts (by pushing) entirely on the posterior part of the ulna alone, without grasping the arm. The fulcrum introduced between the head of the radius and the external condyle prevented the radius from reaching the condyle, but did not interfere with the complete flexion of the ulna; and by the time the ulna reached its

extreme flexion the head of the radius had resumed its proper position with regard to the external condyle, and so the luxation became reduced. The oblique fibres on the posterior part of the interosseous ligament were torn, and also some fibres of the external lateral ligament, but the oblique ligament remained entire."

Then, with respect to maintaining the head of the radius in its place, if the Surgeon has been fortunate enough in replacing it, this is also attended with much difficulty, as the bone is so liable to slip out again, and this is verified by a case alluded to by Mr. Hilton in the same paper:—

"Some time since a little boy came to the Surgery at Guy's with a dislocation of the radius forwards and upwards. A thick cedar pencil was placed across the elbow above the cup of the radius, and I then forcibly bent the ulna to complete flexion. This had the effect of replacing the head of the radius on its proper level with the inferior surface of the external condyle; and then, by pressing the head of the radius backwards, it returned to its normal position by the side of the ulna. The bone subsequently was again displaced, and the patient did not continue in attendance at the Hospital."

And now, lastly, about the excision of the head of the bone to render the arm of use, inasmuch as the unreduced dislocation rendered the arm quite useless for all ordinary purposes. No Surgeon of any practical knowledge of this accident would ever excise the head of the bone, knowing as he does that the parts will accommodate themselves to a very great extent. However, as proof is better than theory, I subjoin the details of a case admitted under my care in Guy's Hospital last year, where the man had had a similar dislocation, which was unreduced; it had existed fourteen years; the arm was quite as useful as the other, and performing all the corresponding motions of the sound limb, and was as equally developed.

Dislocation of the Left Hip upwards, forwards, and inwards—Reduction.—Also Old Unreduced Dislocation of Head of Radius forwards, with perfect Use of Arm. (From Notes by Mr. George Eastes.)

Edward B., aged 31, admitted into Guy's Hospital under Mr. Poland, on Nov. 20, 1867. Is a labourer, and living in Bermondsey. He was at work at the Bricklayers' Arms station under a truck on the line in a kneeling position, when some more trucks were shunted against the one he was at work under, causing the latter to move on rapidly. The axletree caught him on the hip and rolled him forward. He was unable to walk after the accident. On admission it was found that he had dislocation of the head of the femur upwards, forwards, and inwards; he was suffering great pain, and unable to move his leg. Chloroform was administered, and the dislocation reduced with difficulty. He recovered and left the Hospital at the end of three weeks.

He had also an old unreduced dislocation of the head of the left radius; he states that when 7 years old he fell over a stile, striking upon the tip of his left elbow. No wound was then produced, or had afterwards formed there; but it was several months before he could move his arm without pain. He gradually recovered the use of it, and thinks he enjoyed at the end of twelve months from the accident as good use in the joint as he now possesses. He has never experienced any subsequent trouble at the articulation.

At present when the man extends both forearms fully, and supinates them at the same time to the full extent, each upper arm hanging straight from the shoulder, each forearm has a tendency outwards, which on the right or sound side might be expressed by saying that the forearm is placed at an angle of 160° with the upper arm, the apex of the angle being inwards; but with the left, the corresponding angle is only about 140°—*i.e.*, the left forearm is more turned outwards than the right. On rotating the left forearm, the head of the radius is found resting upon the external condyle of the humerus, and there is a corresponding depression behind at the spot where the head of the radius naturally should lie. There seems to be no other deformity about the joint, neither can any rugged piece of bone be felt, as if the result of old fracture, or separation of any epiphysis from the shaft of its bone.

The man can flex and extend the left forearm on the upper arm at the elbow to the same extent as he can perform the corresponding motions with the opposite limb—that is, he can use the arm quite naturally. The left arm is equally developed in all respects with the right.

Should you deem these points worthy of your notice, I think you would be doing a justice to the defendant in the case just tried by giving these remarks a place in your columns. I am, etc. ALFRED POLAND.

27A, Finsbury-square, E.C., Aug. 8.

NEW BOOKS, WITH SHORT CRITIQUES.

Dover as a Health-resort and Place of Residence: Its Climate, etc. By Charles Parsons, M.D. Edin., Associate of King's College, London, etc. London: John Churchill and Sons. 1868. Price 1s.

*** Dr. Parsons thus recapitulates the characteristic features of the climate of Dover:—

"Dover possesses a climate pre-eminently bracing, tonic, and dry. It varies, however, at certain seasons of the year, and for a few weeks Dover can hardly be recommended as a residence except to the robust and strong. Our hottest month is July, and would hardly be enjoyed by any except those who really luxuriate in hot weather. Invalids should postpone their visit to the next month, and thus escape the heat, which would certainly be trying to them. May and June are lovely months, living in the open air upon the beach very pleasant and agreeable; the heat enjoyable, and moderated by occasional refreshing showers. The fine weather of August and September is often prolonged into November, and a sort of second summer occurs before the final setting in of winter, just as happens at St. Leonard's. Our winter is by no means cold as compared with other sea-coast towns; indeed, with the exception of January and March, our winter months may be said to be quite temperate, and sometimes even mild. January is our coldest month, but as the atmospheric moisture is not excessive, the air is always dry and bracing. A residence in Dover cannot be recommended to any one during the month of March. The easterly winds which prevail all over England at this season, coming over the icy waters of the Baltic and the frigid floods of the continental rivers, are keenly felt here."

He recommends it for diseases of assimilation and debility, in which a dry, cool, bracing climate is a panacea—such as the early stages of phthisis, many cases of chronic bronchitis, dyspepsia, chronic diarrhœa and dysentery, and the strumous affections of children. He also intimates its value in sleeplessness. The book is short, well-written, and impartial.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Monday, August 10, the following Members of the College were duly admitted Fellows of the same:—

Heaton, John Deakin, M.D. Lond, Claremont, Leeds.
Jackson, John Hughlings, M.D. St. Andrews, 28, Bedford-place, Russell-square.
Morgan, John Edward, M.D. Oxon., St. Peter's-square, Manchester.
Moxon, Walter, M.D. Lond., 6, Finsbury-circus.
Ogle, William, M.D. Cantab., Derby.
Robertson, Charles Alexander Lockhart, M.D. Cantab, County Asylum, Hayward's-heath.
Thompson, Edmund Symes, M.D. Lond., 3, Upper George-street, Portman-square.
Thompson, Reginald Edward, M.D. Cantab., 21, South-street, Park-lane.
Tuke, Thomas Harrington, M.D. St. Andrews, Manor House, Chiswick.

UNIVERSITY OF ABERDEEN, 1868.—During the past year, the following candidates, after the usual examinations, have received degrees in Medicine and Surgery:—

The Degree of M.D.

Dowse, Thomas Stretch, L.R.C.P. Edin., M.R.C.S. Eng., London.
Fisher, Stephen Winter, M.R.C.S. Eng., L.S.A., L.M., Bristol.
Lyle, Thomas, L.R.C.P. Lond., Exeter.
Quinnell, Richard James, East Indies.

The following received promotion to the degree of M.D.:—

Buckley, Henry Child, M.B., C.M., Llanelly, Carmarthenshire.
Dabbs, George Henry Roque, M.B., C.M., Newport, Isle of Wight.
Davson, Frederick Adams, M.B., C.M., British Guiana.
M'Robbie, John Strachan, M.B., C.M., Aberdeen.
Reid, John, M.B., East Indies.
Roberts, John, M.B., C.M., Chester.
Rossignol, Augustin Le, M.B., C.M., Jersey.
Will, John Charles Ogilvie, M.B., C.M., Aberdeen.

The Degree of M.B.

Adam, Charles, M.A., Drainie.
Ash, Robert Vacy, L.R.C.P.L., M.R.C.S. Eng., L.S.A., North Devon.
Bennett, Charles, Lancashire.
Brown, Charles Robert, Surrey.
Coleman, Matthew Owen, M.R.C.S. Eng., Surrey.
Craig, George Alexander, Aberdeenshire.
Crombie, John Mann, M.A., Aberdeen.
Drury, Charles Dennis Hill, M.R.C.S. Eng., Newcastle-on-Tyne.
Gray, John Henry, M.R.C.S. Eng. and L.S.A., Lincolnshire.
Gunn, John Sutherland, Sutherlandshire.
Hampshire, Frederick Knowlton, M.R.C.S. Eng., London.
Hay, James, Aberdeenshire.
Hope, William, M.R.C.S. Eng. and L.S.A. London.
Ironside, James, Aberdeen.
King, Henry Kirwan, M.R.C.S. Eng. and L.S.A., London.
Matheson, Farquhar, Ross-shire.
Muil, William, Aberdeen.
Newth, Alfred Henry, M.R.C.S. Eng., London.
Philip, James Allan, M.A., Aberdeen.
Philpots, Edward Payne, Leamington.
Pickburn, Thomas James, London.
Robb, John, Aberdeen.
Simpson, George Alexander, Aberdeen.

Skinner, Stephen, London.
Smith, Francis William, Banff.
Smith, Joseph Hume, M.A., Methlic.
Strahan, Alexander B., Aberdeen.
Thomas, John Lewis, Holyhead.
Timmins, John A. James, M.R.C.S. Eng., Carmarthen, South Wales.
Tulloch, David, Sutherland.
Walker, Alfred, M.R.C.S. Eng., London.
Walker, William Abram, M.R.C.S. Eng., Chesterfield.
Williams, Albert, London.
Willock, Richmond Cotts, Aberdeen.
Wilson, Alexander, Ross-shire.
Wood, Alexander, Banff.

The Degree of C.M.

Adam, Charles.
Bennett, Charles.
Brown, Charles Robert.
Craig, George Alex.
Crombie, John Mann.
Drury, Charles D. H.
Gunn, John S.
Hay, James.
Ironside, James.
King, Henry Kirwan.
Matheson, Farquhar.
Muil, William.
Philip, James Allan.
Philpots, Edward Payne.
Pickburn, Thomas James.
Quinnell, Richard James.
Robb, John.
Simpson, George Alex.
Skinner, Stephen.
Smith, Francis Wm.
Smith, Joseph Hume.
Strahan, Alexander B.
Thomas, John Lewis.
Timmins John A. James.
Tulloch, David.
Walker, William Abram.
Williams, Albert.
Willock, Richmond C.
Wilson, Alexander.
Wood, Alexander.

Of the above-mentioned candidates, Charles Adam, James Allan Philip, John Robb, and George Alex. Simpson received their degrees in Medicine and Surgery with highest academic honours. At the same time, Robert Macpherson was certified as having passed all the examinations, and is entitled to receive degrees on his attaining the necessary age. And at the late Graduation term, the following were declared to have passed part of their examinations:—

Allan, Hector.
Anderson, William.
Beattie, George W.
Catto, Robert.
Cullen, James.
Davidson, John.
Dewar, James.
Duff, George Skene.
Duncan, James.
Ellis, Henry V.
Grant, Charles D.
Jotham, George W.
Letters, Patrick.
Merson, John.
Mitchell, Patrick.
Morison, George.
Munro, Alexander B.
Orchard, James S.
Orchard, Thomas N.
Parkinson, John T.
Simpson, William.
Sinclair, David.
Sutherland, James.
Thomson, George.
Thomson, John William.
Wattie, Charles.
Yeats, William.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 6, 1868:—

Abrath, Gustavus Adolphus, M.D. Heidelberg, Sunderland.
Allbutt, Henry Arthur, Leeds.
Aldrich, Frederick Edward, Mildenhall, Suffolk.
Marsh, John Wilford, Wickhambrook.
Milligan, William, Buxton.
Rawlings, William Henry, Camelford.
Sewell, Allen, Twickenham.
Stephens, Richard Frederick, Penryn, Cornwall.

The following gentlemen also, on the same day, passed their First Examination:—

Atkins, Francis Day, Guy's Hospital.
Bower, Augustus Edwd., King's College Hospital.
Clark, Andrew, University College Hospital.
Cotterill, Alfred, King's College Hospital.
Etheridge, George Ernest F., St Bartholomew's Hospital.
Gibbings, Alfred Thomas, King's College Hospital.
Hobley, Simon Halford, King's College Hospital.
Lloyd, William Howell, Guy's Hospital.
Prigg, Frederick, St. George's Hospital.
Simon, Arthur Chas., St. Bartholomew's Hospital.
Wearne, Walter, Westminster Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CLAYTON, OSCAR, M.D.—Extra Surgeon-in-Ordinary to His Royal Highness the Prince of Wales.

NAVAL AND MILITARY APPOINTMENTS.

5TH FOOT.—Staff Assistant-Surgeon Charles Frederick Pollock, M.B., to be Assistant-Surgeon, *vice* Charles Stratherne Close, appointed to the Staff.

75TH FOOT.—Staff Surgeon William Ramsay, M.D., to be Surgeon, *vice* Joseph Coleman Hornsby Wright, whose appointment, as stated in the *Gazette* of June 26, has been cancelled.

84TH FOOT.—Surgeon Patrick Joseph Clarke, having completed twenty years' full-pay service, to be Surgeon-Major under the provisions of the Royal Warrant of April 1, 1867.

BIRTHS.

CROCKER.—On August 1, at Horfield, near Bristol, the wife of Surgeon-Major Crocker, the Buffs, of a son.

PIKE.—On August 8, at Weyhill, Hants, the wife of Thelwell Pike, M.D., of a daughter.

SHELDON.—On May 4, at Tenterfield, New South Wales, the wife of William Sheldon, M.D. Edin., of a daughter.

TURNER.—On August 8, at Ryde, Isle of Wight, the wife of W. J. F. Turner, M.R.C.P.E., of a daughter.

MARRIAGES.

ARCHER—SATCHELL.—On August 3, at St. Luke's, Camden-road, Edmond Archer, formerly House-Surgeon at St. Bartholomew's Hospital, to Rosa, third daughter of the late Richard Satchell, of Hilldrop-crescent.

BRENAN—DOWSE.—On August 4, at the Cathedral, Plymouth, Henry Patrick Brenan, R.N., H.M.S. *Buzzard*, youngest son of the late Dr. Thomas Brenan, R.N., of St. Edward's, Southsea, to Catherine Caroline Fanny, second daughter of Richard Dowse, M.D., Inspector-General Army Medical Department. No cards.

BUCKNILL—MORRIS.—On August 6, at the parish church, St. Leonard's, John Townsend Bucknill, son of J. C. Bucknill, M.D., F.R.S., of Hillmorton Hall, Rugby, to Catherine Raworth, daughter of W. R. Morris, Esq., of Silverlands, St. Leonard's.

CARTER—HUNTON.—On August 5, at the parish church, Richmond, Yorkshire, Thomas Carter, Physician and Surgeon, to Eleanor Elizabeth, only daughter of James Hunton, solicitor, of the same place.

GRANT—LORRAIN.—On August 4, at St. Thomas's Episcopal Chapel, Edinburgh, Alexander Grant, Esq., C.E., to Dora Scott, daughter of the late William Buckham Lorrain, M.D., Hongkong.

STAMPER—WILLS.—On August 3, at St. Anne's, Highgate-rise, James Fenton Stamper, M.D., of Pembroke Dock, to Priscilla Paddon, second daughter of the late Rev. Jas. Wills, of Basingstoke, formerly Adjutant Royal Horse Artillery. No cards.

WOSTENHOLM—RUNDLE.—On August 4, at Alverstoke Church, Hants, George Wostenholm, Esq., of Kenwood-park, Yorkshire, to Eliza Mara (Lizzie), second daughter of William John Rundle, M.D., of Audrey House, Gosport, Hants. No cards.

DEATHS.

ALLAN, AGNES MAUDE, fourth daughter of Dr. Allan, at 23, Milner-square, Islington, N., on August 5, in her 21st year.

BAILLIE, MATTHEW THOMAS, eldest son of Dr. Thomas Bisset Baillie, of Victoria, Vancouver's Island, at Islay, Peru, on June 12, aged 25.

GARRINGTON, JANE CATHERINE, wife of William H. Garrington, Esq., J.P., and Coroner for the Borough of Portsmouth, at 6, Queen's-place, Southsea, on August 3.

LANGDALE, HENRY, late of Green Hammerton, near York, on August 10, at Scarborough.

MILLAR, JOHN, M.D., late of Enfield, at his residence, Carnoustie, N.B., on August 9, in his 70th year. Friends at a distance will please accept this intimation.

PEEBLES, MARY, widow of the late John Home Peebles, M.D., on August 6, at Edinburgh, aged 54.

PERRY, ELIZABETH ANNE, wife of John G. Perry, Esq., one of H.M.'s Inspectors of Prisons, at 12, Westbourne-street, Hyde-park-gardens, on August 10.

PORTER, HENRY, M.D., at Peterborough, on August 11, aged 31.

RAMSBOTHAM, JOHN H., M.D., at 16, Park-place, Leeds, on August 5.

SHELDON, MARY EMILY CHARLOTTE, the wife of William Sheldon, M.D. Edin., and daughter of Peter Favene, late of Sydney, at Tenterfield, New South Wales, on May 9, aged 21.

SPENCER, RICHARD, F.R.C.S.L., formerly Surgeon to the 21st Light Dragoons, and twenty years in the service at the Cape of Good Hope and in India, at his residence, Fonthill, Gifford, Wilts, on August 6, in his 91st year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

APPOINTMENTS.

Barnstaple Union.—F. R. Fairbank, M.D., to the Eleventh District.

Bury St. Edmunds Incorporation.—Francis W. Clarke, M.R.C.S., L.S.A., to the First, Second, and Third Districts.

Keynsham Union.—Jacob Ashley, M.R.C.S., L.S.A., to the Bitton District.

Nottingham Union.—Wm. D. Dunn, M.R.C.S. Eng., L.R.C.P. Edin., to the Workhouse.

Saffron Walden Union.—George Samuel Watson, M.R.C.S. Eng., L.S.A., to the First District.

St. Thomas Union.—John Hill Gibbs, M.D., M.R.C.S. Eng., L.A.C. Lond., to the Topsham District.

Thingoe Union.—James Henry, M.D. Glas., M.R.C.S. Eng., to the Seventh District.

Westminster Union.—Edward Sandwell, M.R.C.S. Eng., L.R.C.P. Edin., to the Eastern District.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The Library will be closed from Monday, August 17, to Saturday, September 12, both days inclusive.

DURING the American war a vast number of false beards, moustaches, and whiskers were sent out to the United States, and a steady demand continued until the peace.—*Daily News.*

FIVE THOUSAND SEVEN HUNDRED AND TEN persons drank at the London-bridge drinking fountain on Thursday, the 5th inst.

PROFESSOR EDWARD ZEIS.—This eminent Surgeon, Professor in the Dresden University and Senior Surgeon of the State Hospital, recently died in consequence of disease of the heart. His writings on Plastic Surgery are highly esteemed.

KISSINGEN IN 1867.—Hofrath Dr. Erhard, in an article in the *Deutsche Klinik*, No. 27, states that in the season (May to September) of 1867 there were 7408 persons under treatment at this celebrated watering-place, and 2015 visitors passing through—a total of 9423. Of the 7408 "Curgästen," 5183 came from various parts of Germany, and 2225 were foreigners. Of these last 726 were Russians, 521 English, 235 French, 155 North Americans, and 141 Dutch.

THE CATTLE DISEASE IN RUSSIA.—The *St. Petersburg Journal* has the following telegram, dated from Grunbinnen, August 2:—"Dr. Richter, the Veterinary Departmental Surgeon, has just returned from the journey he made through Russia. He states that the cattle are not affected by the plague, but by an inflammation of the spleen. This disease is wide-spread. At Rittower it carried off 500 head of cattle and 100 horses. In several instances men have been attacked by a similar disorder. On the frontier cantons five persons have already died from it.

BRITISH ASSOCIATION AT NORWICH.—It has been for some time past generally known that an unusual influx of foreign *savants* is expected at Norwich next week. The following are some of the names most intimately connected with our own Profession:—Dr. Carl Vogt and Dr. Appia, from Geneva; Professors Béhier and Broca, from Paris; Drs. Laage, Boorgaard, and Heinsius, of Leyden; Professor Favre, of Lyons; Professor Sartorius Walterhausen, of Halle; Professor Nilsson, of Sweden, etc., etc. Several of these distinguished Professors have important communications to make, and will take an active part in the proceedings of this, the thirty-eighth, annual meeting, which promises to be one of the most brilliant in the annals of the Association. The first general meeting will be held on the 19th instant, at 8 p.m., when his Grace the Duke of Buccleuch will resign the chair, and Dr. Hooker, F.R.S., will assume the presidency and deliver an address. The International Prehistoric Society will also hold its meetings at Norwich during the same week.

THE amount of work which will here pass muster for a fair day's toil is far beyond what is expected of a man in Great Britain. This is no country for foreign idlers to come to. The Americans hate physical exertion themselves, and are willing to pay Englishmen, Irishmen, Germans, or anybody else to come here and do the hard work for them, but they will take great care to get as much out of the people they pay as can be either wheedled or forced from their bones. I have been very much struck here by the fact of the evident dislike of hard work which animates the real American. If I have noticed a man in a workshop or in the open air driving at his work with a will and an apparent relish, as is so commonly seen in England, I have said to myself, that man's grandfather was not an American citizen; and upon inquiry I have seldom found that I was mistaken. The dry climate may have something to do with it, for I have observed elsewhere that dry climates do not seem conducive to an appetite for manual labour, but they seem to make people more nervously active than the denizens of a damper region.—*English Workingman's Letter in Daily News.*

THE POOR-LAW BOARD AND THE MEDICAL OFFICERS OF MILE-END.—The Guardians of Mile-end Old Town are in correspondence with the Poor-law Board on behalf of their Medical officers. Having made new arrangements with regard to vaccination fees, more frequent visitation of cases, and residence within the allotted district, which have tended to curtail the Medical officers' salaries and to increase their duties, the Guardians lately passed a resolution by which they raised the salaries of their Medical officers from £200 to £250 per annum. But the Poor-law Board have refused to sanction the increase, alleging that they do so as custodians of the metropolitan common fund. The Guardians, in their reply to the Poor-law Board through their clerk, draw their arguments from this same common fund, of which the Poor-law Board profess to be such impartial distributors. They say they find that in Marylebone the Medical staff costs £1660, in Lambeth £1405, in Greenwich £1160, in St. Pancras £1045, in Bethnal-green £920, in Shoreditch £860, and in Islington £835, while in Mile-end (with a population of 85,000) the Poor-law Commissioners propose to limit the salary of three efficient officers to £600 only. Moreover, the Medical officers at Mile-end are required to give the whole of their time to the duties of the office, the system of prohibiting from private practice having been found the most efficacious. The Guardians urge, with truth, that under such circumstances £250 a year cannot be considered excessive for a qualified Medical gentleman. If the resolution prohibiting private practice were repealed, it would be impossible for the officers to pay due attention to parish cases, and a larger staff would be required, as in other parishes, at a greatly increased cost. The Guardians therefore trust that the Poor-law Board will confirm the increase or receive a deputation on the subject.

CHOLERA AT PARIS IN 1865-6.—According to the statistics derived from the Prefecture of Police, from the time of the first fatal case of cholera, August, 1865, to that of the last, January, 1866, there occurred 3916 deaths *à domicile* and 2027 in Hospital, total 5943. The twenty-four civil and six military Hospitals admitted 4355 cases, and of these 2279 were cured and 2027 died, forty-nine remaining in the Hospitals who afterwards recovered. The mortality was 32·08 per cent. in September, 46·78 in October, 27·63 in November, 26·95 in December, and 8·33 in January.—*Journal de Statistique*, June.

CASE OF EARLY PREGNANCY.—Dr. Horwitz was called to a pregnant girl who had scarcely reached her 12th year, and of whose age there could be no doubt. The menses first appeared during her 10th year and continued regularly. She went through her pregnancy very comfortably. The pelvis was well formed and capacious. The labour proceeded very favourably, and terminated in ten hours with the birth of a strong living male child. She went on very well, and had a plentiful secretion of milk. References are given to other remarkable cases of the kind on record.—*Petersburg Med. Zeitschrift*, 1867, No. 9.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Treutler's interesting case shall appear as soon as possible.

Birmingham.—Ph. D., *not* M.D.

Dr. A. Allison is thanked. His very valuable paper shall come in immediately.

Dr. Nelson.—The correspondence shall appear.

Rara Avis.—For zoology, read Dallas or Milne Edwards. For botany, read Asa Grey, Balfour, Henfrey, Bentley, Silver, or Le Maout's admirable work in French. For natural philosophy, read Brooke or Ganot. For comparative anatomy, read Huxley or Rymer Jones.

Demonstratio ad Oculos.—The Prussian military Medical authorities have issued to the private soldier a handkerchief to serve, instead of the roller formerly issued, as a primary bandage for wounds. The method of application is depicted in coarse engravings printed on the handkerchief. The mode of using gun-barrels for splints is also shown. The idea of making a handkerchief the vehicle of information is a good one.

K.—It is a very delicate question. Generally speaking, the more fees for visits and consultations the better for the Profession; but for the sake of the patient's pocket the Physician called in in consultation on an emergency, unless specially desired to act otherwise, retires when the alarming symptoms subside which caused him to be consulted.

A Correspondent is thanked for his commentary on the life of Dr. Elliotson. We regret that the crowded state of our columns keeps it out, and likewise that his omission to send his name has prevented us from communicating with him personally. We have always upheld the doctrine that the phenomena of mesmeric sleep are one thing, the explanation another—the sleep real enough, although the assumption of a special force such as "mesmerism" or "magnetism," can be disproved by analysis of the many cases brought forward to support it. We well remember the great discussion on painless operations at the Royal Medical and Chirurgical Society, and remarked at the time with regret the line of argument which some men took who certainly would have spoken otherwise in these days of psychology. Dr. Marshall Hall dogmatised, and pronounced the mesmeric insensibility incompatible with the laws of the excito-motor nervous system. Sir B. Brodie bluntly called the thing an imposture. Dr. Moore said the facts related ought to be authenticated by affidavit before the Lord Mayor. The only man who kept his head, and treated the matter philosophically, was Dr. Thomas Mayo, late President of the Royal College of Physicians. But, for all this, the real conditions under which mesmeric sleep is produced, and the almost miraculous galaxy of rascality with which the few honest and conscientious believers have been surrounded, are unsatisfying in themselves, and compel us to banish mesmerism from the list of justifiable proceedings.

Erratum.—In the report of Obstetrical Society, *Med. Times and Gaz.*, August 1, the sentence, p. 137, col. 1, beginning "Dr. Ogle," is a continuation of the abstract of Dr. Barnes's paper, and not a speech by Dr. Ogle.

The President of the Medical Board, Cape Town, is thanked.

Alpha.—In consequence of the absence of some of our staff, we are forced to ask "Alpha" to repeat his question.

Medical Attendance on Men engaged in Public Works.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly inform me what is the usual remuneration in England given to Surgeons employed in attendance on men engaged at public works, the class of men being chiefly such as are employed in constructing railways? I should also be glad to know if it is customary in any district to expect attendance on the wives and families besides, in consideration of the weekly sum stopped off the men's wages; and if so, what the weekly payment usually is. I am, &c.

A Public Works Surgeon.

Over-population.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If my memory serve me, the noble Viscount, the President of the Dialectical Society, who has such remarkable notions about "prevention of surplus population," had the happiness not very long ago to become the father of twins. Perhaps he does not approve of "double, double toil and trouble," and wishes to take precautions against the recurrence of so serious an accident. An eminent divine of this city is reported to have behaved very differently under similar circumstances, and to have chosen for the Sunday after the event a hymn beginning thus:—

"Not more than others I deserve,
Yet God has given me more."

Of a truth, what is one man's meat is another's poison.

London, August 8. I am, &c. Cœlebs (in search of a wife).

The London Dialectical Society.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to the paragraph in the *Medical Times and Gazette* of the 8th inst. concerning this Society, I beg to inform you that the article is based upon an unauthorised and inaccurate report of the proceedings to which it refers. It is proper that it should be understood that the Society is not committed to any views whatever; it consists of persons holding varied and diverse opinions upon the leading questions in ethics, politics, metaphysics, and theology. It is established for the purpose of discovering, by means of the dialectic method, the truth upon these and other important subjects, and, in seeking this desirable end, it gives its members the opportunity of comparing their opinions, free, as far as possible, from the disturbing influences of passion and prejudice.

I am, &c. D. H. Dyte, Hon. Sec.

32A, George-street, Hanover-square, W., August 10.

*** How can the dialectic method be applied to the discovery of remedies for any state of things, until it be shown whether that state require a remedy?

COMMUNICATIONS have been received from—

A Public Works Surgeon; K.; Mr. Dyte; Dr. Mackay; Dr. J. B. Bond; Dr. Muspratt; Cœlebs; Mr. Reading; Mr. J. S. Brazier; Dr. A. M. Garrington; Mr. Wheatley; Dr. Stewart; Mrs. Baines; Mr. Copney; Dr. MacCormack; Dr. Nelson; Mr. Ireland; Dr. Tuke; Mr. Wilders; Mr. Sergeant; Dr. Day; Mr. J. Chatto; Mr. E. Bellamy; Dr. Hughlings Jackson; Mr. A. Poland; Dr. Churchill; Dr. Oppert; Mr. Fairbank; Mr. Gosden; Dr. Carter; Dr. Coales.

BOOKS RECEIVED—

Fauvel on Cholera—Depautaine on Epidemics—Water; its Impurities and Purification—Dublin Quarterly Journal of Medical Science—Nichol's Woman's Work in Water Cure—Southey and Willett's Statistical Tables of Patients at St. Bartholomew's Hospital—American Journal of Insanity—Winslow's Obscure Diseases of Brain—Begbie's Early History of Anatomy.

NEWSPAPERS RECEIVED—

Indian Medical Gazette, vol. iii. No. 7—Hampshire Telegraph—Medical Press and Circular—L'Union Médicale—Scotsman.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 8, 1868.

BIRTHS.

Births of Boys, 1065; Girls, 960; Total, 2025.
Average of 10 corresponding weeks, 1858-67, 1826·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	795	750	1545
Average of the ten years 1858-67	693·7	664·0	1357·7
Average corrected to increased population..	..	..	1493
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	2	8	..	2	9	52	2
North ..	618,210	1	5	6	3	7	15	61	5
Central	378,058	..	3	11	..	3	5	30	1
East ..	571,158	1	14	10	4	5	12	51	0
South ..	773,175	..	12	15	1	17	12	100	15
Total ..	2,803,989	4	36	50	8	39	53	294	29

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·764 in.
Mean temperature	69·8
Highest point of thermometer	90·5
Lowest point of thermometer	52·8
Mean dew-point temperature	56·9
General direction of wind	E. & S.W.
Whole amount of rain in the week	0·14

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 8, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Aug. 8.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Aug. 8.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2025	1441	1545	90·5	52·8	69·8	0·14	14
Bristol (City) .	167487	35·7	108	75	*77	..	..	..	..	..
Birmingham (Boro')	352296	45·0	238	171	253	89·6	52·6	68·0	1·63	165
Liverpool (Borough)	500676	98·0	275	290	333	88·7	56·5	67·6	0·56	57
Manchester (City) .	366835	81·8	256	208	*283	..	..	..	..	..
Salford (Borough) .	117162	22·7	76	59	87	91·3	54·1	68·6	0·19	19
Sheffield (Borough).	232362	10·2	162	122	159	87·9	53·8	68·8	0·25	25
Bradford (Borough)	108019	16 4	84	55	86	..	..	..	..	..
Leeds (Borough) .	236746	11·0	151	120	187	90·0	48·5	66·8	0·02	2
Hull (Borough) .	108269	30·4	75	50	90	85·0	50·0	65·6	0·00	0
Nwestl-on-Tyne, do.	127701	23·9	85	68	64	78·0	55·0	63 9	0·25	25
Edinburgh (City) .	177039	40·0	108	85	102	87·7	53·0	66·7	0·90	91
Glasgow (City) .	449868	88·9	320	262	311	87·2	52·8	66·8	0·52	53
Dublin (City and some suburbs) .	319985	32·8	159	157	144	83·9	47·0	64·1	0·16	16
Total of 14 large Towns . . .	6391080	34·7	4122	3163	3721	91·3	47·0	67·0	0·42	42
					Week ending Aug. 1.	Week ending Aug. 1.				
Vienna (City) .	(1863) 560000	..	..	..	295	..	..	68·9†	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·764 in. The barometrical reading decreased from 30·07 in. at the beginning of the week to 29·52 in. on Friday, August 7. The general direction of the wind was E. and S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 67·6°.

APPOINTMENTS FOR THE WEEK.

August 15. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

17. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

18. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

19. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

21. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ADDRESS ON THE

RELATION OF FOOD TO WORK DONE BY THE BODY;

AND ITS

BEARING UPON MEDICAL PRACTICE.

DELIVERED AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT OXFORD,

By the Rev. S. HAUGHTON, M.D., F.K.Q.C.P., F.R.S., Fell. Trin. Coll., etc.

(*Concluded from page* 174.)

THE foregoing observations and calculations were made in the month of July, 1866, but I did not then publish them, as I found afterwards that I had been anticipated by Dr. Fick and Dr. Wislicenus, of Zurich, in a paper published in June in the *Philosophical Magazine*, on the urea excreted during an ascent of the Faulhorn. Professor Frankland, in a paper published in the same journal in September, 1866, corrected some erroneous reasoning that found its way into Fick and Wislicenus's paper, and further supplied, from direct experiment, the digestion coefficient of proteine, which had been obtained by me from calculation. The actual value of this important constant was found by him to be—

Actual value of digestion coefficient of proteine .	4·3155
Calculated value	4·8375

My only object in now publishing an account of the independent experiment and calculation made by myself, is to confirm the certainty of the important fact, first proved experimentally by Fick and Wislicenus, that the force due to the urea excreted in a given time is not sufficient to provide the actual work that may be done by the muscles in the same time.

Liebig and his followers, misled by a preconception of the simplicity of nature, assigned to nitrogenous food the duty of providing the force necessary for the production of muscular work, by supplying the waste of muscular tissue; while they supposed the farinaceous and fatty foods to provide the amount of animal heat required by the body.

The opponents of Liebig have fallen into the opposite error, and deny that nitrogenous food contributes any portion of the force employed in muscular work.

The truth, as is usual, lies between the two extreme hypotheses, and we are now compelled to admit that a given development of force, expressed in animal heat, muscular work, and mental exertion, may be the effect of several, perhaps many, supposable supplies of digested food, farinaceous, saccharine, fatty, and albuminous.

Just as a given algebraical function may be equated to a given constant, by the use of a certain definite number of values of its variable quantity, so may a given effect of work in the animal body be produced by certain definite, though very different, combinations of various kinds of food, the digestion of which follows each its own law, and developes its own amount of force. The number of roots in our equation of life increases the difficulty of solving it, but by no means permits the acceptance of the lazy assumption that it is altogether insoluble, or reduces a sagacious guess to the level of the prophecy of a quack.

Lavoisier supposed in his earlier investigations that animal heat was developed by the combustion of carbon and hydrogen in the lungs, just as in earlier times it was supposed to be produced spontaneously in the heart, which was imagined to be so hot as even to burn the hand that should imprudently venture to touch it.

In like manner, Liebig and his followers supposed the muscular work to be developed in the substance itself of the muscles that were its instruments.

Both of these doctrines are now justly repudiated by physiologists, and the view proposed in 1845 by Dr. Mayer, of Heilbronn, and recently developed with much ability by Mr. C. W. Heaton, of Charing-cross Hospital, in the *Philosophical Magazine* for May, 1867, that the blood itself is the seat of all the chemical changes that develope force in the body, has gained favour among physiological chemists, and also met with acceptance among practical clinical observers.

Thus the human mind revolves in cycles, and the Physicians of the nineteenth century are preparing to sit at the feet of Moses, and learn that the blood of an animal really constitutes its life, while South African theologians reject his authority, because he happened to confound a Rodent with a Ruminant. (a)

No two classes of animals can well differ more from each other than the cats and ruminants, one of which is intended by nature to eat the other. They differ in all respects as to food, the cats requiring a supply of fresh meat and blood for their health, and the ruminants being exclusively vegetable feeders; yet in both classes we find a great development of muscular power and of rapid action of the muscles, qualities alike necessary to the pursuer and to the pursued. There can be no doubt that muscular work is developed in the cats from the combustion of flesh, and in the ruminants mainly, if not exclusively, from farinaceous food. It is, however, worthy of remark that the muscular qualities developed by the two kinds of food differ considerably from each other. The hunted deer will outrun the leopard in a fair and open chase, because the work supplied to its muscles by the vegetable food is capable of being given out continuously for a long period of time; but in a sudden rush at a near distance the leopard will infallibly overtake the deer, because its flesh food stores up in the blood a reserve of force capable of being given out instantaneously in the form of exceedingly rapid muscular action.

In conformity with this principle, we find among ourselves an instinctive preference given to farinaceous and fatty foods, or to nitrogenous foods, according as our occupations require a steady, long-continued, slow labour, or the exercise of sudden bursts of muscular labour continued for short periods. Thus chamois hunters setting out for several days' chase provide themselves with bacon fat and sugar; the Lancashire labourers use flour and fat, in the form of apple dumplings; while the Red Indian of North America almost transforms himself into a carnivore, by the exclusive use of flesh food; he sleeps as long, and can fast as long, as the puma or jaguar, and possesses stored up in his blood a reserve of force which enables him, like a cat, to hold his muscles for hours in a rigid posture, or to spring upon his prey, like a leopard leaping from a tree upon the back of an antelope.

If the preceding view of the muscular qualities developed by the two kinds of food be correct, important inferences suggest themselves as to the food that should be employed in relation to several kinds of work. Of these inferences, I shall select two examples:—

1. The nurses of one of our Dublin Hospitals were formerly fed chiefly upon flesh food and beer, a diet that seemed well suited to their work in ordinary times, which was occasionally severe, but relieved by frequent intervals of complete rest. Upon the occasion of an epidemic of cholera, when the Hospital duties of the nurses became more constant, although on the whole not more laborious, they voluntarily asked for bacon fat and milk, as a change of diet from the flesh meat and beer; this change was effected on two days in each week with the best results as to the health of the nurses, and as to their power of discharging the new kind of labour imposed upon them.

2. I have been informed, on competent authority, that the health of the Cornish miners breaks down ultimately, from failure of the action of the heart and its consequences, and not from the affection of the lungs called "miner's phthisis." The labour of the miner is peculiar, and his food appears to me badly suited to meet its requirements. At the close of a hard day's toil, the weary miner has to climb by vertical ladders through a height of 100 to 200 fathoms before he can reach his cottage, where he naturally looks for his food and sleep. This climbing of the ladders is performed hastily, almost as a gymnastic feat, and throws a heavy strain (amounting from one-eighth to one-quarter of the whole day's work) upon the muscles of the tired miner during the half-hour or hour that concludes his daily toil. A flesh-fed man (as a Red Indian) would run up the ladders like a cat, using the stores of force already in reserve in his blood; but the Cornish miner, who is fed chiefly upon dough and fat, finds himself greatly distressed by the climbing of the ladders—more so indeed than by the slower labour of quarrying in the mine. His heart, over-stimulated by the rapid exertion of muscular work, beats more and more quickly in its efforts to oxidate the blood in the lungs, and so supply the force required. Local congestion of the lung itself frequently follows, and lays the foundation

(a) No reasonable person can fail to perceive the ignorance of the great Law-giver, who will apply to him the test first proposed by Swift for Homer; Moses, like the author of the Iliad, was totally unacquainted with the discipline and doctrines of the Church of England.

for the affection, so graphically, though sadly, described by the miner at 40 years of age, who tells you that "his other works are very good, but that he is beginning to leak in the valves."

Were I a Cornish miner, and able to afford the luxury, I should train myself for the "ladder feat" by dining on half a pound of rare beefsteak and a glass of ale from one to two hours before commencing the ascent.

The excretion of nitrogen by the cats and ruminants is very different, as might be expected from their food. I have ascertained that the urea discharged by a Bengal tiger and a sheep daily is as follows:—

Bengal tiger . . . 4375 grs. of urea.
Sheep . . . . 256 „

It is worthy of remark, and serves to throw light on the meaning of the excretion of nitrogen from the body, that causes but slightly connected with muscular exertion in the ruminants increase amazingly the excretion of urea. Thus I have found the following excretion of urea from a ram during the rutting season:—

Ram (rutting season) . 1493 grs. of urea.

This amounts to a sixfold increase of urea, which cannot possibly be accounted for by the food consumed at the time, but requires us to assume a certain storing-up of force, represented by nitrogenous compounds, which has been going on for a considerable period previous to the rutting season. A similar and equally remarkable storing up of phosphates and carbonates takes place, previous to the rutting season, in the ruminants that shed their horns, which in the *Cervus megaceros* often weigh 90 lbs.

These remarkable phenomena remind us of the maxim of the wise Hippocrates, who recommends moderation in the use of the gifts of the Golden Venus, as well as in those of Ceres and Bacchus—

πόνοι, σιτία, ποτὰ, ὕπνος, ἀφροδίσια μέτρια,

with which may be compared its converse in the Latin proverb—

"Sine Cerere et Baccho friget Venus."

Application of Theory to Diseased Conditions of Body.

The relation of food to work, complicated enough in health, becomes more so in disease, and the problem to be solved by rational theory becomes still more difficult. I cannot attempt even to sketch an outline of this part of my subject, considered in general, but shall content myself with asking your attention to three remarkable examples of disease which illustrate the principles I have attempted to lay down.

These diseases are—

A. Typhus Fever.
B. Cholera Asiatica.
C. Diabetes mellitus.

A. *Typhus Fever.*—In typhus fever a prominent symptom is the remarkable elevation of temperature, accompanied by an increased excretion of urea and carbonic acid by the kidneys and lungs, indicating (as no food is taken) an increased morbid metamorphosis of the blood and tissues. The temperature frequently rises to 104° Fahr., representing an increase of upwards of 5° Fahr. above the normal temperature.

If we knew the cause of this increase of temperature, or rather of the increased metamorphosis of which it is the sign, we should know the cause of typhus fever, and learn to combat the disease on rational grounds. At present the cause is unknown, and therefore the Physician is forced to treat the symptoms as they appear, instead of attacking the cause of the disease. Let us examine for a moment the terrible significance of the symptoms.

Your patient lies for nine or ten days, supine, fasting, subdelirious, the picture of weakness and helplessness; and yet this unhappy sufferer actually performs, day by day, an amount of work that might well be envied by the strongest labourer in our land.

The natural temperature of the interior of the body is 100° F., while the temperature of the corresponding parts in typhus fever is at least 105° F. This seems at first sight a small increase—only 5 per cent. of the whole; but it is in reality 2½ times as great as it appears, and actually amounts to 12½ per cent., or *one-eighth* part of the total animal heat. For the total quantity of heat given out by the heated body is proportional (from Newton's law of cooling) to the elevation of its temperature above the temperature of equilibrium, towards which it tends. If we suppose this equilibrium temperature to be 60° F., then the quantities of animal heat given out in typhus fever and in health will be in the proportion of 45 to 40, showing that the animal heat of typhus exceeds that of health by *one-eighth* of its amount.

We have already seen that the work due to animal heat would lift the body through a vertical height of eight miles per day; and it thus appears that an additional amount of work, equivalent to the body lifted through one mile per day, is spent in maintaining its temperature at fever heat.

If you could place your fever patient at the bottom of a mine, twice the depth of the deepest mine in the Duchy of Cornwall, and compel the wretched sufferer to climb its ladders into open air, you would subject him to less torture, from muscular exertion, than that which he undergoes at the hand of Nature, as he lies before you, helpless, tossing, and delirious, on his fever couch.

The treatment of this formidable disease in former times consisted of purging, vomiting, and bleeding the patient, with the view of eliminating an imaginary poison, and so helping nature to terminate the disease.

In modern times, thank God, the Physician either does not interfere at all, or adopts the rational process of retarding the disintegration of the tissues consumed to supply the fever heat, by furnishing in their stead fuel, in the form of wine and beef-tea, sufficient to maintain the increase of temperature imperiously required. This practice may be justly considered rational, because the condition of the circulation admits of its application, and it is considered good, because it has been rewarded with success in the hands of the skilful clinical Physician. In concluding this sketch of the prominent symptom of typhus fever, and as an illustration of the eagerness with which every possible combustible in the body is made use of, I may mention, on the high authority of Dr. Stokes, of Dublin, that the very urea excreted by the kidneys is not permitted to leave the body without first paying its tax to fever, by being burned into carbonate of ammonia, thus rendering the urine of an advanced case of bad typhus fever eminently alkaline.

B. *Asiatic Cholera.*—This remarkable disease presents, as every one knows, three distinct stages; viz.:—

1. The premonitory stage of diarrhœa.
2. The stage of collapse.
3. The stage of consecutive fever.

The stage of collapse exhibits the following symptoms:—Vomiting or purging, muscular cramps, suppression of bile and urine, lowering of body temperature to 95° F., extreme prostration of strength, extremities pulseless, and face Hippocratic.

When death occurs during collapse, the following symptoms are usually found on careful examination of the corpse:—The temperature rises to 103° F., the muscles give out their characteristic susurrus CCC, and exhibit spontaneous movements, the whole train of symptoms producing the effect of a ghastly attempt at resurrection.(b)

In this disease we have phenomena respecting animal heat, the very reverse of those found in typhus fever; the body performing one vertical mile short of its daily work, instead of one mile in excess. The prostration of strength resulting from this deficient combustion is so great, that death is often caused by bringing the patient to Hospital in a cab instead of upon a stretcher, by his walking up a dozen steps into his ward, and sometimes even fatal results have followed a sudden effort to sit up in bed to vomit.

The rise of temperature after death, and the continuance of muscular susurrus and motion, tend to prove that the impeded circulation, which is the prominent symptom in cholera collapse, is due to constriction (probably vasomotor nervous) of the capillaries, in consequence of which the muscles are deprived of their supply of freshly oxidised blood, the result of which is necessarily contraction and cramp, which produces the excessive agony that characterises this disease.

All authorities on cholera, whether their object be to "impede" or to "assist" nature, are agreed that medicines, whether astringent or purgative, are not only useless, but dangerous, in the stage of collapse.

It is useless to give alcoholic fuel to restore the loss of animal heat, for there is no circulation to cause the oxidation of the hydrocarbons.

It is equally useless and more dangerous to give opium, to check the remaining purging that exists; for if vomiting have ceased, your acetate of lead and opium pills lie as if in the

(b) It is startling, on making a post-mortem examination of a cholera patient alone, and by candle-light, to witness, on the first free incision of the scalpel, the hand of the corpse rise slowly from its side and place itself quietly across its breast.

stomach of a corpse, and at the termination of collapse your patient enters upon the consecutive fever with perhaps a dozen grains of opium in his stomach, placed there like an explosive shell by your ill-timed zeal, and rapidly passes into a comatose condition, from which he never for a moment rallies. His death is always accredited by the registrar to cholera morbus, and not to opium.

Purgatives and emetics(c) in cholera collapse effect the same object as opium, but with greater rapidity. In the stage of blue collapse the chances of life and death are almost exactly equal, and the slightest additional loss of force turns the wavering beam on the side of death. The effects of a brisk purgative or emetic (if they act) upon a patient unable to climb a dozen steps or sit up for a quarter of an hour without fatal syncope, may be easily imagined; and the use of them cannot be justified by any arguments borrowed from right reason.

A remarkable though transient improvement takes place in collapse by the injection of warm water (brought to the specific gravity of serum by the addition of mineral salts) into the veins or bowels; the patient loses the cramps, feels that he is about to recover, speaks to his friends, and often transacts whatever business is necessary, but speedily falls back into collapse. The improvement in his condition is altogether due to the temperature of the fluid injected, which supplies for a brief period the deficient animal heat, permits a partial oxidation of the blood, restores the capillary circulation in the muscles, and so destroys their cramp; and, by supplying the deficient work required, removes for the moment the fatal prostration of strength. Any one who has witnessed the remarkable effects of warm liquids thus injected in cholera collapse must feel that recovery would be certain if the improvement could by any possibility be made permanent.

Our hopes for the future, as to the treatment of cholera, lie, as I believe, in the direction of supplying to the body directly its lost animal heat. I have witnessed the happiest results from an injection of warm salt water into the bowels, assisted by hand friction of the surface with turpentine and chloroform, and the application of bags of hot salt along the spine; in cases treated in this manner we may expect to witness cessation of muscular cramp, restoration of perspiration to the skin, with increase of capillary circulation, and finally, to reward our efforts, a return of the excretions of urine and bile; when these reappear, all vomiting and purging cease, and our patient is almost cured.

After recovery, the contrast between the cholera and fever patient is as great as it was during sickness. The fever patient has been overworked for nine or fifteen days without a suitable supply of food, and, when convalescent, experiences a complete exhaustion of strength that lasts for many weeks. The cholera patient, on the other hand, has been prevented from working by constriction of the capillary vessels, caused by the absorption of the cholera poison,(d) and feels, on recovery, much like a man that has been half drowned, while the fever patient resembles a man that has been half starved; the one is able to return to his work in the course of a few days, the other, only after the lapse of as many weeks.

There are two popular superstitions prevalent among Medical men respecting Nature, which yearly slaughter hecatombs of victims—viz., that Nature is simple in her operations and beneficent in her intentions: she is often both simple and beneficent, but at other times she is unquestionably both complex and malevolent.

An Egyptian fable informs us that the votaries of Goddess Nature were divided in opinion as to whether she was transcendently beautiful or hideously ugly; and that, in order to keep up this difference of opinion which suits her purpose, she always wears a thick veil over her face.

> "For, with a veil that wimpled everywhere,
> Her head and face were hid, that mote to none appear;
> That some do say was so by skill devised
> To hide the terror of her uncouth hue
> From mortal eyes that should be sore agrised;
> For that her face did like a lion show,
> That eye of wight could not endure to view;
> But others tell that it so beauteous was,
> And round about such beams of splendour threw
> That it the sun a thousand times did pass,
> Nor could be seen, but like an image in a glass."

Before trusting Nature in the matter of cholera, and proceeding to help her, it would be well to inquire whether she intends to cure the patient by her evacuations, or to put him into his coffin. For myself, I greatly mistrust her, and would wish to ask, previous to assisting her, whether she is really my mother or only my stepmother. Our experience in Dublin has shown that no more effectual mode of shortening life could be devised in cholera than the "eliminant" treatment; and it was accordingly abandoned as soon as tried in that city.

It is much to be regretted that an authority so deservedly held in high repute as that of Sir Thomas Watson can be now quoted in favour of the treatment of cholera by the maxim *similia similibus curantur*. So far as Dr. Watson has informed us, his change of opinion rests upon the statements of others, and not upon his own experience. He has suddenly become an advocate of the castor-oil, rhubarb, calomel, and eliminant treatment of cholera, and writes as follows:—

"When I last spoke on this subject in these lectures, I stated that the few recoveries which I had witnessed had all taken place under large and repeated doses of calomel, but I could not venture to affirm that the calomel cured them. At present, I am much disposed to believe that, by its cleansing action, the calomel may have helped the recovery; and after all that I have since seen, heard, read, and thought upon the matter, I must confess that in the event of my having again to deal with the disorder, I should feel bound to adopt, in its generality, the evacuant theory and practice."

Sir Thomas Watson omits to add that the cases here referred to were only six in number, of whom three died, and three recovered; which is exactly what might have been expected if he had not interfered at all.

Cholera from Bengal visits these islands, at intervals of about seventeen years, and it is much to be feared, that on its next outbreak hundreds of patients will be sacrificed, in obedience to the dogma that asserts it to be our duty to assist Nature.

C. *Diabetes mellitus.*—This disease furnishes us with one of our best proofs that all the chemical changes, by means of which work is produced, take place in the blood and not in the tissues of the body; and, at the same time, an examination of its phenomena explains satisfactorily the regimen and diet which has been found, by experience, most suitable to the diabetic patient. I shall illustrate the disease by a case which was placed under my control, by Dr. Stokes, some years ago.

A young man, aged 20, named Murphy, suffered from fever enteric?) in November, 1859, and, on recovering, became diabetic; he was admitted into the Meath Hospital in October, 1860, where he remained, under my observation, until his death on January 12, 1861.

He was allowed for nine weeks to eat as much as he liked of certain kinds of food, which were varied, week by week, to suit his wants, my object being to obtain, if possible, the natural constants of the disease undisturbed by external interference; the only medicine used by Dr. Stokes's order being opium, to produce sleep, and a little creasote occasionally to promote digestion. As the details of this experiment have been fully published, I shall confine myself to the final results. His food and excretions were analysed from week to week, so as to determine the total quantities of sugar-forming and urea-producing food, as well as the sugar and urea actually excreted.

During six of the nine weeks the sugar excreted was in excess of the sugar ingested, and the means of the daily excretion and ingestion of sugar were:—

Sugar excreted	9773 grs.
Sugar ingested	9321 ,,
Diff.	452 ,,

During two of the nine weeks of observation the urea excreted was in excess of the urea ingested, and the mean daily excretion and ingestion of urea were:—

Urea excreted	1182 grs.
Urea ingested	1349 ,,

The foregoing facts illustrate strikingly one of the prominent symptoms of diabetes—viz., the canine appetite—the quantity both of sugar-producing and urea-forming food consumed is more than double what is necessary to maintain a vigorous labourer in perfect health. An examination of the excretions explains the other prominent symptom of diabetes—viz., the complete prostration of strength in the patient, notwithstanding the great amount of food consumed.

In a state of health, food produces three excretions only—viz., urea, carbonic acid, and water; in diabetes the farina-

(c) When mustard is used, its conservative effects as a stimulant sometimes counteract its destructive effects as an emetic.

(d) Whatever this may be, its period of incubation is forty-nine hours; that of strychnine is twenty-two minutes.

ceous foods appear in the excretions as sugar, and not as carbonic acid and water; and the work necessary to maintain animal heat must be provided altogether at the expense of flesh food, which is the very form of food least fitted to maintain it.

The diabetic patient resembles a racing steamboat on the Mississippi whose supply of coal is exhausted, and whose cargo furnishes nothing better than lean pork hams to throw into the furnace to maintain the race. It cannot be wondered at that our poor patient, under such disadvantageous conditions, fails to keep in the front.

Let us compare together the minimum of work necessary to keep Owen Murphy alive with the work actually supplied to him by the food digested.

1. I have already stated that Dr. Ranke found 660 grms. of carbonic acid in the extreme fasting condition, when he weighed 67 kilos. Now, since

660 grms. = 10185·35 grs.
67 kilos. = 147·71 lbs.

we find 69 grs. per lb. of body weight as the minimum excretion of carbonic acid consistent with continued life.

This quantity of carbonic acid represents a work generated by its production that would lift its corresponding pound of body weight through a height of

$$69 \times \frac{6}{22} \times 8080 \times \frac{9}{5} \times \frac{772}{7000 \times 5280} = 5{\cdot}716 \text{ miles.}$$

Under ordinary conditions, the greater part of this carbonic acid and work is produced by the digestion of farinaceous food; but since, as we have seen, the farinaceous food is excreted as sugar in the diabetic patient, and therefore does no work at all, the whole of the foregoing work must be done by the digestion of other kinds of food.

I have already shown that it follows from Lavoisier's experiments (confirmed in a remarkable manner by those of Regnault), that the work done by the combustion of carbon in the body is to the work done by the combustion of hydrogen in the proportion of 9068 to 3024, almostly exactly 3 to 1; hence we have the work done by Owen Murphy as a minimum in health.

Due to carbon . . .	5·716 miles.
Due to hydrogen . . .	1·905 ,,
	7·621 miles.

This result is somewhat in excess of the truth, for the same reason that the calculated digestion coefficient of proteine is in excess of that found by Frankland from experiment; for the combustion coefficients of carbon and hydrogen, in organic compounds, are slightly less than when free. If we are permitted to reduce 7·621 miles in the same proportion as in the digestion of proteine—viz., 48 to 43, we shall find—

Owen Murphy—minimum of work consists of body weight lifted through . . 6·83 miles.

Let us now compare this minimum with the work actually performed by him when suffering from diabetes, by the digestion of flesh food and production of urea.

2. I have already shown that the work produced by the formation of 501·28 grs. of urea is 704 ft. tons by calculation from the composition of proteine and urea; this result should be reduced in the proportion of 48,375 to 43,155, in order to obtain the work given by Professor Frankland's experiments. Making this reduction, we find that 500 grs. of urea correspond to 626·3 ft. tons of work, or 100 grs. urea to 125·26 ft. tons; or, in other words—

Every four grains of urea excreted correspond to five tons lifted through one foot.

Owen Murphy excreted, on an average, 1182 grs. of urea daily during nine weeks—which, by the foregoing rule, are equal to

$$1475 \text{ ft. tons} = \text{Murphy} \times x;$$

where x represents in miles the height through which the patient could be lifted by the work done per day; and is equal to

$$x = \frac{1475 \times 2240}{93{\cdot}56 \times 5280} = 6{\cdot}69 \text{ miles.}$$

This result is almost exactly equal to that already found as the minimum consistent with continued life, and explains in the most satisfactory manner the complete prostration of the patient, notwithstanding the consumption and digestion of more than double the usual quantity of flesh food.

In corroboration of the foregoing conclusion, I may mention that Murphy's temperature was found to be constantly 2° Fahr. below that of other patients (chronic) placed in the same ward, and, in other respects, under similar conditions.

His unfavourable symptoms (so long as his powers of digestion were not impaired) were invariably alleviated by the free use of flesh food and fat, the latter being instinctively preferred by him; so much so that during the delirium that preceded his death for twenty-four hours, he raved incessantly about "fat, roasted fat, which the angels of heaven were preparing for him."

I have studied many other cases of diabetes mellitus, and found similar results in all; but I feel it to be unnecessary to describe them, as one well-ascertained train of phenomena, carefully observed and recorded, is quite sufficient to establish the order of nature.

Conclusion.

I have now, Mr. President and gentlemen, to apologise for the length of time during which I have spoken, and to thank you for the patience with which you have listened to me. I am well aware how much I am indebted to your kindness, for I laboured under two serious disadvantages in addressing you. In the first place, I had undertaken a task beyond my strength; and again, my address is made shortly after you had, like myself, been charmed and instructed by the luminous, learned, and eloquent oration of Professor Rolleston. I felt confident, however, that I possessed one advantage that he did not; I was a stranger in Oxford, and believed that my faults in matter and style would be leniently criticised; in this expectation, I am happy to say I am not disappointed; and again I thank you for your kindness. Two other advantages I share with him, which have contributed to his address as much as to my own—a profound respect and reverence for all honest labourers in search of truth, whether they have preceded us by 20 years or by 2000 years; and an unwavering confidence and faith in the future that lies before the science of Medicine. We traverse a sea, mapped with imperfect charts, carrying with us a sure guide in our compass and stars; but we cannot afford to neglect a single rock or shoal buoyed for us by the skill and care of those that have preceded us. Let us follow their example, and mark with conscientious care, for our successors, the dangers we ourselves discover and escape.

Assembled, as we are, within the halls of the University of Oxford, the centre and heart of all that is intellectual and religious in the life of England; a University that borrows its accurate Logic, as well as its refined Ethics, from the lips of Aristotle; that reverences Euclid as the fountain and source of its elegant geometry; and sits at the feet of Homer, Pindar, and Æschylus, to learn its poetry; we need not fear that Hippocrates and Galen will ever want admirers and students; but the Oxford of to-day has taught us what many did not anticipate, that she is equally ready and skilful, as she has proved herself to be in cultivating literature, to devote her vast intellectual energies to the encouragement and development of the natural sciences, based upon the solid and only permanent foundation of mathematical research. The efforts made within the last few years by Oxford, to encourage within her walls the mathematical and natural sciences, have won for her the respect, and warmed towards her the hearts, of all that search for truth in the study of Nature. Our brothers in Oxford, like the Athenians at Syracuse, have gone on board the fleet, while we watch them from the shore, sympathising in the sea fight; as they win, we shout; when they fail, we weep.

Long may the union of the far-distant, but never-to-be-forgotten past, with the living present, that now exists in Oxford, continue. No science, no profession, can benefit so much by it as that of Medicine.

MEDICAL CHARITIES.—Legacies have recently been bequeathed to the following metropolitan and provincial Hospitals, Dispensaries, etc., by Mr. Matthew J. Glinton:—£100 each to the South and East Dispensaries, the Northern and Southern Hospitals, the Eye and Ear Infirmary, and £50 to the Royal Infirmary, Liverpool. Mr. J. Reynolds bequeaths £500 to Addenbrooke Hospital, Cambridge. Mr. Everett Allenby, of Regent-street and Surbiton, bequeaths, in addition to large legacies to charities not strictly Medical, £500 to the Charing-cross Hospital, £500 to the Cancer Hospital, Brompton; the Rupture Society, £200; and the Consumption Hospital, Brompton, £150.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVII.—Part I.

TURNING IN CONTRACTED PELVIS AS A SUBSTITUTE FOR CRANIOTOMY—HISTORY AND APPRECIATION.

We now come to a long-contested and still undecided question in obstetric practice—*Is turning ever justifiable as a means of delivery in labour obstructed by pelvic deformity?*

The next alternative in the descending scale of operations is a transition from conservative to what may be distinguished as sacrificial midwifery, involving the destruction of the child. It is obviously a matter of exceeding interest to cultivate any operation that shall hold out a reasonable hope of safety to the child, without adding unduly to the danger of the mother. So much may be conceded on both sides. The question, then, may be set forth as follows:—Do cases of dystocia from pelvic contraction occur in which the child can be delivered alive by turning, and without injury or danger to the mother, which must otherwise be condemned to the perforator? And, not to blink in any way the serious character of the inquiry, it is necessary to append this secondary question to the first—namely,

Assuming that such cases do occur, can they be diagnosed with sufficient accuracy to enable us to restrict the application of turning to them? And if we err by turning in unfitting cases, what is the penalty incurred?—how can we retrieve our error?

These questions I will endeavour to illustrate, if not to answer, by the light of the writings of others, and my own experience and reflections.

The choice of an operation in obstetrics will, in many cases that fall within the debateable territory claimed by two or more rival operations, be determined by the relative perfection of these operations, and by the relative skill in them possessed by the individual operator. This law has governed the history of the progress of the art of delivering women in whom labour was obstructed by disproportion.

"The Fluctuations in Opinion that have prevailed among Practitioners of Midwifery with reference to the Performance of Turning, and the Application of the Forceps in Cases requiring Artificial Delivery on account of Deformity of the Pelvis," is the title of a most interesting memoir by Dr. Charles West (*Medical Gazette*, 1850). I refer to it as the most important and most instructive epitome of this subject.

The operation of extracting a child through a contracted brim has no doubt often been performed as a matter of assumed necessity, as when the shoulder has presented, and contraction of the pelvis is certainly a cause of shoulder-presentation. The observation of such cases, a certain proportion of which terminated successfully for the child, could not fail to suggest the deliberate resort to the operation in cases of similar contraction where the head presented.

Before the forceps was known, and before the instruments for lessening and extracting the head had been brought to any degree of perfection, turning was commonly resorted to in almost all cases of difficult labour. Thus Deventer, who wrote in 1715, as well as La Motte, declaims against the use of instruments, and recommends turning by the feet in all cases of difficult cranial presentation. The consequence was that the art of turning was cultivated very successfully by some of the followers of Ambroise Paré. It appears to me evident that, in the early part of the last century, turning was better understood and more skilfully performed than it was at the beginning of the present century; and it is equally evident to me that, by turning, many children were saved under circumstances that are now held to justify their destruction. Of course this gain was not achieved without a drawback. If children were sometimes saved, many mothers were injured or lost by attempts to turn under circumstances which are now encountered successfully by the forceps or by craniotomy.

As instruments were improved, the choice of means was extended. The forceps first contested the ground. The contest, indeed, was for exclusive dominion. The reputed inventor of the forceps, Hugh Chamberlen, did not hesitate to accept the challenge of Mauriceau to attempt to deliver a woman with extreme pelvic contraction by means of his instrument, feeble and imperfect as it was. As science advanced, the contest was better defined. As the obstruction to delivery was due to contraction of the pelvic brim, and the problem was how to extract a live child arrested above the brim, it is obvious that a short single-curved forceps must fail. It was only when the long double-curved forceps was designed that the knowledge and the power arose which enabled the obstetric Surgeon to bring another means into competition with turning for the credit of saving children from mutilation.

It is, then, from the time of Smellie and Levret, who perfected and used the long forceps, that the real interest of the inquiry dates. It is not a little remarkable that amongst those who have most distinctly recognised the value of the long forceps have been found the advocates for turning in contracted pelvis. The following words, written by Smellie in 1752, challenge attention now:—"Midwifery is now so much improved that the necessity of destroying the child does not occur so often as formerly; indeed, it never should be done, *except when it is impossible to turn or to deliver with the forceps;* and this is seldom the case but when the pelvis is too narrow, or the head too large to pass, and therefore rests above the brim."

Pugh, of Chelmsford (1754), who advocated the long forceps, says:—"When the pelvis is too small or distorted, the head hydrocephalic or very much ossified, or its presentation wrong . . . provided the head lies at the upper part of the brim, or, though pressed into the pelvis, it can without violence be returned back into the uterus, the very best method is to turn the child and deliver by the feet." He then goes on to lay down the conditions which would induce him to prefer the curved forceps, and states that, as the result of these two modes, "I have never opened one head for upwards of fourteen years."

Has not midwifery retrograded since his time? Perfect (1783), who used the long forceps, delivered a rickety woman whose conjugate diameter measured three inches, the head presenting, and brought forth the first living child out of four, the three first having been extracted after perforation. La Chapelle (1825) advised and practised the method. She relates that out of fifteen children extracted by forceps (long) on account of contracted pelvis, eight were stillborn, seven alive; and that out of twenty-five delivered footling, sixteen were born alive, and nine dead.

It is not less remarkable that it is amongst those who reject the long forceps that the strongest opponents of turning in contracted pelvis are to be found. This is the more astonishing when we reflect that this school, rejecting the two saving operations, has nothing to propose but craniotomy for a vast number of children that claim to be brought within the merciful scope of conservative midwifery.

Denman, who used the short forceps exclusively, was, upon the whole, adverse to the operation, although he relates a striking case in illustration of its advantages. He delivered a woman of her eighth child alive at the full period, all her other children having born stillborn. "The success of such attempts," he says, "to preserve the life of a child is very precarious, and the operation of turning a child under the circumstances before stated is rather to be considered among those things of which an experienced man may sometimes avail himself in critical situations, than as submitting to the ordinary rules of practice."

Those who have studied the history of obstetric doctrine cannot fail to see that this dread of encouraging enterprise in practice lest disaster should result from unskilfulness, has cramped the teaching, obstructed the progress of knowledge, and enforced a slavishly timid yet barbarous practice which still persists down to the present time. That the precepts and practice of Smellie and his immediate disciples were infinitely more scientific and successful than those which prevailed in the time of Denman, and in the first half of the present century, cannot be doubted. Possibly the cautious teaching of Denman and many of his successors was justified greatly by the genera imperfection of Medical Education. They had, as we now have, to teach according to the average capacity and trustworthiness of their pupils. They taught men with the same feeling of reserve with which we should still teach midwives. But surely the day is past for all this. We may safely venture to

teach men of a higher standard upon more liberal principles. I am not aware that a similar reticence or restraint has at any time, to a like extent, gagged the teachers of Medicine or Surgery proper. May we not see in this fact a striking testimony that the practice of obstetrics demands, even more than Medicine or Surgery, steadiness yet promptitude in judgment, courage under difficulties, and physical skill?

On the other hand, the forceps has by some been held to be of superior efficacy to turning in contraction of the pelvis. That is, whilst certain lesser degrees of contraction may be dealt with by turning, the forceps claims the preference in more advanced degrees of contraction. It is needless to say that those who advocate this preference rely upon a very powerful forceps. It is accordingly in Germany and France especially that the claim for the superiority of the forceps is contended for.

Stein (1773), Osiander the elder (1799), preferred the forceps. Boër was opposed to turning. In France, Baudelocque maintained the same doctrine as Stein and the elder Osiander. And the recent experiments of Joulin, Chassagny, and Delore with the "appareils à traction," by which a powerful extracting force is added to the forceps, enabling it to bring a head through a greatly contracted passage, seem to strengthen the comparative claim of this instrument.

ORIGINAL COMMUNICATIONS.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,
Physician to the Hospital for the Epileptic and Paralysed, and Assistant-Physician to the London Hospital.

Temperature, Pulse, and Respiration in Coma.

The following case, in the age of the patient, nature of occupation, and rapidity of death, resembles the one Dr. Bäumler published in his valuable paper in your columns on August 1. The temperature was much lower than that of Dr. Bäumler's patient, but it was unfortunately only taken once. The case occurred earlier (May) in the year (1867), but the day was a hot one, and the patient's occupation involved his being where the temperature was high.

A sugar baker, 25 years of age, "gradually dropped down," as if asleep, at 3 o'clock, at his work. He was put in a cab, and driven to the Hospital; he vomited whilst on his way to the Hospital, where, about half an hour later, I saw him. He was then lying on his back, breathing, with moans, thirty-six times in a minute, and had a pulse from 150 to 160; pupils normal, contracting by light; no abnormal ophthalmoscopic signs. He was insensible, but disturbing partly roused him—*e.g.*, he opened his eyes a little and varied his moans, and he whisked his head to the left, when I touched his face. There was no froth nor blood on his lips; there was no evidence of palsy. He passed a motion in bed whilst I was there. The skin felt normal, but the temperature in the axilla was 103°. He died at 11 p.m., and Dr. Sutton found nothing wrong in the patient's body beyond extreme congestion of the lungs and kidneys; these organs were otherwise normal. He had been a healthy man, except for two attacks of "cramp" (fits?) in early childhood.

I have, since the above was in type, made, with Dr. Woodman and Mr. Vialls, an autopsy on a patient whose case was very like the one related. Mr. Vialls found the temperature to be 106 (*sic*). In both cases the condition of the urine is an important matter, but in neither was any to be obtained during life. The urine taken from the bladder *after death* in the second case was albuminous, but how far this is to be taken as evidence of acute kidney mischief I do not know. This point I shall consider when I record more fully the facts with which Mr. Vialls has supplied me.

I also wish to make a few remarks on the general question which Dr. Bäumler's interesting paper raises, but apart from the special kind of case which he has brought forward. I think the temperature rises before death in all cases of coma from whatever cause, but in no instance have I ever found it so high as 109°. I have known it to be 107° in one case of meningeal hæmorrhage.

Soon after the effusion into the brain of a large clot of blood, the symptoms may be only the primary ones of loss of consciousness and hemiplegia, the pulse, respiration, and temperature being presumably normal. Later (the time varies according to no rule that I know of) we have "secondary symptoms"; the pulse quickens, and may become irregular; respiration becomes hurried, shallow, and variable; the temperature rises; the belly becomes sunken, and falls in further during each *in*spiration. (See article *Apoplexy*, "Reynolds's System," vol. ii. p. 540.) In short, that condition is quickly reached which has been conveniently termed "cerebral fever," a condition which mostly, however, comes on more slowly from brain tumour or other forms of coarse intracranial disase. Indeed, after a patient has been doing well for some weeks after cerebral hæmorrhage, "cerebral fever" may slowly supervene.

We have in all cases of coarse disease of the brain (from the recent clot to the slowly forming tumour) to consider distinctly (1) the symptoms due to the local disease in its character of a destroyer of organs—*e.g.*, lateral deviation of the eyes, hemiplegia, defects of intellectual expression, etc.; and (2) the symptoms of general disturbance which the local disease produces in its character as a "foreign body"—*e.g.*, disorders of circulation and respiration, rise of temperature, etc. The first class of symptoms receives more attention than the second, although the latter is of far greater value. I suppose the engorgement of the lungs one almost always finds after death from cerebral hæmorrhage occurs in the second stage. I have known the lungs pale and very light—together weighing only 22 oz., and resembling those of patients who have died in the collapse stage of cholera—in a case of very *rapid* death (an hour) from large cerebral hæmorrhage.

Hemispherical Co-ordination.

In the *Lancet*, November 26, 1864, in some remarks on "Defects of Intellectual Expression," I stated that the *ordinary form of cerebral amaurosis*(a) [optic neuritis] occurs with *left* hemiplegia much oftener than with right. I added:—

"Now amaurosis is due to disease of a *highly specialised nerve of sensation*, while there are good reasons for believing that defect of articulate language, which M. Broca calls aphemia, is a kind of ataxy of articulation, and therefore *a disorder of motion*. Again, the contrast may be made more general. Sight is a department of general perception, whilst articulate language is a department of general expression. If, then, it should be proved by wider evidence that the faculty of expression resides in one hemisphere, there is no absurdity in raising the question as to whether perception—its corresponding opposite—may not be seated in the other."

I still think that double optic neuritis is, as a matter of fact, *oftener* complicated with left than with right hemiplegia, and especially when the hemiplegia is "epileptic." But I have myself (*Royal Lond. Ophth. Hosp. Reports*) published exceptional cases, and have recorded one case in which a clot first caused defect of intellectual expression with right hemiplegia, and was afterwards followed by double optic neuritis. Moreover, the defects of intellectual expression by movements and the loss of sight—even if they were, as losses of *function*, corresponding opposites—are not comparable in the pathological changes on which they depend (this I remarked on p. 177). Extensive destruction of one cerebral hemisphere does not produce loss of sight, although loss of sight follows coarse disease in many parts of the hemisphere. It is of great importance to make this kind of distinction, and this is the reason why I point out prominently, as I have done several times before, the *illegitimate comparison* I made in 1864, when I had studied optic neuritis comparatively little. (See note on Arterial Regions, p. 177.) However, we must not forget that both optic discs are invariably affected when disease of but *one* hemisphere causes defect of sight, although the explanation of this fact is not yet clear.

If, as suggested (p. 179), both sides of the brain are educated in expression, although the left is the leading side, I would still advocate the view I brought forward in the *Lancet*, with the important qualification that the right side may be the *leading* side for perception—educated sensations. So, then, we should have "crossed action" betwixt the two brains, and thus we might suppose a more perfect mental co-ordination. With regard to this, and to co-ordination in general, Hilton's law on the distribution of nerves from nerve trunks to joint,

(a) I never meant to imply that amaurosis, in *the loose sense of the word*, occurred oftener with left than with right hemiplegia. But I am fairly open to the critical remarks in the able article by Dr. Allbutt (*Med.-Chir. Review*, January, 1868, p. 143), as I find that in first bringing the subject of side forward (*Medical Times and Gazette*, July 23, 1864), I used the word amaurosis without qualification.

skin, and muscle, and Brown-Séquard's researches on the relation of the motor and sensory nerves in the two sides of the cord, occur to us. The supply of different cerebral regions by arteries must be considered: see *Lond. Hosp. Reps.*, vol. iii. p. 238; and a report, vol. ii. p. 320, of a case of hemiplegia from disease of the pons Varolii, in which the articulatory muscles were paralysed on the right side, and the face anæsthetic on the left side. See also *Roy. Lond. Ophth. Hosp. Reps.*, part iv. vol. v. p. 277, footnote, for remarks on the study of defects of gradually increasing complexity from sensation to perception in relation to the facts which recent researches have supplied from cases of defects of expression.

It would seem by certain observations of Gratiolet—which are embodied in the following quotations from M. Baillarger's address before the Academy of Medicine — that there is "crossed development" of the brain, if we may take the corpus striatum and thalamus as fixing the (chiefly) motor and sensory regions. The first part of the quotation refers to M. Trousseau's views on a possible explanation of the right-sidedness of the paralysis of speechless patients.

"Deux faits anatomiques ont ici une assez grande importance.

"De ces deux faits, le premier, relatif à la circulation, a déjà été rappelé par M. Trousseau. C'est que l'artère carotide primitive gauche naît directement de la crosse de l'aorte, tandis qu'à droite cette même artère naît du tronc brachio-céphalique.

"Le second fait a été signalé par Gratiolet, ce professeur si éminent dont la science déplore la perte récente:—

"'Il m'a semblé,' dit-il, 'par suite d'une série d'observations *consciencieusement étudiées*, que les deux hémisphères ne se développent pas d'une manière absolument symétrique. Ainsi, le développement des plis frontaux paraît se faire *plus vite à gauche qu'à droite*, tandis que l'inverse a lieu pour les plis des lobes occipitaux et sphénoïdaux.' (Leuret et Gratiolet, *Anatomie du système nerveux*, p. 241.)"

CASE OF

A FIBROUS TUMOUR OF THE UTERUS ELIMINATED BY SOFTENING, IN A FEMALE WHO HAD DISEASE OF THE HEART.

By F. OPPERT, M.D.

Sarah M., aged 40, a housekeeper in the City, presented herself at the City Dispensary on August 20, 1866. She is pale, married sixteen years ago, but the husband is dead, and she had no children. For the last twelve years she has been ailing and suffering from uterine symptoms. She has frequently had hæmorrhage either coincidently with the menstrual period or at other times. During the last two years menstruation often was painful, the pain being dragging and sometimes like labour-pain. The back ached, and the legs often felt numbed. Frequent micturition was not a very distressing symptom, as the patient did not complain of it, but when more closely interrogated she admitted that she passed water at times rather frequently, and with slight pains. A discharge from the vagina was not always present, but lately it has become very annoying. The backache has been troublesome for the last two years.

An examination of the uterus was made with the finger. The os uteri was found rather high in the median line, pointing backwards. The portio vaginalis soft, round, smooth, and almost completely closed. The fundus uteri in front and a little lower than the os, the womb being slightly flected at the cervix. The fundus presented an even, rounded body, which felt like a child's head, and was quite as heavy. It was balotting, being movable, and not fixed by adhesions; it did not deviate to one side, but was in the median line of the body. The abdomen measured, three inches below the navel, 3 feet 4 inches. An introduction of the sound was deprecated by the patient. The discharged fluid was of a yellow colour, resembling pus and of a most disagreeable smell, which was somewhat different from that peculiar to carcinoma. Patient believed it to have been foul for some months. The breasts were not tender, but reduced in size, and the nipple was normal.

Another series of symptoms depended upon the disease of the heart. Patient had had palpitation for the last ten years. It was brought on by any exertion, such as mounting the stairs. A soft blowing murmur was detected by the stethoscope, being synchronous with the systole. It was strongest under the left nipple, its sound not extending for more than an inch to the right and left, nor was it audible further upwards. The second pulmonary sound was slightly strengthened, compared with that of the aorta. The latter and the tricuspid valve did not offer any abnormity. The ictus cordis was between the fifth and sixth rib, being not particularly strong.

The dulness in the region of the heart slightly exceeded the normal limits, not to the right though, but solely to the left. There was no bruit in the vessels of the throat.

The pulse was 80°, not quite regular, soft; the tongue a little whitish, and the appetite not good. The dulness of the spleen slightly exceeded the normal confines, and patient was very weak.

Ordered to take tinctura ferri sesquichloridi ♏xxv. in mistura menthæ ʒj. ter die, and to inject a solution of tannin (ʒij.) ʒx. with equal quantities of water with the india-rubber ball three times a day.

Three weeks later patient was considerably better as regarded her general strength. On September 22 she had her menses, and hæmorrhage with them. Shortly afterwards she left for the country (Wales), and it was nearly a year before I saw her again.

June 27, 1867.—On this day patient applied again at the City Dispensary, but it was not for the uterine complaint; she had hydrops and anasarca. The feet became a little swollen near the ankles about six months ago, and the abdomen swelled afterwards. Recently, however, both had decreased in size, the patient passing a great quantity of water without taking any medicine. There was not much fluid in the cavity of the abdomen, and patient evidently was recovering from the dropsical affection. The pallor of the face existed as before, and the murmur was heard unchanged.

The patient stated that, during her absence, she frequently passed from the vagina, lumps of a substance which she described as looking like "liver" and having a foul smell. The uterus was found anteverted, but not heavy, and the rounded tumour was gone; the sound could be introduced 3½ inches, but detected no heterogeneous plasma. There was scarcely any discharge.

Patient soon somewhat recovered by taking tinctura ferri acetici.

Remarks.—The case is, in many respects, noteworthy. The diagnosis was fibrous tumour and disease of the heart, the former being eliminated by the forces of nature. The presence of a tumour could not be disputed. Pregnancy was out of the question, considering the state of the breasts, the slow growth of the mass, and other circumstances. One might have thought, for a moment, of hypertrophy of an anteverted womb; but the weight of the mass was too heavy for this, and moreover the portio vaginalis would not have been free from hypertrophied tissue. Fibrous polypus would have caused many of the symptoms observed in the patient, but the os uteri would hardly have been closed, as a large polypus of several years' standing is likely to distend the orifice. Carcinoma of the fundus uteri could not be assumed; it is not a common disease, and in this case its symptoms were not present. There were no lancinating pains; the aspect of the patient spoke against malignant disease. The mass was movable, and had grown too slowly during twelve years for cancer. The fœtidity of the discharge might, for a moment, have misled the observer. The later history of the case disclosed more evidently the circumstances in which it originated, confirming at the same time the original diagnosis. I may be pardoned mentioning that the handbooks of English authors on female diseases do not advert to the quality of the discharged fluids as important for the diagnosis of such a case. A peculiar fœtid discharge, as described above, in a person who has a non-malignant tumour, is sufficient proof of a softening process in the same, and enables one to give a safe prognosis. It is rare that we observe the cure of a large fibroid by the unaided forces of the system; but where this happens, it is rather by the process of calcification, gradual atrophy, or fatty degeneration, than that of softening or sloughing. It is, further, rare that the symptoms of irritation of the bladder are so slight, as in this case, that the tumour presents a rounded even mass and no nodules, and it is rare that it proceeds from the anterior wall of the womb. Generally it takes its origin from the posterior wall, and, being located in the space of Douglas, presses upon the rectum. Respecting the heart symptoms, the murmur might have been referred to anæmia; but then there was dulness of the region of the

heart to some extent, and the second sound of the pulmonalis was strengthened. The ictus cordis was not strong, but this was owing to the loss of blood. The place where the murmur was heard, and its systolic character, left no doubt that the mitral valve was defective, insufficient; the dulness argued for slight hypertrophy. The anasarca beginning round the ankles confirmed the diagnosis of disease of the heart. The latter was probably present for ten years, and the case affords an example of the smaller danger to life arising from mitral regurgitation compared with obstruction of the orifices.

NOCTURNAL INSANITY.

By ANDREW ALLISON, M.D.

As no author with whom I am acquainted has drawn the attention of the Profession to that form of mental aberration which I shall describe as Nocturnal Insanity, I have ventured to offer a few remarks upon the pathognomonic signs of the disease. I may observe that of all the mental states with which the psychologist has to deal, few present phases of greater difficulty than those nocturnal hallucinations to which a certain class of patients are liable. Persons of every variety of temperament will occasionally manifest symptoms of insanity during the night, whilst they exhibit apparent immunity from all kinds of derangement in the daytime. Individuals whose habits have been exceedingly parsimonious are generally the victims of this malady. The principal disposition which marks the incipient stage of the person's cerebral vice is covetousness, often expressed in an immoderate desire to execute undue quantities of work, and in dissatisfaction with those who have not contributed freely to his profits. Mr. Latimer, an acute Medical observer, states that in the neighbourhood of Rotherham the majority of capitalists manifest maniacal symptoms during the last two years of their lives, and that their eccentricities are ruled by the amount of their possessions or the spendthrift habits of their heirs-at-law. The same gentleman affirms that he has himself only escaped the epidemic by the smallness of the fortune with which he has been rewarded for thirty-five years of professional toil. In the daytime the patient will transact business with ordinary sagacity, and but little suspicion rests upon his mental stamina during business hours; however, about the proper time of retiring to rest, indications of insanity take the place of his alleged diurnal rationality. Early in the night he becomes excited, reasons falsely, and controverts the advice of his friends on a supposition that they are plotting his destruction. This state of illusion eventually subsides into expressions of melancholy, which forms the sequel of the first part of the nocturnal tragedy. Overcome at last by a sense of exhaustion, he professes an unselfish desire for the comfort of others, solicits rest, and ultimately obtains a few hours of incoherent sleep, which completes the second stage of his nocturnal vagaries. Towards morning his friends, wearied with the irregularities of the night, experience a degree of relief in observing his daily vocations resumed at the shrine of Mammon with an enthusiasm "worthy of a nobler cause." He generally displays considerable mental and great muscular activity, with a restless anxiety for the completion of orders, and an impatience towards those who refuse to assume a diligence in business equal to his own. In bed he generally wishes to converse upon religious topics, and expatiates upon practical morality, expressing alternate hopes and fears of his own destiny. Every succeeding evening his delusions reappear, and the night is again consumed in disputations adverse to the habits of a sane man. Should his family suggest restraint, considerable difficulty is experienced in conducting the Medical examination. In the daytime the Professional referee is unable to detect much in the manner, actions, or conversation of the patient to warrant his confinement in an asylum, and is obliged to accept fragments of secondary evidence from those who are conversant with his nocturnal hallucinations. Hence the difficulty of solving his mental condition at the time when his actions are governed by an insane impulse, which often leads to serious procrastination in the application of remedial measures.

The law, however, in its parental concern for the security of life and property, acting through the corporate agency of the clergyman and relieving officer of the parish, usually imposes the restraint necessary for the protection of the subject by transferring the unfortunate patient to a legal institution, which concludes the last division in the case alluded to.

The conduct of persons afflicted with this form of insanity frequently becomes the subject of forensic investigation. Some years ago I had the superintendence of a case of nocturnal insanity, and had it involved legal inquiry I could only have given effect to my observations by stating that the gentleman seemed to be of sound mind in the daytime, but that at night he was, beyond all doubt, an irresponsible lunatic. Such cases often give rise to discrepancy of opinion respecting the responsibility of criminals charged with grave offences. The accused is usually seen by Medical referees in opposite states of the mental condition; consequently assertions, chameleon-like, are confidently advanced by conscientious witnesses in support of guilt, and contradicted by others of equal integrity. I hold that where a crime has been conceived during the paroxysmal attack of insanity, and executed at a time of seeming responsibility, the offence unquestionably presents extenuating features.

The perpetration of a wrong act during a period of untested rationality amounts only to a questionable proof of legal guilt, whereas positive indications of night insanity ought to deflect the balance of testimony in favour of the accused. Some years ago I was instructed by the parish authorities of a neighbouring village to report upon the state of a woman's mind who attempted in the night time to murder her husband. The most rigid day examination failed to elicit anything like an abnormal state of her intellect. Eventually she again repeated her design, in bed, to despatch her master. The protection of the clergyman and a fresh Surgeon was then invoked in the outrage, and she was duly transferred to the York County Asylum, where she remained twelve months. In this case the sanity of the woman in the daytime was never questioned, but at night she evinced a homicidal tendency, and other nocturnal freaks which are still observed to exist in a modified degree. In courts of law grave mistakes have been made by overlooking the nocturnal forms of insanity. For want of due precaution irresponsible victims have been consigned to the gallows, who ought to have been the subjects of humane treatment in a well-conducted retreat. No tribunal of justice ought to receive the testimony of even a lunacy Physician who has not made the nocturnal and diurnal states of the patient's mind the subject of special investigation; otherwise sound conclusions cannot be deduced from a consideration of the *whole* case. Instead of limiting the examination to a period of time when the graver symptoms of insanity are absent, the Medical expert must extend his scrutiny into every phase of the malady—especially where scientific testimony affects to transpose a minor charge into one of criminal responsibility. In every civilised country full proof of insanity exempts a prisoner from the legitimate consequences of deliberate crime, and the cerebral exhaustion which succeeds nights of excitement must render punishment for acts during the intervals of insanity altogether questionable. In the present reactionary state of public feeling I fear that the doctrine of justification is seriously neglected; and unless the accused is crafty enough to exhibit signs of persistent dementia, the lucid interval—which may, in point of fact, constitute the most irrational period of the disorder—serves only to augment the risk of sanguinary consequences. I contend that the remission in certain fevers exists as a characteristic of the disease, and that the lucid intervals pointed to in nocturnal insanity are no less proofs of a disordered intellect, and exempt the accused from the consequences due to wilful crime. I should as soon think of imposing upon a patient the obligation of walking with a fractured tibia as to hold him responsible for the full exercise of reason during the intervals of nocturnal insanity. A particular mental condition gives birth to morbid suggestions, and a given state of the brain is essential to their execution. The first is expressed by active nocturnal hallucinations, the second in lucid intervals; and whether jointly or severally, a faulty state of the mind or brain alike excludes the patient from the punishment due to legal or moral guilt. The stale legal axiom of "knowing right from wrong" is too general for the recognition of the psychological student, but may be conveniently adopted by the lawyer when driven to mount a hobby. The early stages of remittent insanity are marked by alternate states of apoplectiform congestion or epileptic vertigo. In the advanced stage a higher form of morbid development takes place, and the poor maniac is then considered to be legally incapable; and should the diagnosis point to idiopathic disease of the cerebro-spinal system, and not to any sympathies with remoter organs, the prognosis must be unfavourable.

I have tried to show the irresponsibility of the insane during

the lucid interval of disease, and the immunities which they may justly claim when charged with offences otherwise meriting the gravest consideration. In conclusion, I grant that the pathology of the brain and other organs involved in diseased states of the nervous system is difficult of demonstration, and that the morbid appearances presented in cases of insanity often test the ingenuity of distinguished pathologists. Incrustation of arteries and interstitial deposits in the voluntary and reflex organs frequently account for functional derangement. On the other hand, microscopists affirm that mental errors may exist without any appreciable change in the nervous centres; consequently we have numerous laws of morbid action yet to study, and many obligations imposed upon us still to "labour and to wait." Fifty years ago, the doctrine of therapeutics was in advance of several other branches of Medical science, and physiology then took the lowest place in the schools. At present, this order of things is reversed. The microscope, in the hands of trained investigators, has thrown a flood of light upon ultimate structure, and taught practical men the value of physiological knowledge in the cure of disease. Forms of insanity which were formerly intractable are now yielding to the discoveries of modern science; and those institutions which now adorn our country for the reception of the unfortunate insane are standing monuments of humanity, and the noblest expressions of British liberality.

Bridlington.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASE OF REMOVAL OF FIBROUS POLYPUS ATTACHED TO BASE OF SKULL.

(Under the care of Sir WILLIAM FERGUSSON.)

THIS case is worthy of notice, and not merely from a pathological point of view. Years since, when Liston first advocated the entire or partial removal of the superior maxillary bone, the line of incision was made from the angle of the mouth on the affected side up to the zygoma. This wound, when healed, left an imperishable scar, and remained a great disfigurement during the patient's life. Sir William Fergusson was, we believe, the first who suggested that quite as much room might be obtained by carrying the knife up the mesial line of the upper lip, around the ala of the nose, and along the side of this organ towards the inner canthus of the eye, from which point the incision might be extended, if necessary, along the fold at the lower margin of the orbit. This mode of procedure obviated all disfigurement, as the incisions are made in the natural depressions of the skin.

James H., aged 19, a sailor, was admitted into the Victoria Ward of King's College Hospital June 11, 1868, with a swelling in the upper jaw. The history was as follows:—Two years since he had some sharp, darting pain in his right cheek, and that side of the face began to swell. The pain left him in a short time, but the swelling gradually increased both in size and hardness. From its original situation, just above the angle of the lower jaw, the enlargement spread upwards and inwards rapidly, and lately he has been unable to blow through either nostril. On admission, the patient appeared a strong, healthy young man. The tumour extends from the angle and lower border of the inferior maxillary bone up to and beneath the zygoma of the right side, and forwards to the nose, the chief prominence being over the malar bone. However, the antrum does not appear enlarged, the alveolus and teeth are quite firm, and the roof of the mouth seems in its normal state; both nostrils are blocked, and the septum is pushed over to the left side. This case was watched with much interest for some time, and it was found that the growth increased rapidly, though the patient suffered but little pain. There was so much about the tumour that was doubtful about the seat and character, that it was not till a month after admission that Sir William Fergusson determined to operate upon it.

July 11.—Sir William slit the upper lip open exactly in the mesial line, in the hollow under the columna, and then carried the knife along the right side of the base of the columna; then, turning the incision upwards, he took the knife along the right side of the nose to within half an inch of the inner canthus of the eye. The soft parts being dissected from the bone and turned outwards quickly—for there was a great deal of hæmorrhage—a square piece of bone was removed from the superior maxilla by means of the saw and cutting pliers, and the back of the nose opened. (There was still very much bleeding.) Through the opening thus made, a strong pair of polypus forceps, introduced backwards and downwards towards the base of the cranium, succeeded in extracting a small portion of a polypoid growth. Then, by the employment of a smaller pair of forceps, a huge polypoid mass was seized and extracted, and then it was found that the external bore no relation to the internal disease—in fact, that there were two separate diseases. The polypoid growth was irregular in shape, and connected with the base of the cranium by a thick pedicle: it was of the fibrous kind.

At this stage of the proceedings, the patient became so blanched from loss of blood that it was deemed unadvisable to interfere with the tumour which existed externally; so the cut lip was united by a twisted silk suture over two hare-lip pins in the usual way, and the wound's edges brought together by sutures.

Remarks by Sir W. Fergusson. — Sir William Fergusson said it was a very interesting case in a pathological point of view, one that was exceedingly difficult to form a correct diagnosis of, and one which he had approached, even with his large experience in "upper-jaw" cases, with much diffidence. Here was a large external tumour, involving great part of the right cheek and running up under the zygoma; and, while the antrum did not appear to be the original seat of the disease, as the alveolar ridge and teeth were firm, and there was no bulging of its walls, yet both nostrils were blocked up, and the septum nasi was pushed over to the left side. After much consideration, the only explanation that could be arrived at was this—that, by a strange coincidence, two diseases of a separate nature and different seat had been simultaneously developed, one on the inside and one on the outside of the jaw on the same side. This view was entirely borne out by the operation. The internal disease consisted of a huge fibrous mass growing from the base of the cranium, and attached thereto by a broad pedicle. It was in close juxtaposition to the internal maxillary artery, so that no great force for the removal of the growth could be used, lest damage should accrue either to the vessel or to the numerous important structures of the vicinity. Sir William Fergusson added that considerable hæmorrhage always attended extensive operations upon the upper jaw, and that generally this was of no consequence, but that here the bleeding had been so profuse that he thought it only right to postpone the further operation for the removal of the secondary external disease until some future day.

Notes of Case continued.—The operation was performed at 3 p.m., and at 5 p.m. the patient was somewhat recovered from shock. However, his pulse sank again, and large quantities of brandy were administered—viz., ʒj. every hour. During the evening of the same day he vomited nearly eighteen ounces of blood, which, no doubt, he had swallowed during the operation. The vomiting went on more or less all night

July 12.—Patient rallied considerably. But little vomiting, and the pulse much stronger.

13th.—Patient quite recovered from shock. Takes his food well. The wound looks very well. There has been no bleeding since operation.

14th.—The hare-lip pins removed. Patient expresses himself as feeling quite well in health. Has a good appetite.

16th.—Stitches at side of the nose removed; union has mostly taken place by first intention along the line of incision. From this time the patient had not one bad symptom; the wound healed rapidly, and he was discharged on July 31, with instructions to return to town in the early part of the winter, in order that the tumour (supposed fibrous) on the outside of the jaw might be removed also.

CASE OF PHLEGMONOUS ERYSIPELAS AND GANGRENE.

(Under the care of Sir WILLIAM FERGUSSON.)

PLENTY of pure air and perfect cleanliness seem to be the great fundamental necessities after surgical operations. However, in spite of both these and the new antiseptics and disinfectants, which are now so much employed in our large

metropolitan Hospitals, cases of erysipelas occur over and over again; and whenever this affection does appear it always most seriously complicates the original disease or injury. No doubt erysipelas generally shows itself after operations or injury in those persons whose surroundings evince a total want of fresh air and cleanliness, and who are by habit intemperate in the use of stimulants; but occasionally the diseased and morbid state of the blood seems to predispose in a very high degree to the supervention of this, in a Hospital especially, dire affection. Renal disease appears to predispose patients to absorb the poison of erysipelas in a remarkable manner; so also does typhus fever, and many others of a lowering character. In the following case it will be at once seen that the form of the disease was most virulent, and also that it supervened upon injury of a most trifling nature. There is no proof that the woman poisoned her thumb; she only thought she did, as the digit got bad so very rapidly. The patient was, however, of an obese habit, accustomed to drink freely, and on admission was found to have albumen in her urine. These facts are quite sufficient to account for the quickness with which the erysipelas and subsequent gangrene spread, and the rapidity in the course of the disease left no time for the formation of a line of demarcation, and utterly precluded active surgical interference in the shape of amputation of the limb. For it has been most satisfactorily shown that unless the Surgeon wait for the line, gangrene is certain to occur in the stump after amputation is performed, and the patient is then in a worse plight than before.

Charlotte A., aged 50, was admitted into King's College Hospital, under the care of Sir William Fergusson, on July 4, 1868, with phlegmonous inflammation of the right hand and forearm.

The patient, a stout heavy woman, stated that while washing some dirty linen on Wednesday, three days previous to admission, she pricked and "poisoned" her thumb, which became very much swollen and exceedingly painful. She applied for advice to a Medical man, who made a free incision into the "pulp" of the member, and ordered it to be poulticed. But the patient got worse, and applying at the Hospital was admitted as above.

On admission the right forearm was found to be greatly inflamed, the redness of a uniform scarlet hue, while the swelling was very great and soft, pitting distinctly on pressure. This extended to the elbow. The hand was extensively swollen, and the skin very tense and brawny, the thumb being cold, and feeling benumbed.

There was a good deal of constitutional disturbance, furred tongue, and high pulse, and, on the urine being tested, it was found to contain albumen, indicating probably disease in the renal organs. Occasionally erysipelas is the cause of temporary albuminuria.

The House-Surgeon made several free incisions on the back of the hand, affording great relief from pain; the patient was placed in bed, the arm and hand enveloped in large linseed-meal poultices, and ʒxij. of brandy ordered for twenty-four hours; also ammon. carb. gr. iv. 4tis horis.

July 5.—Patient passed a very restless night, and suffers extreme pain in the hand and arm; the hand is less tense and brawny, but the colour is deeper, and the redness is extending further. The House-Surgeon made three incisions in the forearm, one on the radial side, one on the ulnar side of the anterior surface just above the wrist, and one in the middle of the posterior surface, and a considerable quantity of blood and serum escaped.

7th.—Patient rather delirious last night. Tongue very brown and furred; pulse 120, quick and feeble. The hand is cold and "mottled" in colour, and the gangrene extends about two inches above the wrist. Patches of gangrene surround the incisions made in the arm, and the erysipelas has affected the upper arm.

8th.—Gangrene extending very rapidly, now above the elbow; superficial veins of shoulder, neck, and chest much distended. Patient complains of pain in her chest; her breathing is 38 in a minute, and very shallow; the pulse 130, and very weak.

9th.—Smell of arm most offensive, and charcoal poultices applied. The hand and arm quite dead, and the gangrene has extended in a large irregular patch over the right shoulder, and on the anterior surface of the chest. Patient became dull and stupid, muttering delirium nearly constant, and the poor woman gradually sank and died at 1.15 p.m.

ROYAL FREE HOSPITAL.

CASES SHOWING RESTORATION OF MOTION AND SENSATION AFTER TRAUMATIC LESIONS OF LARGE NERVES, WITH LOSS OF SUBSTANCE.

(Under the care of Mr. JOHN DANIEL HILL.)

It is laid down as a rule by many experienced Surgeons, on the one hand, that when large nerves are divided with loss of substance, their functions are never restored; while, on the other hand, M. Paulet (in an interesting memoir on the effects of traumatic lesions of nerves recently read before the Paris Société de Chirurgie) has adduced a large amount of evidence, showing that where nerves are divided with loss of substance, under some circumstances their functions are restored, although his observations on the results derived from experimental physiology (as reported during the last fifty years) are somewhat antagonistic to the facts which he has recorded from clinical experience. His researches are, nevertheless, of considerable value. (See *Med. Times and Gaz.*, April 4.)

In Surgical practice, cases of neurotomy proper are not commonly seen; the experience, therefore, which is brought forward by a single member of the Profession can have but little weight in supporting or negativing any general conclusions acknowledged by the Profession at large unless such experience be substantiated by living facts. If, in addition to such facts, analogous experiments have been carefully performed upon the lower animals, a little indulgence may be solicited, should the combined results seem to throw a light upon the process of repair in the human frame.

In experiments which I have conducted during the last few years upon dogs, rabbits, and other animals, I have found that simple neurotomy is generally followed by restoration of nervous power after two, three, or four weeks, and in cases where pieces of nerve-tissue varying from one-tenth to one-fourth of an inch in length have been cut out motor power has returned in one, two, or three months respectively. In one instance where I excised half an inch from the sciatic nerve of a dog, four months elapsed before motor power was re-established. During an active Hospital career of some years I have seen only three cases of accidental and unavoidable division of large nerves (proper), with excisions of a portion of their structure. In each patient complete restoration of nervous power was developed after a lapse of time varying from five to seven months. Two of these cases having occurred in my own practice, I am induced to bring them forward to support my physiological experiments on the lower animals. Whether the cases adduced are exceptions to the rule, only the collective experience of the Profession can determine.

The first patient accidentally ruptured his ulnar nerve; the irregularly broken fibres were carefully washed, cut of an equal length, and replaced *in situ*. In the second patient I unavoidably divided the internal popliteal nerve in removing a large fibrous tumour from the back of the thigh. Moreover, a piece of the nerve which was intimately and inseparably connected with the tumour was excised.

Case 1.—John C., aged 26, a butcher by trade, was admitted an out-patient of the Hospital, under my care, on Sunday, October 6, 1861, at 8.30 p m. He stated that while he was standing upon a block to hang up a leg of mutton the block tipped up, and slipped from under him; his elbow caught in a hook, and for a moment his entire body was suspended by it. In endeavouring to extricate himself from this unpleasant position, the arm and its coverings broke away, and he fell to the ground. Shortly after the accident he came under my observation. I found a lacerated V-shaped wound, two inches in extent, over the internal condyle of the right humerus, through which protruded about two inches of the torn proximal end of the ulnar nerve. It was irregularly spread out into a lash, and its neurilemma was lacerated for at least an inch, the uncovered nerve fibres being torn through at unequal lengths. The cutaneous distribution of the nerve was well marked, and was mapped out with a pen. There was loss of sensation on the palmar surface of the little finger and half the ring finger, on the ulnar surface of the palm, on the ulnar aspect of the dorsum of the hand, and on the little and half the ring fingers. Moreover, there was paralysis of the adductor pollicis muscle. The temperature of the skin, taken by the bulb of a thermometer on the dorsal, radial, and ulnar aspects of both hands, gave respectively the following results, viz.:—Right radial, 74° Fahr.; ulnar, 70° Fahr.; left radial and ulnar, respectively,

74° Fahr. With a sharp pair of scissors, I cut of an equal length the nerve fibres which were spread out, having previously cleased them with warm water, and with an oiled director I carefully passed the nerve back to its place from behind the internal condyle to the intermuscular foramen between the two heads of the flexor carpi ulnaris, for the nerve had been ruptured in its course between the heads of that muscle. While snipping off the terminal fibres, the patient shrieked violently, saying that he felt the most excruciating pain extending from the elbow to the neck, and for some moments afterwards there was a convulsive twitching of the muscles of the upper arm. The arm was next adjusted to a rectangular external splint, and the wound was sealed up with a pad of oiled lint. I had the opportunity of witnessing his daily progress. A good deal of inflammation attacked the wound, but at the end of twelve days it began to heal.

November 20.—Six weeks have now elapsed since the accident. The wound is quite healed, and sensation is returning. He feels in the course of the nerve as though the part were covered with leather. The temperature still remains two degrees lower than on the radial side.

December 29.—Sensation is now completely restored, and he can feel the point of a probe in the entire course of the nerve.

March 1, 1862.—Sensation is perfect and motion pretty well restored; he can move the various muscles supplied by the ulnar nerve; the temperature remains 1° Fahr. less than on the radial side.

January 3, 1868.—More than six years afterwards I accidentally met him. He said that his arm was then as strong as its fellow, and on examining the limb I found that he had sensation and motion quite equal to his left arm.

Case 2.—Ernest R., aged 8, a native of Oxford, was admitted into the Royal Free Hospital, under my care, on July 31, 1867, with a large tumour which was situated deeply at the back of the left thigh, extending into the upper part of the popliteal space. It had been gradually forming during the previous twelve months, notwithstanding local and general treatment under the most able supervision. It was now causing the patient pain from its pressure on the nerves, and was producing lameness from its interference with the action of the flexor muscles. Upon examination the knee was found to be partially flexed, and on attempting to straighten it pain followed by numbness was produced in the course of the internal popliteal nerve. The tumour felt firm, hard, and weighty, but was freely moveable beneath the muscles. The hamstrings could be felt contracting over it when the knee was being flexed. On moving it from below upwards great pain was produced in the toes, and spasmodic contraction of the gastrocnemius and plantar muscles. The friends having consented to its removal, on August 20, 1867, chloroform was administered, and the patient having been placed on his face, I carried an incision through the integument over the tumour six inches in extent. The hamstrings on either side were next separated from it with the point of the scalpel; then detaching the firm connexions of dense areolar tissue, I came down upon the great sciatic nerve. The tumour was now grasped from above, separated from its deep connexions, and from the nerve as far as its bifurcation; about half an inch below this point I found the internal popliteal nerve intimately associated with it. Leaving this point for a moment, to isolate if possible the inferior border of the tumour, I came upon the lower part of the nerve which emerged from the centre of it; therefore a portion of the nerve was running obliquely through and intimately connected with the new growth. Finding that they could not be separated, I divided the nerve above and below (close to its entrance and exit), leaving a space of three quarters of an inch between its ends. The vessels were secured in the steps of the operation, the edges of the wound were brought together, and the limb was fixed to a long external splint. There was some difficulty in rousing him from the chloroform. Arrest of the breathing and suspension of the pulse at the wrist and in the carotids, irregularity of the iris when pressing on the globe of the eye, with extreme dilatation of the pupil, and deathly pallor of the face, betokened some serious functional disturbance, probably arising from the uncomfortable position necessary for the operation and the accidental pressure on the jugular veins; hence the embarrassment in the cerebral circulation and its direct and remote consequences. Artificial respiration, galvanism, ammonia, and various restorative measures were had recourse to, and in about twenty minutes he began to breathe perceptibly and show other signs of returning animation. Some days afterwards he suffered from the effects of the chloroform, characterised by nausea, vomiting, and irritability of the stomach. Locally he complained of a burning pain in his knee, foot, and toes, and jumping of the leg. The temperature of the limb in the course of the divided nerve was six degrees lower than on the anterior aspect of the leg. See following figures:—Left Leg: Anterior surface, 80° F.; posterior surface, 74° F. Right Leg: Anterior surface, 80° F.; posterior surface, 80° F. There was complete anæsthesia of the little toe and outer side and sole of foot, paralysis of the extensors of the ankle and flexors of the toes, as well as the muscles of the plantar region. He progressed very slowly, and, being of an irritable temperament, was upset by the least sound in the ward. Accordingly I advised his parents to remove him into quiet lodgings in the neighbourhood of the Hospital. The wound was now healing gradually.

At the end of a month (September 21) I removed the splint, owing to an abscess which formed over the great trochanter. This was laid open, and the limb kept at rest by means of sand-bags. He then began to complain of cramp in the thigh, and the knee would become frequently bent and the ankle extended. This was attended with great pain, which was increased by bringing the leg to its usual position. The temperature of the posterior aspect of the leg was now three degrees lower than that of the anterior surface.

September 26.—To-day he says that his foot feels as if he had a sock on it, and on exploring the cutaneous surface of the affected limb it is quite evident that he can feel indistinctly in the course of the plantar nerves. The temperature has risen to 79°—*i.e.*, within 1° of the sound parts.

28th.—Since the last note diarrhœa has been troublesome, but the wound is now all but healed. I have advised the parents to take him home, and, as soon as the wound is sound, to let him get about on crutches. He left London on October 1.

November 1.—He was brought to see me to-day. The wound is now quite healed, and sensation in the foot is much improved, although not so good as in the opposite limb. He is able to walk without crutches, but limps, and has no control over the plantar muscles.

His next visit dates December 11. Sensation is now perfectly restored and motion much improved; the limb measures the same as its fellow, and the temperature also corresponds.

April 4, 1868.—I have to-day received a letter from his father, of which the following is an extract: He says—"My son has at last recovered the use of his toes; he first moved them on March 5, 1868, and seems more lame from weakness in the ankle-joint than anything else, but I have no doubt he will soon get over that; he can walk two or three miles at a time without feeling fatigued, and his general health is better than it has been for years.

The tumour on section was found to be made up of nucleated fibres, with which the nerve was intimately connected, the nerve-fibres being to the naked eye lost in the glistening fibrous tissue.

It is an interesting fact that the first symptom indicating the process of repair in these nerves was a modified sense of feeling, and that this sense was almost complete in both cases before much advance was made in motor power.

In Case No. 1, six weeks after the accident, sensation began to return, and was complete by the eleventh week; but motion was not completely restored until the lapse of nearly five months.

In Case No. 2 sensation began to return five weeks after the division of the nerve, but was not perfect before the fourth month. Motion, however, was not restored to all the muscles until the sixth month.

The temperature on the cutaneous surface of the paralysed part was in both instances reduced, but it gradually returned with the nervous functions.

HOSPITAL SHIP "DREADNOUGHT."

CHRONIC DISEASE OF KNEE-JOINT—AMPUTATION OF THE LIMB IMMEDIATELY ABOVE THE AFFECTED JOINT.

(Under the care of Mr. ROOKE.)

THE following case presents some interest from the fact that recourse was had to an operation which, from recently published results, seems to be a good and a justifiable pro-

*

ceeding in cases of knee-joint disease where the general condition of the patient is unfavourable to amputation in the middle third of the thigh, and also where extensive disease of the soft parts about the knee renders resection useless as a means of bringing speedy and complete relief to the patient. In the subject of this report both unfavourable conditions existed; the general health was much impaired, and there was wide-spread disease of the synovial membrane of the knee. Mr. Rooke decided upon amputation at the knee-joint with removal of the articular end of the femur, a proceeding that has been extensively carried into practice by Mr. Carden, of Worcester, and lately advocated in America by Dr. Brinton. The results of this operation were satisfactory with regard to the general condition of the patient. The man rapidly recovered from the shock of the operation, and soon improved in health. The local processes in the stump, however, were not quite so favourable, as speedy cicatrisation was prevented in the first place by extreme retraction of the posterior flap, which caused a large granulating gap to be formed at the back of the thigh, and, secondly, by necrosis of a small portion of the lower end of the femur, which could be felt exposed at the bottom of a circular ulcer in front of the limb. This latter occurrence was probably due to partial removal of the very soft and loose periosteum, an accident which frequently takes place during the operation of resection, and gives rise to much subsequent irritation about the line of incision.

J. J., aged 20, a weak and anæmic Norwegian sailor, was admitted into the *Dreadnought* on December 18, 1867. He was suffering from disease of the left knee, which joint had been swollen for several months.

About ten months before his admission, whilst on a voyage to India, was compelled to lay up on account of stiffness and pain in the left knee. This did not pass off, but the joint slowly increased in size. On his arrival he applied to the Calcutta Hospital, and remained there as an in-patient for three months. He was treated by blisters and leeches, but the joint still increased in size, and became very painful, particularly at night. He was finally sent home as a sick passenger, and during the voyage, which lasted for four months, was unable, in consequence of the increasing severity of his knee affection, to do any work.

On his admission, the joint was very much swollen, and the patella elevated by a soft and elastic material. The skin covering the joint was pale and œdematous, and was marked by four circular ulcers – two at the outer and two at the inner part of the patella; these discharged freely, and were covered by pale and large granulations, but did not lead directly into the interior of the joint. The limb was placed in a M'Intyre splint and suspended in a cradle. This treatment by rest was persevered in for some time, but the health of the patient rapidly gave way. At the end of April, 1868, he had an attack of jaundice, which lasted for several days. After this had cleared off, it was deemed imperatively necessary to remove the local disease.

May 14.—After chloroform had been administered, a large anterior flap was taken from the front of the knee and from the upper and greater part of the middle third of leg. This was dissected upwards, the ligamentum patellæ cut through, and the joint exposed. The knife was then passed between the bones of the leg and the lower end of femur, and carried directly from before backwards through the soft tissues and integument of the popliteal region. The condyles of the femur were sawn through, and the patella removed. After deligation of the arteries, the anterior flap, which seemed to be very redundant, was finally fixed to the short posterior flap by wire sutures.

The patient did remarkably well after the operation. His appetite returned, and he was able to obtain a fair amount of sleep. The stump was placed upon a pillow, and covered with a single layer of lint saturated with cold water. The wound at first appeared to be rapidly closing, but shortly after the removal of the sutures it was noticed that the anterior flap was commencing to retract, and also that the upper lip of the wound was dragged upwards together with the neighbouring soft tissues by the action of the hamstring muscles. Several attempts were made to prevent this separation, but at the end of June a wide gap extended at the back part of the stump from one side to the other, the whole of which was covered by large and vascular granulations. At this time a small portion of skin over the lower end of the sawn femur in front commenced to inflame, and at last gave way, leaving exposed a small portion of bare and necrosed bone.

In the course of the month of July, after careful attention to the position of the limb and firm bandaging above the wound, the gap was much diminished in size; the contraction of the granulations gradually restored the anterior flap to its former position, and brought it downwards over the end of the stump.

July 31.—A narrow wound exists at the back of the stump, which is cicatrising rapidly. Ulcer in front of thigh diminishing in size, and covered entirely by granulations. The dead bone is no longer visible, and has evidently been thrown off. Health of patient very good; he is able to sit up, and has frequently been carried to the upper deck for the purpose of getting fresh air.

After the amputation it was found that the disease of the joint consisted in extensive gelatiniform degeneration of the synovial membrane, softening of the ligaments, and commencing ulceration of the articular cartilage of the patella.

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Medical Times and Gazette.

SATURDAY, AUGUST 22, 1868.

CHILDLESS MARRIAGES.

We have often had occasion to point out how entirely natural history, morals, and religion agree as to the nature and duties of marriage. There must be, to fulfil the purposes of creation, a succession of human beings on the earth. The strongest impulse of man leads him to seek the sweet society of woman, but such society cannot be had without the prospect of offspring. All animals who pair are led by irresistible instinct to provide for their progeny simultaneously with the indulgence of love. The sexual instinct, taken as a whole, demands the one as clearly as it does the other. To gratify the feelings of love without provision for the results would be a strange and unnatural perversion of instinct in a bird, but in a rational being is an offence against morals as well as against the higher sanctions of religion.

As it is the duty of a man who lives with a woman to make some reasonable provision for children, and as no such provision is good for anything in a civilised country unless it include marriage and a home, so there is no greater inducement to industry, frugality, temperance, and every other moral virtue, than the desire to marry and to provide for children. We do not say that a man ought not to marry without a fortune and heavy settlements; but he ought to be in possession of employment and sufficient wages. On the other hand, reckless and improvident marriages, in which there is no reasonable hope of being able to rear children, are offences against natural law, morals, and religion. "Marriage is not by any to be taken in hand unadvisedly, lightly, or wantonly, to satisfy man's carnal lusts and appetites, but reverently, discreetly, advisedly, soberly, and in the fear of God; duly considering the causes for which matrimony was ordained,"

of which causes the production and rearing of children come first.

But not only ought those persons to defer marriage who have no reasonable prospect of rearing children, but married persons, for various reasons, may sometimes feel it prudent for a time to abstain from the chance of adding to their families. We say nothing of the religious motives for occasional continence which are spoken of in the Pentateuch and in the writings of St. Paul, but may point to the well-known fact that some delicate women bear children too fast; they do not go their full term, and they cannot suckle their babies; one comes after another in ten, eleven, or twelve months, so that there may be five children in five years, instead of the regular rate of two in three years. Let us observe that it would be a good general rule were the Jewish period of seclusion of women after childbirth uniformly observed amongst ourselves. The interval from Christmas to Candlemas would be better than the conventional month. But where the mother cannot nurse and has children too fast, common sense dictates a continence long enough to enable her to recruit her health thoroughly. A high birth-rate and a high death-rate of infants are but too apt to go together; and delicate children born too fast are cut off remorselessly by bronchitis and diarrhœa. Hence prudence dictates a certain degree of continence, and the Medical Practitioner may at times beneficially bring the prudent view of things before married people. But this is a mere common-sense matter. It simply requires a little discretion and self-denial, and cannot anyhow be considered injurious to health or to require Medical interference.

Far otherwise, however, is it if the parties desire to gratify the instinct of sex, but to avoid the production of children. Devices for this purpose are as old as lust itself; but they seem from times the most primæval to have been peculiarly infamous. Biblical students do not need to be told of the histories of these crimes in the Book of Genesis. Smith's Dictionary of the Bible, speaking of one notorious offender, says, "He found means to prevent the consequences of marriage, 'and what he did was evil in the sight of the Lord.'" Crimes like these for the prevention of the procreation of children gave rise to the especial odium in which the ancient heretical sect of Manichees were held by Christians, and formed the excuse for the extermination of the Albigenses and other heretics of the middle ages who were alleged to be addicted to nameless and unnatural practices of the kind.

We of the nineteenth century see strange things. We find political economists (so called) afraid of a numerous population—as if wealth of any sort could be got without labour, and work, in peace or war, be done without hands. That there may be too many people in one place is possible; and the history of the human race shows the need of occasional emigration. But it is strange to find respectable men like Mr. Matthew Arnold (in the current number of the *Cornhill Magazine*) remonstrating against large families, because such large families must work hard for their living, or, as he says, "live a servile and ignoble life." The world is not half explored yet, and there is plenty of room for more hands to increase our comforts and luxuries.

Still more funny is it to find these most ancient and accursed sexual crimes whereby married people may suppress infant life deliberately treated of by personages of "advanced" political views, as if they were new remedies for the evils of society. Charity compels us to hope that they do not understand what they are talking about, and the sooner they confess this the better. Long before Mr. Hepworth Dixon's book on New America, the Physicians of that country told us of the unnatural and perverted instincts of their "cultivated" women, and uttered indignant remonstrances against them. Of the alleged customs of the French we will not speak. But neither in France nor in America are the Medical Profession accomplices in these crimes, nor will they be be so here, spite of Lord Amberley's invitation.

CLUB DOCTORS AND THEIR REMUNERATION.

The subject of the inadequacy of club remuneration and the best means of remedying the evil is, in its present phase, an eminently unpleasant one. In several provincial towns the Medical attendants of clubs have fixed on a certain scale of payments, and have steadily refused to give their services for less. The clubs thereupon have advertised for and imported other Doctors, to take the places and the pay refused by the original possessors, who, in their turns, are roused to retaliation and tempted to coercive measures by finding themselves thus publicly undersold by members of their own Profession.

On the original question, amongst educated people at least, there cannot be two opinions. The payment to a qualified Medical Practitioner of half a crown, three shillings, or even of five shillings, for attending and accepting the responsibility involved in the care of the health of a full-grown man during three hundred and sixty-five days and nights, must be allowed to be ridiculously small and utterly inadequate. Nevertheless it is true that the Medical Profession have for a number of years accepted these sums, and that they are munificent in comparison with the payments which the Government of the country legalises for the care of the health of its pauper subjects. Practices founded and mainly composed of such appointments have yielded a scant subsistence to the Doctor and his family. The impossibility of making any provision for the future under such circumstances has indeed long been felt, and at last Medical men are beginning here and there to unite for the purpose of obtaining better terms. Here and there the truth is beginning to dawn that, in the present state of society at least, work without adequate payment is not the only thing for which to live, and that it is not to the credit of the Medical or of any other profession to be represented in every eleemosynary institution, and to furnish a constant supply of widows and orphans to be provided for by public and private charity.

We hold that the time has come when, if the Medical Profession were in any degree true to itself, the foundation of a thorough reform both in club and pauper practice might be laid. Ways of influencing public opinion through Parliament and through the press are open which were unknown to a former generation. But we are obliged to confess that at present, for all political purposes, our Profession is "a disorganised rabble." Adequate Medical representation in Parliament would strike at the root of the abuses of the Poor-law Medical Service, and fair Government remuneration to the Poor-law Medical officer would raise the current value of Medical services throughout the kingdom. But what is the fact? Three seats were substantially given to our Profession by the enfranchisement of the University of London and the four Scottish Universities; in two of the three the return of a Medical representative is utterly hopeless, and in the other it is confessedly doubtful. The same want of unanimity and cohesion prevails on the small scale. If the Surgeons of a town refuse to attend clubs of working men under a certain payment, the lodges laugh in their sleeves, and advertise for a Doctor at their own price. They know full well that they can rely upon plenty of applicants.

Under such circumstances, is there any cause for surprise if the Medical men of a town who have banded together to assert the true value of their Professional services are irate and indignant at the settlement amongst them of interlopers who have accepted the insulting pittances offered by the clubs? It is not in human nature to hold out the right hand of fellowship to the new-comers. Nor do we think they deserve it. Any man who chooses to place himself in the position of endeavouring to obtain an advantage over other members of the profession to which he belongs by publicly underselling them, behaves in an unprofessional manner, and can

have no reason to complain if he be not admitted to their intercourse.

It is perfectly competent to any Professional man, be he general Practitioner or consulting Physician or Surgeon, to decline to meet in practice a person who thus acts, nor can he be blamed for doing so. But here a line must be drawn. For a Medical Association to institute combined action to prevent such a person obtaining help and assistance in the practice of his Profession from consulting Medical men, or to visit with threats or penalties any consulting Physician or Surgeon who may meet him, is a course probably illegal and certainly impolitic. Medical Associations cannot afford to adopt the tactics of trades-unions. It will be a bad day for Physic when such an imputation can be fairly thrown upon them. If Medicine be not what it professes to be, an enlightened and beneficent Profession, it is far less worth following than many a trade. The ethical code of the workshop would shut up all our Hospitals and terribly cut down our *clientèles*. This aspect of the case, however, affords no reason why the force of Professional opinion should not be brought to bear on individuals who are willing to undersell their brethren for the miserable baits held out by Odd Fellows' and Foresters' lodges. We say nothing of the short-sighted folly of the proceeding. Working men are not fools, and they know that a good thing must be fairly paid for. In some places at least, we hear that the practice of undersel'ing has been tried, and has brought anything but prosperity to the undersellers. The labourers or artisans who were to be attended for two shillings or half a crown a year soon became dissatisfied; "cheap and nasty" ran in their heads, and in the end they went back to the respectable Practitioner, who then made his own terms. But gentlemen who thus put themselves in direct opposition to their brethren must not be surprised if they are quietly excluded from their friendship and society. They must clearly understand that they are held to be acting a part derogatory to themselves as Professional men and injurious to the commonwealth of Medicine, and they can have no reason to wonder if they are refused the countenance of their Professional neighbours.

THEORIES OF CHOLERA.

THE ZYMOTIC THEORY.

(*Continued from page* 180.)

Now let us see what are the facts as to the natural history of the minute bodies, whose consequences are so portentous.

"Pasteur proved that ferments are organised bodies, differing in character, and living usually in the absence of free oxygen, which they have the power of appropriating or detaching from its feebler chemical combinations. Thus the ferment of butyric acid is a kind of vibrion. Tartrate of lime dissolved with phosphate of ammonia and alkaline or earthy phosphates in boiled water, from which air is excluded, remains unchanged for an indefinite time; but so soon as a few infusorial forms from a previous spontaneous fermentation of the tartrate are sown in the phial the vibrions multiply rapidly, and the tartrate is converted into a mass of deposited vibrions of about a thousandth of a millimetre in diameter, and of variable lengths. The vibrions are reproduced by fissiparity, and during the whole process of fermentation every particle of the deposit under the microscope exhibits a multitude in rapid wriggling motion. This vibrion differs from those that create butyric acid, and there are several varieties. When the water is unboiled and is exposed to the air, the tartrate of lime ferments spontaneously in the course of a few days, and gives place to a mixture of animalcules living without free oxygen. The same change of the materials takes place in a phial full of a solution in aërated distilled water. The smallest of the infusoria, *monas*, *bacterium termo*, are developed in the aerated distilled water, because it holds in solution oxygen, traces of ammonia, with phosphate and tartrate of lime, and these animalcules take from it integrally, with incredible rapidity, all its oxygen, which is replaced by rather more than its volume of carbonic acid. This effect is produced within twenty-four or thirty-six hours at the utmost, at a temperature ranging from 25° to 30° Centigrade. Then, and not till then, appear the infusorial ferments which can live without free oxygen gas. To the question, How can animalcules be generated which live without oxygen and perish in air? the reply is, they are generated after the birth of a first generation of large consumers of oxygen that deprive fluids completely of that gas. The proper ferments take their oxygen or carbon from existing organic compounds; and even putrefaction in air-tight vessels is carried on by infusoria living without free oxygen, while in the open air they are associated with other types that consume free oxygen: the sulphuretted hydrogen and other compounds affecting the smell are only incidental products. Putrefaction itself is a struggle of different forms of life for organic matter.

"In the microscopic world a multitude of minute bodies form a sort of borderland on the confines of the three kingdoms differing essentially in their nature, and animated by forces generating forms giving rise to most extraordinary phenomena.

"The cholera flux (rice-water evacuations) contains albuminous matter, silica, phosphates, sulphates, and carbonates of lime, potash, and soda, as well as a considerable quantity of chloride of sodium. A characteristic feature under the microscope is the 'granular corpuscle;' on a mucous base it forms the bulk of the deposit which subsides in most samples. 'Myriads of vibrions,' says Dr. Hassall, 'have been detected in every drop of every sample (twenty-five) of rice-water discharge hitherto subjected to examination. Of these vibrions many formed threads more or less twisted, which, under the microscope, presented a dotted appearance.' 'In none of the samples were sporules or threads of fungus present, or a peculiar body of any kind noticed other than the vibrions.' He examined and found them in the small intestine twelve hours after death, and by a special arrangement at St. Bartholomew's Hospital in two cases immediately and in several cases within two hours after death. He concludes that they are 'constantly present' in the cholera fluid, that they are developed in it during life, and are found so high up the bowel as the small intestine. Vibrions he found in healthy fæces only in small numbers, and thinks they might be generated in the lower bowel where incipient decomposition begins. Vibrions thrive in alkaline organic or feebly acid matter, and sulphuric acid destroying their conditions of life destroys the vibrions. 'Vibrions are true *aquatic productions*, unlike fungi, which are for the most part aerial, fluids being the media in which, as far as I am aware, they are always developed, and to which they are usually confined.' (Hassall, p. 305.) They are not distilled, even from rice-water fluid, and yet Dr. Thomson found them in small quantities in the distilled water through which the air of a cholera ward had been drawn, as well as in sewers. Hassall also found in the breath of cholera patients a few, on their linen abundance of vibrions.

"As vibrions are found in impure water, and wherever putrefaction is going on in the absence of acids, Hassall did not venture to regard them as the cause of cholera. The tendency, in fact, when this excellent microscopic observer wrote, was to regard vibrions and other ferments as results, and not as causes, of putrefaction.

"The best microscopists insist that it is organised matter still minuter, and at the utmost verge of vision, that is found in zymotic disease. Pasteur calls the stuff, or zymine, 'granulations' in the diseased silkworm. Beale designates it degraded 'germinal matter' in the cattle disease. Pacini names it in cholera 'choleragenic molecules' (*molecole colerigene*). Every one of these little living molecules moving under the microscope has the power of producing out of suitable matters, by conversion of force alone or conjunctively, molecules identical in nature and power: they have all its character of life; they generate, they die, that is they are turned into other forms by other forces; and in common with the ova of higher species the secret of their metamorphic power has hitherto eluded the finest analysis of chemistry, the highest power of the microscope."

In a subsequent number we shall see how Dr. Farr shows the zymotic theory to be adequate to explain the limitation of cholera, as well as its propagation.

ROYAL COLLEGE OF SURGEONS.—The Library and Museum of this institution will be closed as usual during the month of September.

THE WEEK.

TOPICS OF THE DAY.

"SCHOLARES NON ASCRIPTI" are henceforth to be admitted students in the University of Oxford—in other words, in order to obtain the benefits of an Oxford education, it is no longer necessary to enter at a College or Hall. All that is necessary to become an unattached student is to forward to the delegates for licensing lodging-houses a certificate of good character and the consent in writing of parents or guardians, and to be ready to give proof of having received a fair schoolboy's education in classics and mathematics. The only necessary fees and dues to be paid are—upon matriculation £5, and subsequently £3 10s. per annum. These payments entitle the students to the advice and supervision of tutors and to all the University advantages which are the privilege of undergraduates. Of course, unattached students will have to reside in lodging-houses licensed by the University, unless they live with parents, and the delegates for licensing lodging-houses appointed by the University will exercise over them the same authority which is exercised by heads of colleges and halls over their students. These regulations certainly open a tempting prospect to students generally who are not over-blessed with wealth, and to none more than to young men intending to choose Medicine as a Profession. We believe that the advantages of an Oxford or Cambridge education, instead of being lowered by the competition of more modern institutions, have never been greater than at present, and we are rejoiced that these advantages are thus brought within the grasp of the sons of hardly worked and slenderly paid Professional men.

Dr. Humphry Sandwith, C.B., who served with so much distinction as principal Medical officer during the siege of Kars, and wrote an account of that most gallant defence, is announced as a Liberal candidate for Marylebone. His sponsor is Mr. Goldwin Smith, and we need scarcely add that his political views are not colourless. His election would undoubtedly make a valuable addition to the little band of Medical men whom we hope to see in the new Parliament.

As might have been expected from the known opinions of the new President of the British Association, his address at Norwich was largely composed of an exposition of and tribute to the views and labours of Mr. Darwin. The truth of that eminent naturalist's theories is undoubtedly the scientific question of the day, but it is scarcely to be affected by the number of editions "The Origin of Species" has reached. Yet Dr. Hooker quoted the sale of the book and the number of its foreign editions as an answer to a reviewer in the *Athenæum*, who said that Mr. Darwin's theory is a thing of the past, and that natural selection is rapidly declining in favour. We have heard "The Origin of Species" called a scientific romance, and certainly the sale of so interesting a book cannot be taken as any proof either of its scientific value or of the number of converts it has made.

Mr. Kinglake's statement on the subject of the neglect of the wounded Russians after the Alma continues to call forth indignant rejoinders from army Medical officers. In a letter to the *Times*, Deputy Inspector-General Massy enumerates the following officers as having been specially employed in treating the Russian wounded:—Surgeon-Major Evans (then an Assistant-Surgeon); Inspector-General Dumbreck; Mr. Alexander and Sir James Gibson, the late Directors-General; Inspector-General A. Gordon; Staff-Surgeon Mitchell; Professor Longmore and Surgeon-Major Watt of the 15th Hussars. Deputy-Inspector Massy states that on the 21st he alone must have attended at least fifty wounded Russians, and performed several capital operations. He adds, "No one of any capacity was deserving of more praise for his unceasing energy and attention to the wounded on this occasion than Dr. Dumbreck." Dr. Dumbreck, our readers will recollect, was one of the Medical officers who were especially singled out by the newspapers as scapegoats to bear the blame of the breakdown of our rusty military system.

Dr. Diplock, the recently elected Coroner for West Middlesex, has made another unsuccessful attempt to obtain his salary from the Middlesex magistrates. He has addressed a letter to the chairman of the Board, and his solicitor has written to Mr. Kemshead, of the Committee of Accounts, offering a valid guarantee, securing the county against double payment. The magistrates, however, refuse to pay any salary until the claims of Dr. Diplock and Dr. Hardwicke have been adjudicated in the Court of Queen's Bench. Under these circumstances is it to be understood that, in case Dr. Hardwicke is successful, all Dr. Diplock's services in the coroner's office are to be entirely unpaid, and the arrears of salary are to be handed to Dr. Hardwicke? This scarcely seems fair.

A case of alcoholic poisoning is reported at West Hackney, in which a man is said to have drunk thirty-two half-quarterns of rum, besides beer, in the latter part of one day. Dr. G. White proved that the cause of death was congestion of the brain, and the jury returned a verdict that deceased had died from drinking rum.

CHAIR OF CHEMISTRY IN ST. MARY'S HOSPITAL.

THE Committee of St. Mary's Hospital met last Wednesday to receive the testimonials of candidates for the vacant office, and to select a successor to Dr. Matthiessen, F.R.S. The choice fell unanimously on Dr. W. J. Russell, one of the Secretaries of the Chemical Section of the British Association. Dr. Russell is therefore *de facto* elected, since the appointment by the Board of Governors is a mere piece of formality which it would be well if Medical schools could dispense with. Dr. Russell is an original inquirer and an experienced teacher. He sent in testimonials from Herr Bunsen, under whom he studied in Germany, and from Professors Frankland, Williamson, Miller, Odling, Roscoe, and Matthiessen, all certifying to his ability as a lecturer and to the great importance and wide reputation of his published investigations.

THE CHAIR OF BOTANY IN TRINITY COLLEGE, DUBLIN, AND THE UNIVERSITY OF GLASGOW.

THE Chair of Botany in the University of Glasgow has been filled by the appointment of Dr. A. Dickson, of whose acquirements and reputation we have already had occasion to speak so highly. We may safely congratulate the Glasgow Senatus Academicus on the addition to their body of a skilled man of science and a true gentleman. By this appointment the Chair of Botany in Trinity College, Dublin, previously held by Dr. Dickson, becomes vacant, and we already hear of Dr. E. Percival Wright, Professor of Zoology in the same institution as a candidate for the vacant post. Dr. Wright is better known as a zoologist than as a botanist, but the talents which have made his name familiar to workers in zoology will go with him should his attention be transferred to another branch of the great subject of natural history. The Rev. Dr. J. C. Browne is also spoken of. He has already lectured on the subject, when King's College, Aberdeen, possessed a separate School of Medicine, and at the Cape of Good Hope he had opportunities for extending his knowledge among the beautiful flora of that region. Another candidate exists in the person of Mr. M'Nab, but doubtless, before long, the list will be increased from the eager ranks of industrious, but too often, from a worldly point of view, unsuccessful, workers at natural science.

ANOTHER MEDICAL J.P.

OUR readers will be glad to hear that the Lord Chancellor has appointed D. Devereux, M.R.C.S., L.R.C.P., a Justice of the Peace for the Borough of Tewkesbury.

PAUPER SICKNESS IN WHITECHAPEL.

Mr. Liddle, the indefatigable Health Officer of Whitechapel, calls attention, in his quarterly report just published, to the great increase in pauper cases of sickness in the district—viz., from 11,392 in 1860, to 17,181 in 1867. The total number of sick paupers, including those in the workhouse, is 20,000, out of a population of 78,000. Mr. Sequeira, one of the Medical officers of the Union, has called attention to the injury occasioned to the labourers in the dry goods department of the Docks by the irritating dust disengaged in manipulating tea, hemp, jute, indigo, and seeds. A ventilating fan is suggested. Mr. Liddle complains of the want of a proper staff of inspectors.

NEW VILLAGE HOSPITAL.

We are glad to learn that another of these valuable institutions has been set on foot in the country, this time at Lytcham, in Norfolk. The district is a thickly populated one, and the nearest Hospital is at Lynn, sixteen miles off, that at Norwich being twenty-five miles distant. It is precisely under such circumstances that village Hospitals are to be recommended. Now that machinery is so much employed in agricultural operations, accidents are not so rare as they were wont to be, and nothing can be more dreadful to contemplate than the sufferings of a poor mangled wretch who has to be conveyed over miles of execrable road before he can reach his haven of safety in the County Hospital. Even admitting that the appliances at the disposal of the village Surgeon are inferior to those to be met with in the more pretentious institution, we are inclined to think that immediate treatment and the diminution of the fatigue incident to such journeys, are of even greater value than elaborate apparatus. The Hospital at Lytcham is supported partly by voluntary contribution, partly by the parochial guardians, and has, we trust, a mission of usefulness in store for it. Mr. Hazard, the Surgeon, tells us that two cases of injury, the one from a kick by a horse, the other by a mowing machine, have already been treated in the new institution.

THE MAURITIUS EPIDEMIC.

We learn by latest advices from the Mauritius, dated July 17, that during the immediately preceding month the health of the island was continuing better, although the diminution in the prevalence of fever was not quite so rapid or decided as might have been expected from the improvement in the weather, which had become cool and dry. At Port Louis fresh cases of fever were still occurring among new arrivals, but relapses were neither so frequent nor so severe. In the central parts of the island, also, fresh cases were still not uncommon, but the attacks were of a much milder nature. The death-rate at Port Louis, notwithstanding the general improvement, was still nearly double the normal average, the excess being due chiefly to the malarious fever and its most serious sequela, dysentery. The troops generally were in better health. Fresh cases of fever were not half so numerous among them as they had been during the preceding month, and it is said that none had occurred during the last ten days, but a good many men were still in Hospital, and two deaths had occurred in the 32nd Regiment.

PERMANENT ANATOMICAL PREPARATIONS IN HOSPITAL MUSEUMS.

It would be of the greatest value to the student and assistance to the teachers if preparations similar to those used in the examinations at the College of Surgeons were added to every museum. There would thus be permanent references to the more unusual dissections, which are, by some students at least, rarely seen. It cannot be expected that the extraordinary excellence of these preparations is to be attained everywhere, but we think that a few hints on the method of "putting them up" may not be amiss. The materials required are very simple and cheap. The part is first carefully dissected *under* water or spirit, and with *scissors*, in order to remove any particles of cellular tissue or fascia. Next, an ordinary earthenware pan, suitable in size, glazed inside, is taken, and the lip ground perfectly flat on a flagstone with sand and water in order to adapt a round glass top, which any glazier can furnish. The nidus for the specimen is next made by mixing plaster of Paris and water, in which the specimen is placed before the surface has commenced to set. The plaster should be coloured with a little French blue, or the surface of ordinary plaster may be subsequently coloured by pouring over it a coloured stratum. The specimen should then be thoroughly washed with water, or spirit and water, care being taken that the plaster is quite set, and when the dissection is complete and the part arranged—a matter of great nicety—the spirit which is to preserve it should be poured over it, so as completely to cover it. The glass top is conveniently and securely kept on by a stout india-rubber band made specially, which should overlap the glass and pan at right angles for about an inch or an inch and a half. This description roughly explains an excellent system; but skilful manipulation and neatness, and, above all, a certain amount of practice in dissection are necessary, or the result will not be satisfactory. We are glad to see that specimens of this description are already being made at Charing-cross Hospital and at St. Bartholomew's.

PROMOTIONS IN THE ARMY MEDICAL DEPARTMENT FOR SERVICES IN ABYSSINIA.

The names of the following Medical Officers appeared in the *Gazette* of the 14th inst. as having been promoted by command of her Majesty in consideration of their valuable services with the Abyssinian expeditionary force. Deputy-Inspector General of Hospitals Samuel Currie, M.D., C.B., to be Inspector-General of Hospitals; Staff Surgeon-Major Thomas Guy, M.D., to be Deputy Inspector-General of Hospitals; Surgeon Neil Henry Stewart, 3rd Dragoon Guards, Surgeon James Sinclair, 33rd Foot, and Surgeon Charles Dodgson Madden, 4th Foot, to be Surgeons-Major. Dr. Mahaffy, Principal Medical Officer of the First Division, has been made a Companion of the Bath. The problem of how to reward services so as to satisfy the fortunate recipients without causing discontent among others not so fortunate, but quite as willing and able, has, we fear, made no progress towards solution in the present instance. In the other departments of the army the system of promotion by brevet, while advancing officers in the general roll towards the rank of general, gives no actual regimental or departmental rank. A captain in the corps of Royal Engineers, for instance, may be promoted to the rank of colonel in the army, and still occupy his old regimental position with a merely nominal increase of pay, while he at the same time creeps onward in the list of field officers. But it is not so in the Medical Department, and the promotions from Surgeon to Surgeon-Major which we have recorded above carry with them a very substantial increase in pay, besides actual advancement over the heads of many senior officers. No doubt it may be encouraging to the officers of the Army Medical Department to see merit rewarded in their branch—as it was to Mr. Snagsby, in "Bleak House," to think, in the heat of a London summer, that he lived in an island with the ocean "a rolling and a bowling on all sides of him," that being his share of the cool sea breezes—but it cannot be pleasant for them to have the painful sensation of the reward being entirely at their expense. They could hardly find a reason for objecting to the pecuniary reward of their fellows at the expense of the public; but when absolute departmental superiority goes along with it they cannot but feel that their going down in the see-saw of promotion contributes more than their share to the elevation of others, and causes to many of them a very disagreeable prospect of per-

manently sticking in the mud. We incline strongly to the opinion that a more liberal distribution of the honours of the Order of the Bath—not limiting them to those officers now promoted—and promotion in some of the higher ranks would have been more gratifying to the Department generally, and would have fully met all the requirements of the case.

THE MELBOURNE SNAKE BITE.

The singular case of death from snake bite at Melbourne, of which we lately gave a history, was brought to a close by the trial for manslaughter and acquittal of Shires, the man who vaunted himself to be possessed of an antidote, and whose snake had bitten Mr. Drummond. The chief interest in the case is attached to the evidence of Professor Halford, who seems to have been in fact a *particeps criminis*, inasmuch as he had once allowed Shires to be bitten in his presence. This charge, however, was repelled by showing that Shires was really impregnable to the bite of the snakes used, as was proved by ample testimony. Not the least interesting portion of the evidence is that relating to the treatment of Mr. Drummond after his visit to Professor Halford; the unfortunate gentleman persisted in saying that there was nothing the matter with him, even when it was painfully evident to all around that he was sinking rapidly. When Dr. Halford and another Medical gentleman, Dr. Wooldridge, called upon him at his own house, he was found lying on a sofa, but jumped up and walked about when requested to do so. Ammonia and rum were ordered to be freely administered, and the Medical gentlemen left. Something like a censure was attempted to be passed on them for leaving Mr. Drummond at this time. But what could they do? They could not take possession of the house and compel the patient to swallow what remedies they pleased. And when a man decidedly, however politely, insists that he has no need of you, it may be rather difficult to do otherwise than comply with his wishes, and leave him to himself. The unfortunate end of the case, in spite of the enormous quantity of stimulants given, is known to all. On the trial it came out that the vaunted antidote consisted essentially of iodine combined with ammonia in alcohol. It is curious to know that a remedy for some time in favour in America, and which really seemed, according to the Medical officer attached to one of the United States Rocky Mountain expeditions, to be of service in some cases of rattle-snake bite, also consisted of iodine and bromine with, if we remember aright, the addition of a small quantity of corrosive sublimate. Latterly it also failed, and was abandoned It is strange that up to recent days the subject of snake poisoning seems to have been almost entirely overlooked, and it is even now a matter of no small difficulty to form a tolerably accurate list of venomous snakes. Professor Halford's researches, however, and those partly set agoing by Dr. Shortt in India, promise to supply us with somewhat more accurate information on the subject. The extraordinary statement made by Professor Halford as to the existence of innumerable bodies in the blood of those who died from snake bite has at least stimulated investigation, and if further researches do not confirm the belief, they will have the negative merit of clearing away an error. Some of the Indian journals, as the *Indian Medical Gazette*, literally teem with accounts of experiments with cobras and other poisonous snakes. From these we trust to obtain increased scientific knowledge, even should they fail to add to our means of curing patients who have been bitten by the more venomous kinds of snakes. Dr. Halford, in his evidence at the trial alluded to above, says that the greater part of those bitten by venomous snakes recover. In this we are inclined to think he is correct; otherwise the prospect would be sad indeed, for until we can obtain something more powerful in the way of a specific than ammonia and alcohol, we must really leave the patient to the efforts of nature to overcome the noxious influence of the poison. Dr. Berncastle, however, writing to the *Melbourne Age*, holds that three things are alone necessary for the cure of snake bite. These are the removal of the injured portion of skin, the free use of alcohol, and absolute rest. These, he says, have succeeded in America and New South Wales, but they may not when the snake is as dangerous as the cobra.

FROM ABROAD.—VACCINATIONS IN THE PRUSSIAN ARMY—M. KŒBERLE'S RESULTS IN OVARIOTOMY—THE NEW FRENCH LABORATORIES—TOBACCO.

The Prussian Government has just published the annual report on the results of vaccination and revaccination in the army. During 1867 127,279 soldiers were vaccinated, and, among these, the cicatrices of former vaccinations were distinct in 107,778 (84·68 per cent.), indistinct in 13,291 (10·44), and non-existent in 6210 (4·88). Vaccination was followed by regular results in 79,670 (62·59), by irregular results in 12,372 (9·72), and was without effect in 35,237 (27·69); of these last 34,790 were again vaccinated, and in 11,775 instances (33·85) with, in 23,015 (66·15) without, success. The entire number of successful vaccinations amounted to 71·84 per cent. Among these 91,445 successful cases there were 47,236 (51·66) in which the true pustules varied from one to five in number; in 27,544 (29·69) from 6 to 10; in 15,074 (16·48) from 11 to 20; and in 1591 (1·74) from 21 to 30. The total number vaccinated during the years 1833·67 inclusive amounts to 1,787,824, and the mean percentage of success for that period is 63·21. During the year 1867, there occurred in the entire Prussian army 164 cases of variolous disease—viz., 19 of varicella, 134 of varioloid, and 11 of variola, two of these last proving fatal, and none of the 11 having been revaccinated. During the years 1834-67 inclusive, there have occurred 3601 cases of the three forms of variolous diseases in the Prussian army, of which number 113 have proved fatal, or 3·138 per cent. With respect to vaccinating with a mixture of glycerine and vaccine virus, so strongly recommended by Geh. Rath Dr. Müller, the present reporter, Staff-Surgeon Prager, observes that the trials have not been sufficiently numerous in the army to enable him to come to positive conclusions. He observes that we should scarcely expect such good results from its employment in revaccinating recruits as have been obtained in the primary vaccination of infants. The matter is, however, to be thoroughly investigated and reported upon next year.

M. Kœberlé furnishes (*Gazette Hebdomadaire*, August 7) an elaborate account, accompanied by several tables, of the ovariotomy operations he has performed. Commencing in 1862, he has, to the present time, performed the operation sixty-nine times. All these cases he has published, whatever their results, as they have arisen, and this is the general recapitulation of the whole:—As the general result, the recoveries amount to two-thirds, but in the last twenty-two cases there have been only five deaths. During the first year there were 6 cases, with 1 death; in the second, 4 cases and 2 deaths; in the third, 8 cases and 2 deaths; in the fourth, 9 cases and 4 deaths; in the fifth, 19 cases and 9 deaths; and in the sixth, 23 cases and 6 deaths—total, 69 cases and 24 deaths. The results as regards the most serious cases, owing to the improvements which have been effected in the operation, have greatly improved during the later years. Thus, while during 1867-68, of 11 *cas graves* 6 recovered, in 12 *cas graves* occurring during the preceding two years only 2 recoveries took place.

At the instigation of the indefatigable Minister of Public Instruction, M. Duruy, the Emperor has just published a decree for the organisation of, and providing the funds for, two classes of laboratories—one to be devoted to the purposes of teaching, and the other to the pursuit of investigations by the masters in science and their selected pupils and assistants. To the first of these, the "school-laboratories," the students in chemistry, pharmacy, natural history, physics, etc., will be freely admitted and practically taught. From these, too, the

directors of the "laboratories for investigation" will select their auxiliaries from among the most promising pupils. Not infrequently the same *savant* will be the Professor in the one laboratory and the Director of the other, just as both establishments may exist in the same locality to their mutual advantage. A council of eminent men of science is to be formed for the purpose of aiding the Minister in the creation and development of these institutions and selecting the *savants* to whose direction they are to be confided. The creation of such laboratories will furnish some well-paid posts, enabling the holders to dispense with other appointments, and to devote a sufficiency of their time to the new institutions. An essential condition is to be that those who are in possession of them are to be at entire liberty in the direction of their own investigations and the studies of their assistants, pursuing, quite independently of any official programme, the course which they deem most likely to benefit science.

"These two kinds of laboratories will fulfil, as regards the public service, two quite distinct requirements—the diffusion and the progress of science—while the different aptitudes of the students will in like manner be provided for. Some of these need only the spirit of comprehension which enables them to seize and appropriate the knowledge displayed to them; but others, animated by the spirit of investigation and invention, may peradventure contribute to the advancement of science if we place at their disposal the means indispensable for scientific investigation."

It is certain that a man of M. Duruy's practical energy will not let this remain a mere paper decree, but will soon breathe vitality into it. This is one of the consequences of emulation with Germany in which we can indeed express our warmest admiration and sympathy, as well as our confident anticipations of successful results.

In an interesting article on the Government tobacco manufactured in France, M. Ducamp, commenting upon the exaggerated statements that have been made as to the ill-consequences which attend the use of the "weed," observes that one learned Academician goes so far as to attribute the increase of lunacy in France to the augmented consumption of tobacco. While the revenue derived from this in 1838 was only 30,000,000 fr., there were but 10,000 lunatics, while when, in 1862, this had risen to 180,000,000 fr., the lunatics numbered 44,000. M. Ducamp observes that the learned Doctor forgets to deduct 47 per cent. of the lunatics as being females, and not smokers, while he does not take into account that during the last twenty years France has become invaded with the passion for strong drinks which before characterised the northern nations. It is to the alcoholism produced by *absinthe*, with its 72 degrees of alcohol, that the increase of insanity is in part to be attributed much rather than to tobacco. The case of the sailors is one in point. Constantly chewing tobacco, they introduce much more of its poisonous ingredients into the economy than the smokers; but the 30,000 men of whom the fleet consists present just their normal proportion of lunatics. Moreover, Brest alone furnishes as many lunatics as the other four naval stations put together; not that the Breton soldiers chew more, but that they are of notoriously drunken habits. We may here mention that while snuff-taking is greatly diminishing in France, the practice of chewing is on the increase; for while in 1861 there were but 533,918 kilos. of quids manufactured, these rose in 1865 to 634,669 kilos. Among the numerous *employés*, both male and female, at the manufactories, no special maladies are observable, except accidental conjunctivitis. It is true, their sanitary condition and ailments are carefully provided for. Alluding to the intensely poisonous effects of the nicotine of tobacco, which are indeed sometimes exhibited on unfortunate animals straying into the laboratory of the establishment, M. Ducamp observes that it is ridiculous to compare, even in degree, the effects of this separated product with the results observed when it exists in combination with other matters. It would, indeed, be to revive Sir Fitzroy Kelly's celebrated explanation of the presence of prussic acid in a case of poisoning by the fact of the victim having just eaten an apple, the pips of which contained this dangerous ingredient. One of the results of manufacturing tobacco is to remove a portion of this nicotine, so that 300 kilos. of tobacco which contained $12\frac{1}{4}$ kilos., after undergoing washing, fermentation, and evaporation, only retain 8·85 kilos. At the manufactory at Gros Caillou, in this way, 94,290 kilos. are destroyed annually—*i.e.*, a quantity sufficient to poison the whole of France. To smokers and others interested in the tobacco question we can strongly recommend a perusal of M. Ducamp's paper in the *Revue des deux Mondes*, August 1, for an excellent account of the elaborate and scientific procedures carried on by the French Government with the view of securing excellence, cheapness, and purity.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(*From our Special Correspondent.*)

Norwich, August 19.

"This is our opening day" for the thirty-eighth time in the life of the British Association for the Advancement of Science, and an opening which promises great success. Norwich, unlike some towns where we meet, is accessible. It is also conveniently fitted for meetings, and certainly, if heartiness of reception can do anything to make a holiday go off well, that element is without stint. Our Medical brethren are specially forward in their hospitality, and already the strangers'—I beg pardon, I mean visitors'—list is filling fast. Amongst members in the general walks of science, I see already present Sir John Bowring, Mr. Pengelly, Mr. J. Clarke, Mr. Channing (descendant of the illustrious name), Admiral Belcher, Mr. Glaisher, Mr. Lowe, Professor Williamson, Mr. Wyatt, Mr. Heywood, Professor Phillips, and many other well-known men; and amongst the Medical fraternity there are Cobbold, Balfour, Huxley, Humphry, Michael Foster, Flower, Richardson, Grierson, Rolleston, and O'Callaghan. Some eminent foreign brethren are also here; Professor Gross and Broca are of these.

The first business of the Association that excites attention is the meeting of the General Committee. It is very remarkable how simple is the mechanism which holds this great organisation together from year to year. There is no true permanent committee—none, in fact, but that which is formed by the officers of the Association. Happily these, though few, are active, and they are sustained by an assistant general secretary, Mr. Griffith, who is the very perfection of an executive officer. What work falls on Mr. Griffiths's hands at these times it would be simply preposterous to attempt to describe; how it is done is one of those mysteries which I should not attempt to fathom. Nevertheless, in a persistent noiseless way the work is done, and the thousands are satisfied with every part of it.

Well, as I have said, the General Committee opens the session. It meets variously as to place: I have seen it in a chapel, a lecture-room, a Masonic hall—anywhere. This year it meets in St. Peter's Hall. It arranges the general business, discusses any proposition that may come before it, votes for the President, fixes the next place of meeting, and, in a word, rules the day.

At the meeting this morning, the Duke of Buccleugh presiding, an active discussion arose on a motion by Dr. Richardson to the effect that a new section be added, to be called the Section of "*Applied Science.*" The mover urged that, by means of the Association, science could be made more applicable to the wants of the world. By his proposal, in the new section, which would be made up of representatives of the other sections, the whole subject of the applications of science to practical purposes would be annually ventilated. The scholar would find room to describe lost or forgotten discoveries and inventions; the economist could compute the cost and labour of the productions of science; the introduction of scientific skill into newly explored parts of the earth

could be discussed; and men of science and men engaged in commerce could come together for mutual benefit, the former to point out new scientific knowledge, the latter to see a demand for such knowledge.

The debate on this proposition was taken up, in opposition, by Mr. Heywood, was supported in part by Dr. Williamson, and was opposed by Sir John Bowring and Mr. Pengelly. But all were agreed that the general principle advocated was sound; they differed from the mover only in detail, urging that the suggestion could be best carried out in the sections as they were. The Duke of Buccleugh spoke very clearly and impartially, leaning perhaps towards the side of the proposition. At the close, Dr. Richardson expressed through the chairman that the object he had was to awaken thought on the subject, and that he would press the matter no further. He therefore withdrew his motion.

In the afternoon, the Biological Section met in committee, Dr. Humphry in the chair, and, as on the last occasion, the Section divided for work into two departments—one of physiology, the other of zoology and botany. There was a little friendly sparring, as usual, between the physiologists and botanists, but all went well. Mr. Flower, F.R.S., Vice-President of the Section, will preside over the physiologists, Professor Turner will be one of the vice-presidents, and Dr. Michael Foster will be secretary. There are plenty of papers.

The President's Address.

This evening the President of the Association gave his address. The President is a member of our own Profession—Dr. Hooker, the Superintendent of the Gardens at Kew. Dr. Hooker studied in Glasgow, and graduated there. His nomination to this presidency is hailed on all sides as one of the most happy of selections.

The discourse of the President embraced a variety of topics—the International Congress of Prehistoric Archæology now sitting here; the populations of India and the megalithic monuments; museums; advances in fossil botany and vegetable physiology; the Darwinian hypothesis of pangenesis; the age of the world, and one or two other subjects of less moment. The part of the address which attracted most attention was the description of certain of the tribes in India and their stupendous buildings. The limitations of your space are, I know, great, but one extract from the address I must send. Dr. Hooker said:—

"It will, no doubt, surprise many here to be told that there exists within 300 miles of the British capital of India a tribe of semi-savages who habitually erect dolmens, menares, cysts, and cromlechs, almost as gigantic in their proportions, and very similar in appearance and construction to the so-called Druidical remains of Western Europe; and what is still more curious, though described and figured nearly a quarter of a century ago by Colonel Yule, the eminent oriental geographer, except by Sir John Lubbock, they are scarcely alluded to in the modern literature of prehistoric monuments. In the *Bengal Asiatic Journal* for 1844, you will find Colonel Yule's description of the Khasia people of East Bengal, an Indo-Chinese race, who keep cattle but drink no milk, estimate distances traversed by the mouthfuls of pawn chewed *en route*, and amongst whom the marriage tie is so loose that the son commonly forgets his father, when the sister's son inherits property and rank. Dr. Thomson and I dwelt for some months amongst the Khasia people, now eighteen years ago, and found Colonel Yule's account to be correct in all particulars. The undulatory eminences of the country, some 4000 to 6000 feet above the level of the sea, are dotted with groups of huge unpolished squared pillars and tabular slabs, supported on three or four rude piers.

"In one spot, buried in a sand grove, we found an early complete circle of menhies, the tallest of which was thirty feet out of the ground, six feet broad, and two feet eight inches thick; and in front of each was a dolmen or cromlech of proportionately gigantic pieces of rock, whilst the largest slab hitherto measured is thirty-two feet high, fifteen feet broad, and two feet thick.

"Several that we saw had been very recently erected, and we were informed that every year some are put up, but not in the rainy season, which we spent in the country. The method of removing the blocks is by cutting grooves, along which fires are lit, and into which, when heated, cold water is run, which causes the rock to fissure along the groove; the lever and rope are the only mechanical aids used in transporting and erecting the blocks. The objects of their erection are various—sepulture, marking spots where public events had occurred, etc. It is a curious fact that the Khasian word for a stone, 'Man,' as commonly occurs in the names of their villages and places, as that of Man, Maen, and Men, does in those of Brittany, Wales, Cornwall, etc.; thus Mansmai signifies in Khasia the Stone of Oath—Mamloo, the Stone of Salt—Manflong, the Grassy Stone, and, just as in Wales, Per mæn maur signifies the Hill of the Big Stone; and in Brittany a Macuhyr is a Standing Stone, and a Dolmen a Table Stone, etc.

"At the date of Colonel Yule's, as of my visit to these people, our intercourse with them was limited, and not always friendly; we were ignorant of their language, and they themselves far from communicative. Of late, however, the country has been more opened up, and the establishment of a British cantonment amongst them renders it all the more important that the inquiry into their origin, language, beliefs, customs, etc., should be followed up without delay. This will now be done, thanks to your representations, and I cannot doubt but that it will throw great light upon that obscure and important branch of Prehistoric Archæology, the megalithian monuments of Western Europe."

The address altogether was a singular success; in argument, good; in style, pure; in illustration, apt. It was excellently received by an audience overflowing.

Will "ye animals feed together" this year? This is a question frequently asked to-day. Nobody knows — how should they, until they know who the animals are? Well, the animals are the "Red Lions," and they roar, I can assure you. But who, then, are the red lions? That is a question, my reader of the sober *Medical Times and Gazette*, which neither you nor the very editor himself—awful personage as he is—shall extract from me this week, perhaps not next, perhaps never. I dare not promise. Nevertheless next week I will send something which I hope you will find worth your eyes.

ARMY MEDICAL DEPARTMENT.

List of the Candidates of Her Majesty's British Service who were successful at the Competitive Examination in August, 1868, *and who have passed through a course at the Army Medical School, showing the combined results of the Examinations.*

Order of merit.	Names.	Studied at	No. of marks.
1.	T. Lewis	London and Aberdeen	5452
2.	G. E. Dobson	Dublin	4855
3.	I. Fraser	Belfast	4563
4.	N. A. Williamson	Edinburgh	4375
5.	I. Walker	Dublin	4295
6.	G. W. Ryan	Dublin	4177
7.	E. N. McSwiney	Cork	4170
8.	J. S. Conyers	Edinburgh	4155
9.	R. G. Fitzgerald	Dublin	4137
10.	J. H. Ussher	Dublin	4008
11.	J. Leader	Edinburgh and Cork	3980
12.	J. A. G. O'Brien	Cork	3976
13.	W. C. Gasteen	Dublin	3968
14.	R. F. Anderson	London	3910
15.	W. Geoghegan	Dublin	3825
16.	A. K. L'Estrange	Edinburgh and Dublin	3627
17.	A. Kirwan	Dublin	3607
18.	C. E. Jones	Dublin	3503
19.	J. M. Knox	Dublin	3460
20.	R. M. Craig	Dublin	3423
21.	J. R. Rahilly	Dublin	3362
22.	A. L. Brown	Dublin	3310
23.	A. A. Macrobin	Aberdeen	3281
24.	F. Waghorn	London	3175
25.	C. B. Jennings	Dublin	3155
26.	W. H. Garde	Cork	3073
27.	J. H. Reynolds	Dublin	2950
28.	H. H. Burford	London	2915
29.	T. W. Jackson	Glasgow	2913
30.	D. Thornton	Dublin	2910
31.	J. Latchford	Dublin	2775
32.	G. W. L'Estrange	Dublin	2732
33.	P. F. Frazer	Dublin	2688
34.	W. G. Campbell	Dublin	2670
35.	W. Z. Samuels	Dublin	2614
36.	F. A. L'Estrange	Dublin	2454
37.	O. S. Eager	Dublin	2428
38.	Duke Parke	Dublin	2379

THE CLOSE OF THE SUMMER SESSION OF THE ARMY MEDICAL SCHOOL AT NETLEY.

At the close of the summer session of the Army Medical School at Netley, Dr. Logan, C.B., Director-General of the Army Medical Department, in announcing the name of the candidate to whom the Herbert Prize has, for the first time, been awarded, delivered an address, for an abstract of which we are indebted to the courtesy of a correspondent.

After expressing his congratulations at the general success with which the course had been brought to a close, and his gratification at the favourable report which had been made to him by the professors as regards the discipline and the general good conduct and attention to their studies exhibited by the candidates for both her Majesty's British and Indian Medical Services, Dr. Logan proceeded to observe upon the importance of these qualities, which serve mainly to establish the character of every Medical officer anxious to be successful in the service, and exhorted them never to fail in the one or flag in the other after they had embarked in the world-wide career which the service would present to them. Now that the schoolmaster is abroad among all classes, it is the more essentially requisite that the Medical officer should maintain his pre-eminence. He comes daily into contact with sharp observers, and errors in judgment or shortcomings in Professional skill rarely escape detection. The public service demands a double qualification in the person of the Medical officer—in academic phrase, he should be a "double first." He is generally supposed to be the most scientific in the ordinary regimental community—and assuredly, if he has not that virtue, he cannot assume it—and then he can afford to be second to none as a gentleman; and to maintain these positions he must, while keeping up progress in Professional knowledge, devote time also to the cultivation of general literature, to practise the tastes, and, above all, to observe the temperance and habits which combine to stamp the proverbial English gentleman. Keeping such ever in view, the Medical officer will never fail to attain that social position in the service which he would merit, and which no mere theoretical rank alone can establish for him.

The opinions and advice which we have so frequently advanced in these pages to Medical officers in the public services, on the subject of relative rank being so completely in accord with those expressed by the Director-General, that we are glad to see them now impressed as it were with the official stamp, and trust that Medical officers will strive more and more by personal qualifications to attain and maintain that position in the estimation of their lay comrades, of which relative rank, badges, lace, etc., are but the feeble exponents.

Dr. Logan enlarged still further on the necessity of subordination to authority, which, as a principle, is essentially the foundation-stone of the service, whether from a purely military or Medical point of view. In this rapid age men are sometimes given to run counter to others, and to aim at self-importance, but the true interests of the service require deference to commanding officers and Medical superiors, and at the same time an earnest and hearty co-operation with the latter, whereby will be attained that unity which nowhere more constitutes strength than in the Army Medical Department. When the famous army Surgeon of Peninsular times, Guthrie, boasted that his regiment (the 29th) was the "best doctored" in the army, we may be certain that he could not have done so if he had not received the cordial co-operation of his Assistant-Surgeons. Having next alluded to the happy occasions which his hearers would probably have, during the varied scenes of foreign, and possibly active, service, of renewing the friendships formed at Netley, and of again combining in their mutual efforts for good with a brotherly feeling which should characterise them as worthy sons of our *alma mater*, Dr. Logan proceeded to perform the very attractive part which attached to his present mission to Netley, and this was to inaugurate in its presentation the first gift of the Herbert Prize. He first detailed the circumstances under which the prize had been instituted. Nearly £1200 having remained over from the sum contributed by public subscription for the erection of the Herbert monument, it was decided by the Committee to appropriate this sum to the foundation of a prize to be called the Herbert Prize, to be awarded to the most deserving candidate in each session of the Army Medical School. The Secretary of State for War having referred to the Director-General and Senate of the Army Medical School the conditions under which this prize should be awarded, it was decided that it should be given to the candidate of either her Majesty's British or Indian Medical Services who passed the best examination at Chelsea or Netley, provided his conduct in all other respects had been satisfactory. Before declaring the name of the fortunate winner, Dr. Logan alluded to the growth of the hygienic care now devoted to the soldiers, which had obtained such an amount of sympathy and support from Lord Herbert from the termination of the Crimean War until his lamented death. Members of the Army Medical Department were the early apostles of sanitary thought, and the body became its subsequent pioneers. Jackson and his successors had urged many reforms and improvements, which only now at last are becoming established among us, their efforts at the time having met only opposition, and their reward being only that of the prophet in his own country.

Dr. Cunningham, of her Majesty's Indian Medical Service, was declared the winner of the Hubert Prize, which Dr. Logan designated the "blue ribbon" of Netley. Mr. Lewis, of her Majesty's British Service, and a student of University College, had been a close competitor, and Mr. Whitwell, of the Indian Service, also received honourable mention.

We congratulate Dr. Cunningham on his success, and trust that a career begun so honourably may be long and distinguished, bringing honour and emolument to himself and benefit to the public service.

The prize is a sum of money equivalent to the half-yearly interest on £1200, and we dare say it is the most valuable and acceptable form in which it could be given to a young man at the outset of his career.

RESEARCHES INTO THE NATURE OF VEGETABLE PARASITIC ORGANISMS.

By Professor HALLIER, of the University of Jena.

[Translated for the *Medical Times and Gazette* from a letter to Hermann Beigel, M.D., M.R.C.P. Lond., Physician to the Metropolitan Free Hospital.]

It is only within a very recent period that the study of minute forms of vegetable parasites has attracted the attention it deserves, but it has already produced a rich harvest of scientific results, and may one day lead to an important advance in the treatment of disease.

My attention was first directed to this subject by the results of my investigation into germination, and I will therefore preface my remarks with a brief outline of the more important views which have been held on this question.

German writers on this subject have, up to the present time, held two hypotheses, which have been considered by their respective authors as a kind of dogma. According to De Barry and others, the different yeast-fungi are considered as distinct species, and classified into distinct genera—as, for instance, Cryptococcus cerevisiæ, Hormiscium vini, Oidium lactis, etc.—whilst, according to Hoffmann, Bail, and others, yeast is a product of the spores of fungi, and developes by sprouting. This view at least rests upon observation, while the ideas of the first-named authors were nothing but mere theory. If the spores of mould fungus enter a liquid capable of fermentation, they form yeast-like sprouts, which, however, are not true yeast fungi, but an intermediate formation produced only on the surface, but not within the fermenting fluid. The act of sprouting, therefore, cannot be taken as a proof of the yeast-like nature of the fungus. But besides this, the second theory is erroneous from the fact that it merely takes into consideration the alcoholic fermentation, as it is only in this process that sprouting yeast-formations occur, whilst in all other fermentations—viz., the putrific, lactic, butyric and acetic, etc.—the yeast-fungus follows a perfectly different law of development.

I was led by a mere chance, as it were, to the discovery of the history of the process of development of all yeast fungi. If the spores of a mould fungus or blight fungus (Brandpilz) are put into a fluid capable of fermentation, say a mixture of a solution of grape sugar and a salt of ammonia, the first alteration observable in them is the division of the spore-plasma into numerous small nuclei (cocci), which ultimately leave their parents either by rupture or dissolution of the spore-walls. These nuclei, naked cells as it were, develope and multiply by continued bipartition. In some instances they

leave the spore-walls as "amœboid swarmers," in others they exhibit only the ordinary molecular movements. Thus freed, they continue the process of division which commenced within the parent spores, and multiply as long as there is a sufficient supply of nitrogen in the fluid. This form, which is the basis of all yeast formations, has therefore been called "nucleated yeast" (Kernhefe), or micrococcus; it is the source of all fermentations which take place in fluids rich in nitrogen, *i.e.* putrid fermentations.

If the amount of nitrogen in a fermenting liquid be consumed to a certain extent, the nuclei become altered; they secrete a membrane, which then expands, so as to increase the size of the yeast-cells very considerably, the original nucleus now lying in the centre of a large cell. The mode of division and multiplication likewise becomes altered. The yeast-cell no longer divides simply into two, but protrudes buds or sprouts at one or two opposite points, or, in rarer cases, at more than two points, these sprouts being each likewise provided with a nucleus. At the same time that this change occurs the fermenting process is altered, and alcoholic or spirituous fermentation commences. For the yeast fungus of the vinous fermentation I have reserved the old name of "cryptococcus," or "sprout-yeast."

As long as the supply of nitrogen lasts, the fluid continues to ferment, and this the more energetically, the less access that atmospheric air has to it. When fermentation is completed and the fluid is exposed to the air, a new change commences, and acetic fermentation is established; thereupon the cryptococcus protrudes five rod-like or quadrangular processes or sprouts, which, when separated from the mother cell, do not continue sprouting, but, like the micrococci, divide by partition. This form of yeast, which produces acetic fermentation, I have named "linked yeast" (Gliederhefe) or "arthrococcus." Of course the arthrococcus can immediately originate from the micrococcus. Thus, for instance, if diluted starch mucilage be boiled with a salt of ammonia, and, after having been allowed to cool, some spores of a fungus are added, the micrococcus developes from their plasma, but, as the amount of nitrogen becomes diminished, the micrococcus cells increase in length and become changed into arthrococcus, which, in this instance, induces lactic fermentation.

There may possibly be still other forms than these three—micrococcus, cryptococcus, and arthrococcus—but up to the present time they have not been observed. There are, however, incomplete yeast formations, transitional forms as it were. If, for instance, micrococcus gathers on the surface of the fermenting fluid, the newly formed subdivisions of the parent cells remain in connexion, forming links of a chain. In the same way these chains may form in masses upon the mucous membrane of the mouth and pharynx, and pass, more or less broken up, through the alimentary canal, and may be found in large masses in the fæces. Remak gave these forms the name of Leptothrix buccalis; but since leptothrix is a kind of alga, I have preferred to call them mycothrix. In the same way beautiful arborescent growths may be produced under certain atmospheric influences which have been called hormyscium, but which should rather be called the hormyscium form of micrococcus. In like manner, arthrococcus may present several varieties, which have been classified as oïdium, torula, etc.

Micrococcus, cryptococcus, and arthrococcus are, therefore, not separate species, but merely morphæ, or forms representing stages in the growth of different fungi, which, however similar they may be to each other, never lose their specific characters. A fact of the utmost value in the study of vegetable parasites is that we are enabled to make each yeast-cell bud and develope, if we place it on an appropriate solid soil and provide it with filtered air.

In the blood and tissues of the human body, rich in nitrogen, of course the micrococcus of fungi alone is to be found. Arthrococcus is, however, frequently found on the surface of the mucous membrane of the mouth and stomach, whilst cryptococcus is sometimes met with in the contents of the stomach after certain kinds of food have been taken. When the micrococcus of any fungus occurs in large masses in the blood of man, it may generally be looked upon as a pathological indication. I have, however, occasionally found the micrococcus of Penicillum crustaceum in the blood of perfectly healthy people. At all events, the occurrence of micrococcus in blood can only be considered as of any real pathological moment when it is known from what fungus it proceeds.

The micrococcus cells are generally so small that they require to be magnified 2000 diameters to be examined, as they do not present distinctive characters. The fungus from which they have been derived can only be determined by cultivating them. I have succeeded in finding the micrococcus of certain fungi in a considerable number of diseases, and have always found one form peculiar to one and the same disease. To develope the fungus, in each case a supply of filtered air and a solid substratum are necessary, as mentioned above. Under these circumstances, the micrococcus gradually enlarges, until the cells reach about the diameter of the respective fungus. These large translucent cells, which have been named "sporoids," are capable of budding.

I have thus discovered that in Asiatic cholera the micrococcus of a fungus unknown in Europe is to be found, and have also succeeded in showing the micrococcus of peculiar fungi to be present in vaccinia, variola, typhoid and typhus fevers, measles, gonorrhœa, chancre in women, secondary syphilis, and Egyptian ophthalmia. In Asiatic cholera a cystic seed was found, which may easily be transferred to rice—a fact which would seem to confirm an old belief that diseased rice produced cholera. This seed consists of globular or oblong cysts, which are divided by longitudinal septa into a large number of cells. In each of these a spore is lying with a bud process (Keimschlauch) projecting from it, which breaks through the seed wall. I have called such seeds schizosporangiæ. These may be found in very many fungi, particularly blight-fungus (ustilagineæ). The species septosporium—for instance, sporidesmium, stemphylium, coniothicum, etc., are nothing but the schizosporangiæ of different fungi. I am inclined to consider cholera fungus, from its external form, to be a "urocystis;" but it is extremely difficult to decide this question until all the changes of form which ustilagineæ undergo, have been determined. It will, therefore, be better to apply meanwhile to such indefinite seed-forms the name of schizosporangium. The cholera fungus is the schizosporangium of the mildew of wheat (Weizenbrand), Tillætia cæries, but never has the seed-form described above been found on wheat or any other plant in Europe.

In the common lymph for vaccination the micrococcus of Eurotium herbariorum is constantly to be found; but in the lymph of variola we find the micrococcus of the schizosporangiæ of the same fungus.

In typhoid fever the micrococcus of Rhizopus nigricans (Ehrenberg) exists constantly in large masses in the intestines; whilst in the blood of the same patient a very few micrococcus cells of the same fungus occur, but very large numbers of that of penicillum. In the blood, however, of typhus fever, large numbers of the micrococcus of Rhizopus nigricans are met with.

In measles the micrococcus of Mucor mucedo (Fres.) has been found in the blood and expectoration. It is extremely interesting that the micrococcus of the same fungus is to be found in pathologically altered connective tissue from the lungs of cattle suffering from the "lung-disease." Thompson was, therefore, perhaps right in suspecting that the same cause produced lung disease in cattle and measles in man. The discharge of gonorrhœa contains the micrococcus of a coniothecium hitherto unknown, to which I have applied the name Coniothecium gonorrhoicum. In the same manner in chancre, and in secondary syphilis, another coniothecium is to be found, which may be called Coniothecium syphiliticum. A similar, and perhaps identical, fungus is produced by cultivating the micrococcus existing in the blood of horses suffering from glanders. It is not a little remarkable that glanders transferred to man very often assumes a form which can scarcely be distinguished from syphilis. The sheep form contains the micrococcus of Pleospora herbarum (Tul.).

Although these yeast formations in the human body cannot as yet be considered as the actual contagium of these diseases, because such an assumption must necessarily be founded upon a very large number of experiments which are very expensive and difficult, yet nevertheless it may be considered as certain that their presence cannot be a matter of indifference to the body, the more so as they do not exist in the blood of healthy men, the only fungus which I have hitherto found normally present, and that in very insignificant quantity, being the micrococcus of pencillum. It therefore appears to me to be a matter of the highest importance that the study of vegetable parasites should be prosecuted in different countries, and in the direction which I have endeavoured to indicate. (a)

(a) Professor Hallier's works bearing on the question at issue are:—1. "Gährungs-Erscheinungen." Leipzig. 1867.—2. "Die pflanzlichen Parasiten des menschlichen Körpers." Leipzig. 1866.—3. "Parasitologische Untersuchungen." Leipzig. 1868.

GRESHAM LECTURES.

DELIVERED IN TRINITY TERM

By E. SYMES THOMPSON, M.D., F.R.C.P.,
Gresham Professor of Medicine.

ON THE TREATMENT OF DISEASE.

The art of Physic is based on experience and precept. It teaches us what to do and how to do it. The science of Medicine deals with principles and causes, and opens to the eye of reason the mysteries and secrets of the art, thus facilitating, not obstructing, practice; but, the end of the science being practical, we must so state the principles as to render their practical application easy.

In looking back at the history of the art of healing, we find empirical attempts to relieve suffering combined with superstitious practices and mystical ceremonies, and even now this stamp is still impressed upon the art, while, with this adherence to traditionary maxims, there is a proneness to indulge in rash hypothesis, and a deficiency in all accurate knowledge. The science of therapeutics is at length happily gaining a more solid foundation, and, in the place of mere empiricism, we are establishing a rational method of research. We prescribe now-a-days on physiological principles according to individual requirements instead of attacking disease with laudanum, antimony, or calomel. The cure of disorders is due less to the remedy itself than to the judgment with which it is employed, and so a bad remedy used discriminately is often better than a good one administered without discretion. Yet we hear it said, "We want practical Doctors, not scientific philosophers," or "Give me a practical man, not a theorist." But what is to theorise but to think? and happy the patient whose Doctor thinks most about his case. We must not pit experience against theory, observation against inquiry—they are not obstructive, but mutually helpful—we cannot altogether throw aside empiricism, but must remember that it is apt to advance claims in proportion to its inability to establish them, and instead of modestly doubting its conclusions it holds fast to authority established when science was in its infancy.

We are no longer entramelled by superstitions, nor can we complain of want of aids or resources; we must, indeed, be careful not to allow the auxiliary sciences to get far ahead of and play the dictator to us. We have passed through the stage of fiction and simple unreasoning faith—that of arbitrary hypothesis and speculation—and are arriving at a sober positive science.

The scientific horizon of our day is vastly widened; theories which flourished a few decennia ago, are now seen in their true light as impossibilities. We must recognise the principle that diseases are but transitional deviations from the normal processes of the body due to fixed laws—as much as winds and storms—and we must not blame the Physician for failing to control the former, any more than the meteorologist, because he cannot regulate the latter.

Were it possible to set aside all the accidental circumstances which modify the action of a remedy, and to secure uniform conditions, the art of prescribing would be simply to order the remedy proved to be the best in the largest number of cases, and, strange as it may seem, Physicians have been found who prescribed thus; but the difficulties in the way of obtaining the necessary evidence are such as must ever leave imperfections in the science of therapeutics, and we must depend on general principles, and on a correct estimation of the causes at work in the production of disease, rather than on partial, often unreliable, statements as to the efficacy of this or that remedy. Statistics as to the effects of drugs may, indeed, be helpful, although they frequently lead to faulty deduction. The bane of all philosophy is not hypothesis, but conclusions based on faulty evidence.

It must not be forgotten that those only are able to draw conclusions as to the effect of a remedy on a disease who are capable of making a correct diagnosis. Some there are, however, whose faith in figures is such that they readily accept as incontrovertible all statistical deductions as to the superiority of one plan over another—as in the treatment of pneumonia or cholera, for instance—who would admit, were their attention called to the fact, that they were trusting to the conclusions of those unqualified to judge either of the nature or extent of the disease. The experience of the cattle plague of 1865 furnishes ample evidence of the correctness of this assertion.

The characteristics of a drug, its mode of entering the system, and its action on the healthy organism, must be learnt before we can estimate its effect in disease. In deciding on the superiority of a remedy, we ought to know how our patients would have got on without it, for air, food, and nursing exert more influence than physic, and the dose, combination, quality, time of administration, etc., all have their weight.

It would seem as if the very complexity of the conditions tended to beget acquiescence in that which is lightest and most insufficient. Evidence feeble in origin gains weight by transmission; prejudice and credulity warp the judgment. One man concludes on proof which to another has no weight or pertinency. "Some men, in passing through the boundless ocean of disquisition, mistake fogs for land," whilst others "think there is no land when they see nothing but sea."

After all, recovery is no necessary effect of the drug administered. *Post hoc* does not always include *propter hoc*. Twenty patients getting well under one mode of treatment and dying under a second is by itself no proof of the superiority of the one over the other.

Probability has hitherto been no aid to public faith in matters Medical; but, on the contrary, the more mysterious and improbable the restorative agent, the greater the confidence of the patient.

During the last half-century an advance has been made in diagnosis and in the application of simple measures. Casting aside specifics, which, because they seem to have done good in one case, are vaunted as cures for all, we try and apply with judgment the simplest remedies, and perhaps—triumph of Medical art!—do without drugs altogether. Just as it has been said of the sister art that "operations are the opprobrium of Surgery," it may be asserted that "drugs are the opprobrium of Medicine."

"Modern Practitioners are less sagacious," we are told, "than old ones." If the want of a spirit of dogmatism and self-assertion (which is commonly admitted to be the accompaniment of ignorance and want of skill) is an evidence of the fact, beyond all doubt they are. They may be less positive and pretentious, and appear less active, for they prescribe only when they think they know what is wrong and how to remedy it. We lately heard it remarked, "My new Doctor only writes a prescription when he is certain it will do me good; the old one always gave me physic whether he knew what was the matter or no." Modern Practitioners have at least done more, by promoting sanitary reform, ventilation, etc., in preserving health, preventing disease, and thus securing happiness and longevity, than their predecessors accomplished by skill in the selection of drugs or compounding of complicated prescriptions.

Ridicule has been rightly thrown on the influence of infinitesimal doses; but there is an opposite fallacy of more general acceptance, which has done considerable injury to the progress of therapeutics—viz., the supposition that drugs produce the same effect, differing only in degree, when given in large or small quantities. On this assumption, remedies useful in small doses are frequently administered in large ones, in the hope of rapidly cutting short the malady. Thus, instead of good, real harm results. Hence, too, has sprung a yet more stupid notion, which has been again and again thrust before the public, that because a drug may be given in hurtful doses, it is therefore always injurious. We are accustomed to look upon the science of dietetics as very distinct from that of therapeutics, but it is practically hard to draw a line between them. Iron and cod-liver oil may be classed with foods; tea and brandy with drugs. In the matter of dosage especially these two sciences throw light on each other. Half a pound of mustard with three grains of beef is not better fitted to remove hunger than a tablespoonful of prussic acid or three drops of cod-liver oil to relieve disease! Common salt and mustard are either useful condiments or active emetics. Tea and brandy are valuable or injurious, according to the dose, and lives have been sacrificed by the abuse of all. We have met with a case in which death resulted from eating roast beef, and another from eating plum-pudding, but that these good things should be for ever banished because they have been known to act as poisons, is a conclusion which the common sense of John Bull will not admit.

In judging of the dose, we must not blindly accept authority, but, beginning with small doses, increase the quantity till the desired effect is produced. In the practice of the art of healing many facts are acquired naturally communicable to those only who are familiar with Medical lines of thought and reasoning; but the public cannot be too well acquainted with the broad general principles which regulate our practice.

The lecturer pointed out the physical properties of poisons, showing by various experiments in dialysis that they are *crystalloids*, and readily pass through membranes; whereas fibrin, the best type of the class of *colloids*, has a natural tendency to pass from the soluble to the insoluble state, and does not pass through a membrane. Carbonic oxide (a typical poison, the *modus operandi* of which we know) thoroughly arrests the natural changes of oxidation and reduction going on in the blood, and expels the whole of the oxygen. Sulphuretted hydrogen and many poisonous gases remove the loosely combined oxygen from the blood corpuscle, and thus produce asphyxia.

Prussic acid is so diffusible that when it is injected under the skin of a frog, the poison is rapidly given off by the skin, and the creature lives for hours if in the free air; but, if put under a bell-glass with other frogs, all breathe the poisonous atmosphere and die, the companions as quickly as the one injected.

The Professor alluded to the vast recent improvements introduced into therapeutics by the use of antiseptics—as carbolic acid, chloride of zinc, etc.—both constitutionally and locally, offered some general suggestions as to the use of nutritives, stimulants, tonics, sedatives, etc., and concluded the course thus:—

"A simple appreciation of the great principle of supply and demand is of inestimable value to every man. Our power for mental or bodily work depends on our supplies; energy cannot be exerted without diminishing these, and when they are exhausted, tiredness and disease occur and continue till income and expenditure are fairly balanced. Drugs can but guide and favour the restorative processes, as stirring a fire may make it burn if there be the needful fuel. Medication is, in a large class of diseases, of inferior importance to this simple, natural, and financially sound method of restoring health. My advice, then, to you all is—Do not anticipate or draw upon future incomings, and, if you have foolishly or inadvertently done so, look for a cure, not from vaunted 'infallible specifics,' but feed and rest the over-taxed organs for a time corresponding to the period of deficient supply, and thus readjust the relation between expenditure and income. Is not this a reasonable, an arithmetical basis for the constitutional treatment of disease?"

REVIEWS.

RECENT WORKS ON GYNÆCOLOGY AND OBSTETRICS.(a)

(*Continued from page* 164.)

From the diseases of women generally we turn to a disease which specially belongs to the subject of obstetrics—namely, puerperal convulsions—a very serious disorder, which two of our American *confrères*, Professor Bedford and Professor Elliot, have considered at considerable length. Dr. Bedford devotes two lectures to this subject, and of course considers it systematically, while no less than the first 126 pages of Dr. Elliot's "Obstetric Clinic" are allotted to it. Dr. Bedford possesses the happy talent, for which our distinguished countryman Sir Thomas Watson is so celebrated, of drawing singularly graphic word-pictures of disease, and his picture of this dreadful malady is a masterpiece.

The first chapter of Professor Elliot's "Obstetric Clinic" treats of the relations of albuminuria to pregnancy. With regard to the frequency of albuminuria in the puerperal state, he finds from observations made by himself and his assistants on the urine of 437 pregnant women that albumen was present in about one case in twenty-two: a large proportion of these women were, however, primiparæ, who are especially liable to the complication.

"Pregnancy," he observes, "presents the great clinical peculiarities of being—

"1. A special excitor, in very many cases, of albuminuria which had not previously existed.

"2. Of materially developing those morbid conditions in many chronic cases, in which they might possibly have remained latent for a much longer period.

"3. Albuminuria in pregnancy is not only liable to involve all the dangers associated with its existence in other conditions of the system, but, in addition, entails a special liability to some, as convulsions or mania."—"Obstetric Clinic," p. 11.

The coincidence of albuminuria and eclampsia—a fact totally unsuspected a quarter of a century ago—enables us, if we have detected albumen during pregnancy, to adopt certain prophylactic means against the dreaded contingency. These means are thus summed up by Professor Elliot:—"Eliminate through the bowels, the skin, and perhaps the kidneys. Consider the advisability of inducing labour and of abstracting blood. Diminish the supply of meat and indigestible food. Remove exciting and depressing influences. Do not debilitate the patient. Ward off threatening attacks with chloroform or sedatives." (*Op. cit.* p. 33.) He goes on to show that the best cathartics for the prophylactic treatment are pre-eminently the salines, steadily given, such as acidulated bitartrate of potash, Rochelle salts, etc. With these, if necessary, enemata and Franke's dinner pill (composed of aloes and extract of jalap) may be associated. In some hopeless cases of Bright's disease he has seen great benefit arise from the use of elaterium and apocyanum cannabinum. He gives an instance in which ten grains of calomel induced profuse salivation followed by death, as a warning against rashly prescribing mercurial aperients. In this case the salivation *may* have been an accident dependent on idiosyncrasy. At all events, mercurials (the bichloride, for example) in minute doses are very efficient, especially if combined with bark. The skin should always be stimulated to increased activity by the hot-air bath or rougher means, such as "bags of potatoes or corn steaming hot." Dr. Elliot further recommends mild diuretics, such as the free use of water sweetened with fruit-syrup, or acidulated with lemon-juice, Vichy and Seltzer waters, etc., and is careful in regulating the use of meat. "Under this line of treatment, varied according to the patient's strength and tone, many cases of albuminuria in the puerperal state have been relieved, and the dark cloud lifted from the coming labour" (*op. cit.* p. 37).

It is a very difficult question to decide whether premature labour should be induced as a prophylactic measure, there being no absolute physical sign on which we can rely to decide whether or not it is called for. Dr. Elliot believes that when repeated examinations of the urine show that albumen is persistently present or progressing, and when the first threatenings of the attack are showing themselves, the operation is expedient, *provided the fœtus be viable.* If the latter condition does not exist, we must wait till the mother's life is in immediate danger.

We are glad to find that Dr. Elliot does not entertain that extraordinary dread of chloroform which still seems to prevail in many parts of the civilised world.(b) "If only one method of treatment were given me," he observes, "for these cases, my choice would unhesitatingly be for chloroform. The chief indications are to terminate the labour as speedily as may be justifiable, and meanwhile to keep the patient moderately under the influence of chloroform." (*Op. cit.* p. 63.) With regard to venesection in the treatment of puerperal convulsions, our author speaks cautiously and with great judgment. In the majority of these cases the patient is anæmic, and copious bleeding would interfere with convalescence, and even in plethoric cases the abstraction of blood should be moderate. In most of Dr. Elliot's cases blood was taken in moderate

(a) 1. "Researches on Obstetrics," by J. Matthews Duncan, A.M., M.D., Lecturer on Midwifery in Surgeons' Hall Medical School, Edinburgh, etc. Pp. 467. 1868. Edinburgh: Adam and Charles Black.

2. "The Diagnosis, Pathology, and Treatment of the Diseases of Women, including the Diagnosis of Pregnancy," by Graily Hewitt, M.D. Lond., Professor of Midwifery and Diseases of Women at University College. Second edition, revised and enlarged. Pp. 700. 1868. London: Longmans.

3. "A Practical Treatise on the Diseases of Women," by T. Gaillard Thomas, M.D., Professor of Obstetrics and the Diseases of Women in the College of Physicians and Surgeons, New York. Pp. 625. 1868. Philadelphia: Henry C. Lea.

4. "The Principles and Practice of Obstetrics," by Gunning S. Bedford, A.M., M.D., Professor of Obstetrics, the Diseases of Women, and Clinical Obstetrics in the University of New York. Fourth edition, revised and enlarged. Pp. 763. 1868. New York: Wood and Co.

5. "Obstetric Clinic, a Practical Contribution to the Study of Obstetrics and the Diseases of Women and Children," by George T. Elliot, jun., A.M., M.D., Professor of Obstetrics in the Bellevue Hospital Medical College, New York. Pp. 458. 1868. New York: Appleton and Co.

6. "Résumé du Cours d'Accouchements donné à l'Université de Gand," par le Professeur van Leynseele. Pp. 457. 1866. Gand: Muquardt.

7. "Die Nerven der Gebärmutter und ihre Endigung in den glatten Muskelfasern, ein Beitrag zur Anatomie und Gynäkologie," von Dr. F. Frankenhäuser. 1867. Jena: Manka.

8. "Pathological Anatomy of the Female Sexual Organs," by Julius M. Klob, M.D., Professor of the University of Vienna. Translated from the German by Joseph Kammerer, M.D., and Benjamin F. Dawson, M.D. New York: Moorhead, Simpson, and Bond. London: Trübner. Pp. 296.

(b) The statement contained in the following sentence of Dr. Elliot's book is scarcely credible:—"Some years ago a patient died under chloroform in the Surgical wards of the City Hospital of New York, and that agent was then banished from use in that institution."

quantity, and chiefly by cupping, but he adds that every year he resorts less frequently and with less confidence to this mode of treatment.

Dr. Bedford's last lecture is devoted to certain important complications more or less incident to pregnancy—namely, chorea, paralysis, and jaundice. The subject is a very important one, but he has not only contributed little that is new, but has omitted all notice of some of the most important contributions to these subjects. Under the head of "Pregnancy complicated with Chorea," we might fairly have expected to see some notice of Mosler's admirable essay "On Chorea Gravidarum," published about four years ago in Virchow's *Archiv*. We may incidentally mention that in his "Clinical Lectures" Dr. Jaccoud describes a very interesting case of this affection which completely yielded to bromide of potassium, taken in doses gradually increased from gr. xv. to 3j. daily.

We may observe that the works of our American brethren are fully entitled to a place in every library in which the subjects of obstetrics and the diseases of women claim to be represented. The comparative rapidity with which Dr. Graily Hewitt's volume has reached a second edition is a sufficient indication of the value which the Profession attached to the first edition.

Professor Van Leynseele's "*Résumé* of his Course of Lectures on *Accouchements*" is a *lithographed* imitation of (we presume) the Professor's handwriting. It treats in order of (1) the physiology and hygiene of the subject, (2) its pathology and therapeutics, and (3) obstetric operative Surgery. From the perusal of a few pages we do not feel called upon to recommend it except as a literary curiosity. For example, in the paragraph on "Sudden Death of the Woman," we find not the slightest reference to death from the impaction of a clot, etc., in an important vessel. It would appear from the following sentence that the Belgian accoucheur goes forth to his labour far more fully armed than we consider necessary in this country. Our quotation is from the commencement of the article, *Soins à donner à la femme*. "L'accoucheur appelé auprès d'une femme en travail doit se munir de lancettes, d'une sonde de femme, d'une sonde en gomme élastique, d'un forceps et d'un levier!" to which armament he must add "ergot of rye, laudanum, ether, and chloroform," if the lady lives in the country.

Dr. Frankenhäuser's treatise on the nerves of the uterus affords evidence of much anatomical work of a very difficult nature. We should be glad if some competent hand in this country would repeat the dissections, as a mere off-hand expression of their probable accuracy is valueless.

(*To be continued.*)

GENERAL CORRESPONDENCE.

PROPOSAL TO STAMP OUT SMALL-POX.

Letter from Mr. G. T. Mockett.

[To the Editor of the Medical Times and Gazette.]

Sir,—The importance of this subject urges me to lay before your readers an instance where the spread of this disease was prevented, a fact which demonstrates from experience the truth of the opinions of Sir James Y. Simpson, placed before the Profession in your editions dated January 4 and 11, and the practical value of his four regulations.

In 1865-6, an epidemic visited the adjoining northern districts of this neighbourhood, which for some time caused me anxiety, not only in my capacity of Medical officer to the Don Pedro N. del Rey and the Anglo-Brazilian Gold Companies, but also as the sole resident of our calling in the city of Marianna, the bishopric of the province of Minas Geraes, which contains the episcopal seminary as well as another large institution for girls, the College of Providence, in all some 5000 or 6000 people, an important thoroughfare, through which runs the public road from Rio de Janeiro (by Ouro Preto, the capital of the province, a league and a half distant) to the gold and diamond districts. The following are the facts:—

A bastard case appeared here late in December, 1865. A free labourer of the D. Pedro N. del Rey Company, of drunken habit, presented himself with a vesicular eruption which, as it progressed, showed one or two distinct pustules. His entry into Hospital was reported at once to the representative of the Company; he was isolated in the "Tronco," and seen by me always after my daily round to the other patients, as likewise by the attendant, who received especial orders for instituting disinfection, and he was kept so isolated until all marks of disease had disappeared, and was allowed a few days' change of air before return to his work.

The next applicant from this cause came under my notice on March 16, 1866, at the Hospital of the said Company, suffering from the distinct form. He was reported accordingly, isolated, and the same precautions taken to prevent the spread of the disease, and I was in hopes, by the observation of proper caution so far as I was concerned, to preserve the usual sanitary condition; and, indeed, no more cases appeared on this establishment; but unfortunately, as I afterwards ascertained from subsequent investigation, the individual I last treated had lived together with another free labourer whose relatives kept house in Papagene (a village situated between Marianna and Ouro-Preto, the seat of the Anglo-Brazilian Company's works), who, upon his messmate going into Hospital, left to visit his family, was shortly after taken ill, refused my attendance upon him, and remained without Medical aid until such time as the disease was propagated to his immediate neighbours, one of whom appeared with preliminary symptoms on April 18, and was visited by me the next day, when I found the disease established, and the other, who had refused my services, with pustular desquamations—most of the residents moving or having moved off for the city, fortunately before the contagion had been conveyed to them. I at once communicated with the President of the Camara, and received instructions from the local authorities to take all necessary steps in the matter, with the assistance of the police to enforce my commands, which authority was subsequently confirmed to me by the Government, who nominated me on a commission with two others, a resident capitalist and a subordinate official, with instructions and orders to bury the dead, hermetically sealed and disinfected, at a distance. Public vaccination was at once put in force.

By the 28th, I had been called to thirteen cases, all limited within a space of 200 yards, on a hill rising above the village, the street to which has no outlet for traffic. Those selected to act with me, as also two women nurses, bore indubitable signs of having had the disease. The subordinate mentioned was placed to guard the approach, prevent communication, receive medicines and necessaries for the sufferers, and to keep up fumigation—consuming constantly green orange leaves, both in the houses of those infected and in the street. Disinfectants were freely used throughout, ventilation enforced (a difficulty amongst these people, who not only stop up every crevice, but even the keyhole, directly anything ails them, and exclude all light and air). Clothing either was destroyed or underwent a necessary process of maceration previous to being washed. On convalescence the men were allowed quick and slacked lime which I procured, and set to work to clean their houses down (not before they wanted it) inside and out. Not one of the patients again entered the community until the appearance of the skin had for some days, with due regard to ablution, regained its healthy appearance and function.

Two deaths took place in females; the deceased presented the confluent form, and in both cases had nursed a member of the family first taken. One succumbed on the fourth, the other on the sixth day; in each death accelerated by exhaustion, and in one case by attendant profuse uterine hæmorrhage.

I have extracted these facts from my report to the Inspector of Public Health, and offer them to corroborate the opinion of so leading and esteemed a member of our Profession and out of respect for his sanitary opinions. Suffice it to state it did not extend, and I have not heard of any case here since, now just two years ago. I am, &c. G. T. Mockett.

Marianna, Minas Geraes, Brazil, March 27.

ANDERSONVILLE *v.* NORTHERN PRISONS.

Letter from Dr. Mackaye.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me to corroborate what Dr. Whitehead of Vicksburg, the late P.M.O. of Loring's division, states *in re* the Andersonville prison. I myself happened to be present in the bureau of one of the most energetic and kindest Medical officers of the Southern Confederacy (a former distinguished student of the University of Edinburgh) when a "requisition" came to him, in his official capacity as Medical Intendant of the 5th Department, asking, in an endorsement from the general officer in charge of the district including Anderson-

ville prison, why certain medicines had not been sent. The re-endorsement on his part was, "No such medicines as have been refused are in store, but for the use of the troops in the field, and them only. Indigenous remedies in exactly the same proportion as is supplied to Confederate Hospitals have been sent, and will continue to be. Dr. G. S. Blackie reminds the general commanding that the enemy made, and continue to make, medicines and surgical instruments contraband of war." At that very moment not a private case of sickness, even among women or children, the wives, sisters, and daughters of Confederate soldiers of all ranks, could be treated except by the use of native remedies. I quite agree with Dr. W.'s remark that up to this time the enemies of the Confederacy have alone had the ear of the world. What about our prisoners frozen to death on Johnstone's Island? How many brutal murders committed notably by the poltroons of militia and home guards, the gallant shirk-the-draft heroes, on duty in the Northern prisons? What about unarmed men shot in looking out of window, or in fetching a bucket of water, innocent of breaking any prison rule? What a civilised prison that is which makes rules of such a sort that the sentinels alone know them! It would be well if some of our men published their experience in Northern prisons. Has the English public forgotten the U.S. official refusal to allow the money collected here for the starving, ragged, and frozen Confederate prisoners to be expended for their benefit? *Væ victis* is of old, and well may my late gallant comrades feel that success excuses everything. Not the least of their misfortune is that one side alone now has the power to write officially, but I still live in hope that some I could name will write a work descriptive and explanatory of what life to a Confederate was in a Northern Hospital or prison. I am, &c.

A. L. Mackaye, L.R.C.S.E.,
late Senior-Surgeon of the Artillery
August 7, 1868. of the Army of Tennessee, C.S.A.

PHTHISIS AND SYPHILIS.

Letter from Mr. John Mackeleave.

[To the Editor of the Medical Times and Gazette.]

Sir,— Some communications have lately appeared in the *Medical Times and Gazette* advancing the opinion that scrofula originates in hereditary syphilis, and Mr. Furneaux Jordan maintains that phthisis is a syphilitic disease. Such a doctrine, if not founded on unquestionable data, might lead to disastrous results in practice, as I believe it is acknowledged that the preparations of mercury are pernicious in tubercular affections, while they are most valuable in hereditary syphilis.

Mr. Jordan says, in the *Medical Times and Gazette* of January 4—"I shall be greatly surprised if phthisis shall be shown to prevail where syphilis is unknown." I believe my experience during a practice of thirty-four years in Western Canada will afford an answer. When I first arrived in the colony in 1834, phthisis and other forms of scrofula were almost unknown. My own observation confirms the statements of writers of that period on the climate and diseases of the province. A very different state of things exists now; the scourge of phthisis has prevailed in an increasing ratio during the last twenty years, as also disease of the mesenteric and cervical glands, and strumous affections of the joints. It is amongst the rural population, as well as in the cities and towns, that these diseases have manifested themselves. The descendants of the first hardy settlers are as much victims to it as the emigrant population, yet syphilis (as far as my observation in a very extensive practice goes) was unknown among them. The only form of venereal disease which I have met with in country patients, even of late years, is gonorrhœa, and that very seldom. Their very early marriages no doubt account for this exemption.

What, then, is the cause of this appearance of tuberculosis in various forms? I account for it in the altered modes of warming their dwellings. When I commenced practice in Canada all the houses were warmed by large wood fires and very open chimneys. In most of the farmhouses a large hearth existed on which a fire of logs was built in the family room; the bedrooms opened out of this room, and the occupants left their bedroom doors open day and night (the fire burning all night) for the warmth, and the houses being roughly built, the windows and doors did not fit very closely, and thus a free circulation of air was secured continually, the large chimney acting as a ventilator. As the forest was cleared and wood became scarcer and valuable for sale, open fires were abandoned, and close iron stoves came into use and are now universal, putting an end to all ventilation. The houses are also different, the tight frame or brick house succeeding to the log house; the bedrooms are differently arranged and generally very small (six to eight feet square); and, the doors being generally closed at night, the inmates sleep for eight or nine hours in the confined and vitiated atmosphere of these small apartments.

My own conclusion has been that the constant respiration of air vitiated by the absence of any ventilation and brought to a high temperature by iron raised sometimes even to red heat, has led to that cachectic condition of health which has resulted in the development of scrofula and phthisis. I can attribute it to no other cause, as food is abundant and good, and the clothing in winter thick and warm. I have no statistics to offer, as there is no registration of deaths in Canada.

Writing from so great a distance, and having been so many years absent from England, I ought, perhaps, to say that I am an old Bartholomew man, and acquired my knowledge of clinical Medicine under Dr. Latham.

I am, &c. John Mackeleave, M.R.C.S.

Hamilton, Canada, March 26.

NEW BOOKS, WITH SHORT CRITIQUES.

The Practitioner: A Monthly Journal of Therapeutics. Edited by F. E. Anstie, M.D., F.R.C.P., Senior Assistant-Physician to Westminster Hospital, and Lecturer on Materia Medica in Westminster Hospital School of Medicine; and H. Lawson, M.D., M.R.C.P.E., Assistant-Physician to St. Mary's Hospital, and Lecturer on Histology in St. Mary's Hospital School. Nos. I. and II. London: Macmillan and Co.

*** To many men it has seemed that a monthly Medical journal issued from the metropolis might find favour in the eyes of the Medical world. True, there are difficulties in the way; papers cannot well be continued from one month to another, and there might be some little difficulty in securing at once succinctness, interest, and variety for each number; furthermore, the experiment has been tried, and success has been wanting. Undismayed, however, by former failures, Drs. Anstie and Lawson have entered the field, but, instead of permitting themselves the wide range of Medical science, have limited their endeavours to the subject of therapeutics. This limitation we much regret, for it is at all times difficult to deal with one side of a subject and handle it satisfactorily, and to separate therapeutics from the other departments of clinical practice is like dividing the bond which unites the Siamese twins. Dr. Russell Reynolds's capital paper, in the first number, on bromide of potassium involves vital points of diagnosis; and Mr. J. N. Radcliffe's no less valuable communication on faradisation, if it be worth anything at all, which we conceive it to be, is of most value in its relations to electricity as a means of diagnosis. It is true that therapeutics may be divorced from practical Medicine if it be made to ally itself with physiology, but this separation would hardly suit the ordinary run of Practitioners. As to the contents of the journal, we have nothing to say that is not favourable. M. Maisonneuve's paper on the treatment of wounds by pneumatic aspiration contains nothing, perhaps, that was not known to most men before the appearance of the article; still it will do no harm, and may do good. Dr. Russell Reynolds's article on the therapeutic uses of bromide of potassium is excellent; it deserves to be carefully read and studied. It may be said to carry with it the authorisation of the bromide as a generally received and valuable remedy Dr. Begbie's paper, no doubt, did much, but we are inclined to think that Dr. Reynolds's one will do more. We have already recorded our appreciation of Mr. J. N. Radcliffe's article on faradisation; it is beautifully illustrated, and his remarks on the value of Stöhrer's battery are worthy of general attention. Dr. Sydney Ringer's contribution on the value of glycerine of tannin is very good; it will introduce a new and powerful reagent to many, although we scarcely think he has said enough in its praise as a remedy in many forms of throat affection. The last original communication is from the pen of Dr. Anstie, and relates to the hypodermic injection of remedies. No doubt this mode of administering medicines is but in its infancy, and Dr. Anstie's favourable opinion, derived from such an extensive experience as his is, will doubtless favour its more general introduction. In the second number we also find valuable material. First comes an excellent note by Dr. Beale on intermittent hæmaturia—which, by the bye, is hardly to be described as a purely therapeutical paper. Dr. Fraser writes ably on the use of Calabar bean in tetanus and chorea. Dr. Graily Hewitt contributes a paper on the so-called irritable uterus, a condition which he would associate solely with retroflexion, not perhaps on absolutely satisfactory grounds. Finally, Dr. Beigel writes on inhalation in croup. One good feature in this journal is its reviews; they are short and pithy, but they strike home, and they tell the truth. Should the conductors of this magazine enlarge their sphere of action, and so give themselves more space wherein to work, we do not see why their project should not succeed—certainly the samples of workmanship they have hitherto provided have been thoroughly good. Let them not, however, divorce therapeutics from the other branches of Medical science.

Water: Its Impurities and Purification. By the London and General Water-purifying Company (Limited.) 5th edition. Published at 157, Strand. Price 2d.

*** As facts are stronger than words, so we may show our opinion of the value of filtration better by stating that our last present to a son going to India was one of this Company's pocket filters, than by a page of abstract praise. In dealing with impure water two things are essential—time for subsidence, and filtration. The solid particles in impure water, especially the organic, are the most dangerous parts, and ought to be removed, and this can be done, doubtless, very effectually by a well-constructed filter. The advantage of the filter used by the Water-purifying Company is, that it is not at the mercy of servants, and that all the water that is drawn must be filtered. One thing we desire to know. Let us assume that 200 gallons of water per diem pass through a filter; that each gallon contains one grain of organic matter, which is stopped by the filter. What becomes of the 200

grains per diem? supposing the cistern and filter are not cleaned for 100 days? The Company state honestly that their filters will not remove lime. We believe in the virtues of filtration; that it will do much, but not everything, for impure water, and that what other filters can do, these will.

MILK SICKNESS.

This extraordinary disease, which has baffled so many inquiries, and about which so little is known in this country, has recently been made the subject of investigation by the Kentucky State Medical Society, a committee of whom, consisting of Drs. Yandell, Moorman, Beeler, and Luten, have reported on the matter, and their report has been published in the *Transactions* of the Society.

The early settlers of Kentucky and Tennessee encountered a disease presenting many features which had not been recognised in the familiar diseases of men, and they naturally concluded that the complaint was a novel one, and peculiar to the rich country of which they had just become the proprietors. From the fact that it appeared almost always traceable to the use of milk or butter, beef, veal, or mutton, the belief became general with the people that it was produced by a poison which was derived by domestic animals from their food or drink. This led to the name "Milk Sickness," which has been ever since in use. The disease in the lower animals, which was believed to correspond to milk sickness, was termed "Trembles."

The first Professional account written of this strange malady was by Dr. Drake, in his "Notices of Cincinnati," published in 1809. Dr. John McCall, of Tennessee, in his inaugural thesis, called the attention of the Medical Faculty of the University of Pennsylvania to the subject about the year 1820. His history of the new disease struck some of his learned teachers as wholly incredible. The facts stated in regard to the transmissibility of the poison from the system of one animal to another were utterly irreconcilable with the dogma so strenuously taught at that time in that school, that foreign bodies could not possibly enter the circulation through the alimentary canal. The thesis, in this way, excited unusual interest, and the discussion growing out of it led to its publication in the *Medical Recorder*. Since the appearance of Dr. McCall's thesis, a cloud of witnesses has come forward to substantiate all his statements, and the literature of milk sickness would now form many volumes.

1. A disease has been occasionally encountered in various portions of the Western States since their first settlement, with symptoms so peculiar as to induce the belief that it is new, and a product of the country. It comes on slowly, the subject of it, for several days, or even weeks, having a feeling of lassitude, and, on attempting to exercise, soon growing fatigued. At last he is seized with nausea and vomiting; and these symptoms are accompanied by obstinate constipation, a burning sensation in the epigastrium, thirst, extreme restlessness, and a peculiar odour of the breath. The latter symptom is mentioned by nearly every writer on milk sickness, and is regarded generally as pathognomonic of the disease.

2. Trembles in the cow, sheep, horse, and other animals, agree with milk sickness in the tardiness with which the attack generally comes on, in the sudden failure of muscular power on attempts at exercise, in the thirst, restlessness, and constipation of the bowels.

3. The two diseases are often coincident. They so frequently occur together that it is a universal popular belief that one disease is the cause of the other. They appear in the same regions of country, and those districts are comparatively circumscribed.

4. The milk of cows affected with trembles communicates the disease to their calves, and in very many cases milk sickness has followed the use of milk and butter.

5. Calves have often been seized with trembles after sucking dams that exhibited no evidences of indisposition; but these cows are attacked with trembles if made to take vigorous exercise.

6. Dogs, hogs, buzzards, and other carnivorous birds, are poisoned by the flesh of animals that have died of trembles.

7. Individuals recovering from milk sickness, and animals that survive an attack of trembles, convalesce slowly, relapsing under excessive exercise, and remaining for months feeble, stiff, tremulous, and incapable of active muscular exertion.

8. These diseases appear to be connected with certain geological formations. The characteristic mineral feature of most of the localities in which they are found, is the pyritiferous shale, which, on exposure to the air, undergoes disintegration, giving rise, by combination with oxygen, to double salts of iron and alumina.

In Kentucky, this geological relation has been well ascertained; but the fact is not established in regard to the seats of milk sickness in some of the other States in which the disease is endemic.

Some negative facts concerning milk sickness and trembles may be stated as fully established.

1. These diseases are not produced by arsenic, nor by any other poisonous metal.

2. The evidence is almost as strong that the cause of these diseases is not a vegetable poison. The botany of Kentucky and Indiana has been very thoroughly explored by Dr. Short, Dr. Peter, and Dr. Clapp, but no plant had been discovered from which the symptoms of trembles and milk sickness are known to result.

No opinion concerning milk sickness is more firmly held by the public or the Profession than that this disease results from the use of articles of food derived from the cow, in the shape of milk, butter, or beef. And yet this opinion is far from resting upon an impregnable basis. Many cases of milk sickness are on record in which it is impossible to trace any connexion between the disease and the diet of the patient. A Medical gentleman, living in a county in Kentucky where this disease is known, related, a short time since, the history of some cases that had a fatal termination, the cause of which he attributed to eating butter. The butter was not made by the family in which the unfortunate cases occurred, but was bought from neighbours a few miles distant. Most unfortunately for the confidence of this gentleman as to the origin of the malady, the people who made and sold the butter, living in a region reputed to afford milk sickness, and partaking daily of the milk and butter of their cows, remained all the time in good health. The explanation of the anomaly which occurred to the mind of this intelligent Physician was, that the latter family, "by long use, had acquired a tolerance of the poison."

The committee therefore think that the *post hoc propter hoc* argument has been too much employed in these cases, and, while admitting that in many cases the only body which could have produced the sickness was dried beef, they think the solitary instance given above a refutation in many respects of the doctrine that the disease is invariably caused by some product of the cow. Whilst, therefore, not rejecting this mode of origin, they hold that its invariable connexion with the curious disease called "milk sickness" is not yet proved.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 13, 1868:—

Bedford, Charles Frederick, Sleaford, Lincolnshire.
Hadley, George Percival, Birmiugham.
White, John Campbell, Westminster.
Whitefoord, Caleb Charles, St. John's-terrace.

The following gentlemen also, on the same day, passed their First Examination:—

Duke, Bernard, King's College Hospital.
Lacey, Thomas Warner, Guy's Hospital.
Lucas, Robert Harvey, Middlesex Hospital.
Marsh, Walter Alfred, Guy's Hospital.
Taylor, Joseph Ogilvie, University of Edinburgh.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Atchley, G. F., M.B., M.R.C.S.—Surgeon to the General Hospital, Bristol, *vice* M. Clarke, Esq., resigned.

NAVAL AND MILITARY APPOINTMENTS.

Cotton, John, M.D.—Staff-Surgeon in Her Majesty's Fleet, with seniority of July 31, 1868.

Currie, Samuel, M.D., C.B., Deputy Inspector-General of Hospitals.—Inspector-General of Hospitals.

Guy, Staff Surgeon-Major Thomas, M.D.—Deputy Inspector-General of Hospitals.

Madden, Surgeon Charles Dodgson, 4th Foot.—Surgeon-Major.

Mahaffy, Surgeon-Major Edward, M.D., Bombay—A Companion of the Bath.

SINCLAIR, Surgeon JAMES, M.D., 33rd Foot.—Surgeon-Major.

STEWART, Surgeon NEIL HENRY, M.D., 3rd Dragoon Guards.—Surgeon-Major.

BIRTHS.

BANTOCK.—On August 7, at 44, Cornwall-road, Westbourne-park, the wife of Dr. G. Granville Bantock, of a son.

BENNETT.—On August 13, at College House, Hammersmith, W., the wife of Charles Henry Bennett, M.D., of a daughter.

GIBAUT.—On August 16, at 22, Highbury-terrace, the wife of W. Gibaut, Surgeon, Royal Artillery, of a daughter.

JAMES.—On August 11, at Perry-vale, Forest-hill, the wife of A. James, M.D., of a son.

MADDEN.—On August 19, at 16, Westbourne-street, Hyde-park-gardens, the wife of Dr. Henry R. Madden, of a son.

MAURICE.—On August 13, at Marlborough, the wife of Dr. James Blake Maurice, F.R.C.S., of a son.

NAUGHTIN.—On August 15, at 2, Baker-street, Portman-square, the wife of William Naughtin, M.R.C.S.E., of a daughter.

PEARCE.—On August 11, at Trewyn, Dulwich, the wife of J. Chaning Pearce, M.R.C.S., of a son.

PYLE.—On August 10, at the Esplanade, Bishopwearmouth, the wife of T. T. Pyle, M.D., of a son.

TANNER.—On August 18, at 9, Henrietta-street, Cavendish-square, the wife of Dr. Thomas Hawkes Tanner, of a son.

MARRIAGES.

CAMPBELL—DARLING.—On August 11, at Rossmount, Musselburgh, by the Rev. Daniel Kerr, William Watson Campbell, M.D., Dunse, to Janet, daughter of the late John Darling, Esq.

COLLINS—BENNETT.—On August 12, at St. John's Church, Bilton, Harrogate, John Robert Collins, Esq., Captain in the 70th Regt., fifth son of William Collins, Esq., of Kirkman-bank, Knaresborough, Yorkshire, to Frances, third daughter of William Bennett, M.D., of Beech-grove, Harrogate.

KIDD—LYLE.—On August 12, at Trinity Church, Archibald Napier Kidd, M.D., F.R.C.S.I., son of the late William Lodge Kidd, M.D., of Armagh, to Laura Isabella, second daughter of Andrew Lyle, Esq., Newington, Belfast.

MOFFITT—GORDON.—On August 18, at St. Luke's, Southampton, Andrew Moffitt, Staff Assistant-Surgeon, to Helen Clarke, youngest daughter of the late Lieutenant-General H. W. Gordon, Colonel-Commandant of the 3rd Brigade Royal Artillery.

DEATHS.

ANDREWES, EMMA F., stepdaughter of J. Farmer, Surgeon, at Buckingham House, Brackley, on August 14, aged 25.

CRISP, JOHN, Surgeon, fourth son of the late Robert Crisp, solicitor, of Downham, Norfolk, at Wheathampstead, St. Alban's, after a protracted illness, on August 9, aged 64.

GAYE, WILLIAM THOMAS, M.B., of Williton, Somerset, on August 14, aged 45.

LUSH, ARTHUR FINCH MONTAGUE, younger son of Dr. Lush, after much suffering, at Fisherton House, Salisbury, on August 17, aged 13.

SPENCER, SARAH, wife of George Spencer, Surgeon, etc., at 8, Kensington-park-road, Notting-hill, on August 12.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Launceston Union.—Dr. Felce has resigned the Second District; area 4940; population 876; salary £10 per annum.

Wrexham Union.—Mr. Thos. R. Mitchell has resigned the Gresford District; area 14,930; population 9159; salary £75 per annum.

APPOINTMENTS.

Halifax Union.—Wm. Charteris, L.R.C.P. Edin., L.R.C.S. Edin., to the Hipperholme District.

Lichfield Union.—Henry Edwards, M.R.C.S. Eng., to the Abrewas District.

Melksham Union.—Lewis Miller, L.R.C.P. Edin., L.R.C.S. Edin., L.A.H. Dub., to the Second District.

Taunton Union.—Edward E. Phillips, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A. Lond., to the Bishop's Lydeard District.

WE are sorry to notice the death of Mr. John Roberts Dunn, M.R.C.S., L.S.A., of Dorchester, who was killed at the Culham Railway Station by the accidental discharge of a pistol. The ball lodged in the liver. Deceased was twenty-four years of age. Mr. Dunn was a distinguished naturalist, and was held in great esteem by all who knew him. He was a nephew of the late lamented Colonel Dunn, who was accidentally shot in the Abyssinian war, and it is a melancholy incident that both should have been cut off so prematurely and so full of promise in this same year.

THE Indian papers speak of a specific for leprosy, discovered by Dr. Bhau Daji. Diphtheria is prevalent at Dehra Ghazee Khan, cholera between Napgore and Jubbulpore and at the shrine of Juggernauth, fever at Bhotan, and a small-pox of cattle at Kishnagur. Everything is on a grand scale in India, says the *Indian Medical Gazette*. Famines sweep off millions. Cholera has its cradle there. Cyclones destroy the strongest masonry as if straw. Hail comes in balls of ice, some weighing 2 lbs., and of the diameter of a 13-inch shell. Rain falls in feet (viz., 600 inches, or 50 feet, fell at Cherrapoonjee in one season—the place had been chosen as a sanatorium, and had to be abandoned). Lastly, rain may fall, not as water, but as thick brown mud, if a rain-cloud mingle with a dust-storm. *Per contra*, eighty-five cases of lithotomy are reported by G. E. Pool, Civil Assistant-Surgeon, with only three deaths!

TESTIMONIAL.—Mr. J. H. Elliott, of Andover, has been presented by the members of a Foresters' lodge with a handsome silver goblet, bearing the inscription "Presented to J. H. Elliott, Esq., Surgeon, by the members of the Court Alma, A. O. F., No. 2768."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Alfred Poland's series of cases shall appear as soon as possible.

Celer.—Apply to the Secretary of the Social Science Association, 1, Adam-street, Adelphi; or to Dr. Rumsey, Cheltenham.

E. C.—For information as to the Béton Stabs, apply to B. Nicoll, Regent-circus, Piccadilly. A cottage of two rooms is said to cost £16—of course, plus windows, doors, etc.

To Correspondents.—In consequence of the late meeting at Oxford, the demands on our space are so great this week, that we regret we are unable to publish the correspondence we have received in reference to club remuneration. We have in another column expressed our opinion on the general questions brought before us.

M'Culloch's Microscope is a toy, but it may fairly be called a philosophical toy, and one calculated to entice curious children to prosecute the study of natural history. When a schoolboy has worked through most of the objects that can be studied by this little toy, he may fairly demand as a reward that he shall be supplied with a better instrument.

Corrigendum.—The statement contained in a paragraph in the *Medical Times and Gazette* of the 15th inst., with reference to a boy with compound fracture of the thigh sustained immediately in front of the Herbert Hospital, Woolwich, having been refused admission into that Hospital by the military governor because he was a civilian, and having died on the road to Guy's Hospital, is happily incorrect in the latter particular, as we have ascertained that the boy is at present in Guy's Hospital, and doing well. We have also been informed that at the time of the accident he was taken into one of the Surgical wards of the Herbert Hospital, and remained there from 7.30 p.m. till 10 p.m., and received wine and every attention during his stay in that establishment.

German Scholar.—We can recommend for your perusal Leunis' "Synopsis der drei Naturreiche," which is especially useful in what relates to zoology. Probably the best German text-book of zoology is Rudolf Kner's Lehrbuch, published in Vienna. Clarke's edition of Van der Hoeven is now somewhat behind the age, as are Grant's lectures on comparative anatomy. These latter are, however, models in their way, and will amply repay perusal. Trust to Von Siebold on the Invertebrata, of which there is a very good American translation.

Royal Navy.—No award of the medal has been made.

Railway Accidents.—In the half-yearly report of the directors of the London, Brighton, and South Coast Railway, it is stated that £5185 s. 11d. was paid as compensation for accidents, with the attendant law costs.

A Dublin Student.—The examinations for the session are now terminated. About November next. Write to the Secretary.

Alpha.—He must be possessed of a double qualification entered on the Medical Register to be in accordance with the regulations of the Poor-law Board, but Boards of Guardians may exact any other qualifications they please. Once registered, no renewal is necessary. Let him apply to the General Medical Council for liberty to register his foreign qualification; should they grant this, it becomes legal—not otherwise.

THE MEANING OF THE WORDS "IMP" AND "BRAT."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your issue of the 1st inst., I observed a communication from "Vox et Præterea Nihil," relative to the derivations of the above words. His derivation of "brat" is, I think, wrong; for if he will turn to chap. xiii. of Sir Walter Scott's "Fair Maid of Perth," he will find the following footnote:—"The Gaelic word *brattach* means a standard—literally cloth. The Lowland language still retains the word brat, which, however, is only applicable to a child's pinafore, or a coarse towel. To such mean offices may words descend." I think this explanation answers better than making it an offspring of the root breed. I am, &c. A STUDENT.

Glasgow, August 13.

SPONTANEOUS EXPULSION OF POLYPUS FROM RECTUM?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A patient, female, aged 60, had been complaining for the last two years of sense of bearing down in the rectum, occasional bleedings at stool, and protrusion after stool of something which she was obliged to push back. I diagnosed piles, and recommended an examination and operation. She was too busy for this, however, and so the symptoms went on increasing, till of late there has been a constant discharge from the rectum, escaping involuntarily, and resembling soapy water; frequent loss of blood at stool, constant aching pain, dizziness of head, and difficulty of defecating

save with great straining, and in a peculiar attitude. This being the state of things, she sent for me this morning to say that she was quite cured. On the previous night but one she had been awoke with violent pain, as if diarrhœa; she sat at the close stool for an hour and a quarter, passing squirts of liquid with great straining. At last something came away, and she felt better. Her maid reported to her that the motion consisted of black blood, and of a bit of flesh equal in breadth to two fingers, and resembling an after-birth. Since that night she has been in perfect ease, and has lost the discharge and dizziness. Query: Was a polypous growth torn off and expelled?

I am, &c.

London, August 13. D.

Life of a Ship Surgeon.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having recently returned from Madras—a voyage which I made in accordance with your advice upon finding myself in too weak a state of health to commence active private practice at home—I embrace the opportunity of giving you a cursory sketch of the voyage and of my proceedings in connexion therewith.

I had to call upon several shipping agents before I could procure anything satisfactory, till finally I called at the office of Messrs. Green and Co., and procured an appointment as Surgeon to one of their best and fastest sailing ships, the *Renown*, bound to Madras. All they required of me was to produce my registration certificate of degree and diploma, with a reference or testimonial from some gentleman in London, preferably known to the firm. I was to receive £5 per month, with good table, etc., and there was a probability of my getting Medical charge of troops homeward bound. I had to procure a case of instruments. We left the East India Docks September 11 last year, cast anchor at Gravesend to take in passengers, weighed anchor following morning, discharged pilot off Bournemouth, and after a very pleasant voyage arrived at Madras December 16. The passengers were all first-class, no steerage, were very pleasant and agreeable, and the monotony of the voyage was relieved by dancing, croquêt, and other amusements. Outward bound, my duty was light, consisting of cases of coughs, colds, diarrhœa, the worst cases being hooping-cough and a fracture of the forearm. At Madras we discharged cargo, took in light weight, and sailed for Bunlipatam up the coast of Coromandel, calling also at Calingapatam, at both places taking in cargo consisting of indigo and rice, and thence we sailed to Madras, where we embarked passengers and invalids from various parts of the Madras Presidency. I made application for Medical charge of troops to Dr. Barclay, Deputy Inspector-General of Hospitals at Madras, and, producing my qualifications, had little difficulty in obtaining charge. My pay for Medical charge was 13s. per head for each man and woman, and 8s. for each child disembarked at Netley. There embarked 123 men, 13 women, and 23 children; 118 men, 13 women, and 20 children were safely landed at Netley Hospital. I had an Hospital Sergeant and four orderlies, but had rather hard work of it coming home, the Hospital Sergeant being new at his duty, so that I could not trust him much at the medicine chests. A very important matter to observe to any gentleman having Medical charge of troops is that he should be very careful to keep an accurate account of the expenditure of Medical comforts which will be at his disposal. They require an accurate account of this expenditure at Netley, and if the Surgeon has kept a loose account or none at all of his Medical comforts, he will find great difficulty in getting his pay at the India House. Luckily I had been careful about the Medical comforts, and received a memorandum at Netley enabling me to receive my pay almost at once.

I am, &c. H. S. Baldwin, M.D.

June 29.

COMMUNICATIONS have been received from—

A Student; Mr. Hazard; Mr. Serjeant; Mr. Devereux; Dr. Humphry; Dr. A. N. Kidd; Dr. Tuke; Dr. Steggall; Z.; Dr. Powell; Dr. Dickson; Alpha; Mr. Haviland; Dr. Nelson; Dr. Althaus; Mr. Spencer Wells; Mr. A. Bruce; Dr. Andrew Allison; Dr. Hughlings Jackson; Dr. Down; A Friend; Dr. Mickley.

BOOKS RECEIVED—

Report on Epidemic Cholera and Yellow Fever in U.S. Army—Twelfth Report on the Customs—Report of the Medical Officer of Health for the Holborn District—Tenth Annual Report of the Ladies' Sanitary Association—Pacific Medical and Surgical Journal—New Orleans Journal of Medicine—Wolfe, on Cataract.

NEWSPAPERS RECEIVED—

Gazette des Hôpitaux - L'Union Médicale—Gazette Hebdomadaire—Tribune Médicale—Melbourne Age—Exeter and Plymouth Gazette—Le Mouvement Médical—Birmingham Daily Post—Medical Press and Circular—Exeter Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 15, 1868.

BIRTHS.

Births of Boys, 1037; Girls, 1017; Total, 2054.
Average of 10 corresponding weeks, 1858-67, 1807·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	741	721	1462
Average of the ten years 1858-67	664·9	630·8	1295·7
Average corrected to increased population..	..	..	1425
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	1	11	..	2	5	39	4
North ..	618,210	1	5	14	4	7	9	50	8
Central	378,058	..	5	6	2	2	5	18	2
East ..	571,158	1	10	4	3	8	6	56	5
South ..	773,175	..	4	19	3	10	21	82	10
Total ..	2,803,989	2	25	54	12	29	46	245	29

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·630 in.
Mean temperature	64·3
Highest point of thermometer	82·7
Lowest point of thermometer	52·0
Mean dew-point temperature	54·5
General direction of wind	Variable.
Whole amount of rain in the week	0·37

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 15, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Aug. 15.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Aug. 15.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2054	1441	1462	82·7	52·0	64·3	0·37	37
Bristol (City) . .	167487	35·7	111	75	*79	..	..	..	..	..
Birmingham (Boro')	352296	45·0	218	171	241	79·3	50·0	61·1	1·15	116
Liverpool (Borough)	500676	98·0	319	290	349	73·0	51·0	60·5	0·65	66
Manchester (City) .	366835	81·8	245	208	*287	..	..	..	..	..
Salford (Borough) .	117162	22·7	89	59	95	75·9	48·2	61·1	1·09	110
Sheffield (Borough).	232362	10·2	170	122	150	75·5	48·1	62·2	0·99	100
Bradford (Borough)	108019	16 4	97	55	83	..	..	..	..	..
Leeds (Borough) .	236746	11·0	137	120	164	78·0	43·5	61·5	1·47	148
Hull (Borough) .	108269	30·4	69	50	79	77·0	45·0	60·8	1·37	138
Nwcstl-on-Tyne, do.	127701	23·9	86	68	76	..	..	..	..	..
Edinburgh (City) .	177039	40·0	115	85	93	69·7	51·0	59·1	2·60	263
Glasgow (City) .	449868	88·9	314	262	254	71·9	48·5	59·8	2·18	220
Dublin (City and some suburbs) .	319985	32·8	117	157	161	74·4	46·6	59·6	2·52	255
Total of 14 large Towns . . .	6391080	34·7	4141	3163	3573 Week ending Aug. 8.	82·7	43·5	61·0	1·44	145
Vienna (City) . .	(1863) 560000	..	..	..	302	..	..	† 67·1	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·630 in. The barometrical reading decreased from 30·01 in. on Sunday, August 9, to 29·34 in. on Thursday, August 13.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 69·8°.

APPOINTMENTS FOR THE WEEK.

August 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

25. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

28. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

LECTURES ON
DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

General Paralysis of the Insane.

If I choose a pathological basis for the order of the subjects I bring before you, it necessarily follows that after speaking of acute affections of the brain I should take up the chronic. I spoke first of acute inflammation and true softening; and then of the disease which in general language is styled softening, but which rather implies a withering of the brain. Now I come to another case where the cerebro-spinal centres degenerate, but in a peculiar way, the change being of that kind which is usually supposed to arise from chronic inflammation, and this brings the disease I am about to mention in close alliance with cirrhosis of liver or morbus Brightii, a disease where the membranes are adherent to the brain, and the latter degenerates, together with a production of new connective tissue and a change in the blood-vessels. This is the general alteration which occurs in the general paralysis of the insane. It might appear to some of you that passing from softening of the brain to a form of insanity was a long stride, and I am going now out of the wards of the Hospital to the madhouse; but, in fact, I am following the natural order of disease, and the forcible separation of many cases found in lunatic asylums from those which we have to treat here is artificial. For not only pathology but clinical facts unite them; over and over again have I seen a patient sent here, and it has been a question whether he has softening of the brain or whether he be suffering from the effects of intemperance or be tending to dementia. Not long ago I had a man in my ward who was labouring under cerebral symptoms in consequence of an injury, and it was thus considered a proper case for a Medical ward. One of my clerks, who saw him first, finding his articulation defective, believed it was a case of disease of the medulla oblongata, but after going over all the man's symptoms I concluded it was a case of general paralysis of the insane. Thus you see in actual practice there is not that line of demarcation between cases which you think ought strictly to be found in lunatic asylums and those which we have to treat here in a general Hospital.

You might very fairly argue that this doctrine would apply to all cases of mental disease, for all have their foundation in an alteration of the brain. But this is not really so. Insanity is not a pathological condition, as we understand the term in our post-mortem rooms. I believe all mental peculiarities are associated with a certain organisation, but that peculiar organisation is not of a kind which can be appreciated by our eye. We know that cerebral development is intimately connected with mental power, and that no doubt a peculiar formation exists with eccentricity of character. But if this eccentricity reaches that height to which we give the name of insanity, we should not expect to find any structural change in the brain, even if there was a visible peculiarity in its conformation. I would have you here remember, once for all, that the changes which our eyes or microscopes discern are either of a degenerative and destructive kind, or they discover a low-formed tissue which encroaches on the healthy structure, and thus, under both circumstances, there is a loss of good substance, with a corresponding failure of function. We know nothing of those alterations which are associated with a change of function or exalted function. If, then, a person be not born fatuous, but, having possessed the ordinary mental faculties of man, should lose any of these, and should there fail at the same time any of his bodily powers, then we should expect some degeneration of the structures. If a patient becomes feeble or paralysed in any part, we ought to be able to discover the cause in his nervous system; if also he become demented, a lesion should be made manifest. On the contrary, the discovery of a diseased brain would warrant the assertion of a loss of mental or bodily power.

In speaking, therefore, of chronic inflammatory processes in the brain, we of necessity touch upon the subject of mental disease, and in this form of malady to which I now allude, and which may be compared to the atrophic form of Bright's kidney, the cerebro-spinal centres become wasted. You would expect, of course, a paralysis of body and mind—a "dementia paralytica." This is what you have, and is, in fact, the name of the disease. It is a disease in which the patient finally possesses little more than vegetative life. He sits in a chair or lies in bed perfectly helpless, and the mind gone. Now, you might suppose that this disease progresses gradually, and thus there is a gradual decay both of mental and physical power. Which of these begins to fail first is a disputed question amongst alienists. Inasmuch as the membranes are affected and the adjacent cortical structure, you might infer (from what has been already taught) that convulsive movements might be present, and so they are, epileptiform attacks being very frequent. As also the change is not simply a degenerative one, as seen in old age, but is a destruction due to a more active process, you might suppose that the dementia was ushered in by peculiar mental phenomena. This is so. The mental peculiarities are almost characteristic of the disease. The patient's mind is excited to the formation of the most extravagant ideas; he believes himself to be some exalted personage, to be inhabiting a palace, and to be possessed of enormous wealth. Thus it is that this disease is styled by the French "paralysie ambitieuse."

Here, then, is a chronic disease of the cerebro-spinal centres having the same relation to acute inflammation as phthisis has to pneumonia, or a chronic rheumatic arthritis to an acute synovitis, or, more appropriately, a chronic Bright's disease to an acute nephritis. The disease has a duration of about four or five years, and then terminates fatally. After death you find a marked degeneration or destruction of the most important parts of the brain, the grey substance more especially, but no portion of the whole cerebrum is excluded from the process. The membranes—that is, the visceral arachnoid and pia mater—are much thickened and closely adherent to the surface, so that on an attempt to remove them the cineritious structure is torn. In this grey substance the ganglionic cells would be found to have completely degenerated and altered in form and colour. Associated with them are amylaceous bodies and a quantity of new connective tissue which binds the whole together and hardens it. Sometimes numerous blood-vessels are seen, and small extravasations of blood; also considerable extravasations are often seen to have occurred on the surface, and organised into membranes.

In many cases, one of the most striking alterations is to be found in the blood-vessels; thus in one specimen in the museum, when a section was made, the vessels stood out like so many bristles. They could be pulled out of the brain to the length of several inches, and had undergone a most remarkable calcareous change. The patient was comparatively young, and such an alteration I have never met with in older persons with diseased cerebral vessels. This was an evident and marked change, but besides this it is said that the microscope is able to display even more distinct alterations in the vessels. Dr. Sankey has shown that the vessels become tortuous, and put on a varicose appearance from protuberances on their surface, owing to a thickening of the walls. Indeed, the disease has been regarded in a pathological point of view as a case where there was hypertrophy of the connective tissue in the small arteries and veins of the pia mater of the cortical portion of brain. At the time these observations were made, the anatomy of the blood-vessels of the brain was not so well known as it has been of late, and therefore it would be necessary to compare these diseased vessels with those which may be regarded as normal as delineated by Professors His and Bastian. These gentlemen have shown that the blood-vessels of the brain are normally surrounded with a case, or rather they are contained in sheaths styled perivascular canals, and which some have regarded as lymphatics. With this new light our specimens must be studied afresh. As you might suppose, the disease does not end here, but affects the brain as a whole, and at the same time the spinal cord. Several cases have been recorded where the medullary matter was so hardened by the chronic inflammatory process and the production of adventitious matter that the grey matter could be scraped off, leaving the form of the convolutions in the white matter beneath. The spinal cord is also atrophied. In a spinal cord sent to me from an asylum I found grey degeneration of the posterior columns with abundance of amylaceous bodies; but the history not being good, I thought it better not to publish it. The fact, however, remains that, as a result of the morbid process which takes place, the cineritious structure is atrophied and converted into an inert mass. The brain, as a whole, is degenerated, including the central ganglia, and also the spinal cord.

We have, then, this disease styled "dementia paralytica," or the "general paralysis of the insane;" by the French "folie paralytique," or "paralysie ambitieuse." Pathologically it would be styled "meningo-cerebritis chronica" or "peri-encephalo-meningitis." It is a case of paralysis of body and mind, commencing with a physical weakness or some alteration in the manners or character of the patient. It is a question which takes the lead, the psychical or physical derangement. Those who have recorded most cases agree that the mental aberration is the first symptom discernible. I think it is Dr. Blandford who has insisted on the mental alienation being the first and most important symptom, and that even the defect of speech does not at that time prove a necessary motor lesion, since by a strong effort of the will the stammering may be overcome. As regards the bodily symptoms, they are those of gradual progressing paralysis; there is a tottering in the gait, a want of power in articulation, and an evident paralysis of the muscles of the face. The commencing paralysis of the muscles of the face produces a vacant expression, which is at once recognised by the experienced Medical man, and as soon as the patient talks his mode of articulation at once characterises the disease; he speaks thick, and clips his words like a drunken man. There is no necessary connexion between paralysis of the face and insanity, but still, in a case where the brain is approaching decay, it might be the first symptom recognisable. Thus, from the earliest ages, a madman was characterised by an altered mode of speech and by an inability to hold his saliva. In this disease there is a vacant expression, the articulation is indistinct, and the tongue is protruded with difficulty or wavers. Afterwards the paralysis extends to all parts; there is a weakness of the limbs, and the patient walks unsteadily, like a drunken man. When it is said that the paralysis begins above and then affects the body, this is often only apparent, and because a change in the muscles of the face is more easily distinguishable. Thus, in a man who was in the Hospital some time ago, there was the tremor of lips and tongue, as well as hesitating speech; but the man could grasp with his hands most powerfully, and when asked to walk would step out with vigour, and said he could continue for miles. It might thus have been inferred that he had perfect control over his limbs; but I caused him to write, and the tremor of the hand was evident, as you will see by this specimen, where every letter is formed by a dozen or twenty different strokes; and when he walked his gait was seen to be unsteady, although we had no opportunity of testing the amount of control over his limbs. If ever you go to a lunatic asylum, you may observe persons with this disease playing at cricket, and then you will perceive that, although they run and hit the ball, they do it in so awkward and grotesque a manner that it looks like a burlesque of the game. The appearance of a drunken man will give you some idea of a patient thus affected—in fact, a drunken man might be said to have an acute general paralysis of the insane. I should have mentioned also a fact which is very common in many brain-diseases—that the pupils are, as a rule, unequal in size, and both contracted more than natural. I had lately an opportunity of proving the importance of this symptom. A gentleman died, of what was evidently general paralysis, about two years after his life was insured, when of course some investigation was made as to his state of health at the time the assurance was effected. It was then known that he was suffering from general nervous debility, attributed to over-study at college, and it was also known that one pupil was larger than the other. The two facts were not associated by the Medical adviser; but the proposer of the assurance was sent to an ophthalmic Surgeon, who declared that there was no organic disease of the eye. His life was then accepted.

As regards the mental symptoms, these may show themselves by a mere failure of power, or inability to attend to business or the ordinary affairs of life, or are perhaps exhibited, in a more striking manner, by strange behaviour towards those with whom he associates, and by certain likes and dislikes in his own family. The tendency is towards dementia, seen in the memory failing and the mistakes which are made in the transactions of business. Then he will have delusions, and his mind becomes wholly deranged; but instead of growing melancholy, he becomes elated, or is, as the French say, "gay"—he has exalted ideas. These are not necessarily of the kind before mentioned, but, in cases I have seen, are rather extravagant ideas. The greatness of the man has been not merely exhibited by his boast of immense wealth, but everything around him appears to him on a larger scale, as a patient informed me that his house was a mile high, and that he had a hundred ribs, and that he could kill a thousand pigeons at a shot. They are often rather extravagant than ambitious ideas. I used, amongst my out-patients, to have a postman led in by his wife, as he could scarcely stand. When asked how he was, he smiled, said he was very well, was about to resume his occupation, saying he could walk for miles. Strange that the patient, not feeling ill, will deceive others. Thus, not long ago, a patient staggered into my room, accompanied by his wife, and having all the well-marked symptoms of dementia paralytica; but both of them for some time warded off my questions regarding his brain or the state of his mind, since, as they said, they had come to consult me about the sudden "bilious attacks" to which he was liable. These persons, I might say, are often subject to these so-called affections of the liver.

I not long ago went a few miles into the country to see a young man who I was told had had a sudden attack of illness, and had had several before. I found him in bed in a not completely conscious state, after having had a severe fit of vomiting. The Doctor told me he had been called before to him in such attacks, and believed it was the liver. After a few days, when he had recovered, he came to my house, when it was a clear case of the disease I am describing. I then learned about his altered manner for some months previously. He is now in an asylum. It is very likely that the attacks are of an epileptiform nature, of which the vomiting is a symptom, for these patients, you ought to know, very frequently have fits of what is called cerebral congestion or epilepsy. It has been thought that these attacks are caused by blood effusions, as the remnants of them are often found after death.

Dr. Tuke, who has written on this subject, says you may divide the disease into three stages—first, where the quivering of the lips and thick articulation are observable, together with contraction of the pupils; secondly, where there is decided want of power, shown in the unsteady gait and weakness of arms; and thirdly, where all power of motion is gone, and there occur the epileptiform attacks. This division would have reference to the bodily symptoms, but as for the mental there would be first loss of self-control, of reasoning power, and perhaps excitement; secondly, the patient might have absolute delusions; and, thirdly, complete insensibility. Some have said that the patient passes through the three stages of alienation, dementia, and amentia.

Causes.—It would appear that in this form of insanity there is not found the same strong hereditary disposition to it as in other forms of the disease; and this quite accords with our knowledge that it may be set up by accidental causes. No doubt overwork, or wear and tear on the nervous system in a person of excitable temperament, might develope the disease; but at the same time it does seem capable of being produced by altogether accidental circumstances. There is the case of that man who lately left us. He came in saying that he had not been well since he fell off a scaffold two years before, and was brought to the Hospital suffering from injury to the head. His wife said that he had not been right since, and that his capacity for business had altogether failed. He had a vacant expression, or rather a scared look, showing at once that we had before us a cerebral case; then we noticed one pupil larger than the other, but both contracted on the stimulus of light. When spoken to he answered quickly but rather indistinctly, all his words being as it were thrown together—that is, he spoke thickly, with no clear articulation. His lips trembled when he attempted to utter a word, and his tongue when he protruded it. When asked to walk he set off with great desperation, but his gait was very awkward. He could grasp you tightly, and there appeared to be no tremor of the hand; but, when asked to write, his hand was very tremulous, as you will see by this specimen. As regards his mind, we could not say that he had very exalted ideas; but, on the other hand, he had no approach to melancholy—he always spoke cheerfully, said he could walk, or write, or read. He often had a book before him, but I question if he understood it. Now, if this man had had exalted or ambitious ideas, not a single symptom would have been wanting to make it a case of the general paralysis of the insane; but in spite of this absence, I regard it as an example of the disease, for in some exceptional cases this exhilaration is wanting. The great point of interest is that it resulted from an injury. When you remember that you find in this disease thickening of the membranes, which are adherent to the brain, besides false membranes which have probably arisen from extravasa-

tions of blood, the conditions are just those which might arise from severe concussion, accompanied by some injury to the cineritious structure, with perhaps effusion of blood on the surface.

As regards diagnosis we must be led by a number of circumstances before we form a conclusion. In most cases there is the general paralysis, with the peculiar mental defect before mentioned, and a certain morbid condition found after death. Take these together, they characterise a disease deserving of a special name, but it does not follow that some one symptom may not be absent, and thus we must not style every case where there is bodily and mental defect a case of "dementia paralytica," which has at the present day a very definite signification. For instance, a bodily and mental paralysis exists in mere atrophy of the brain arising from many causes—as excessive spirit-drinking or mere old age—but in the disease of which I speak the destruction of brain has come about in a peculiar way, and the symptoms are necessarily almost characteristic. There are also cases of disease commencing in the spine and subsequently creeping up to the head, and which, strictly speaking, are cases of general paralysis. Some of the most remarkable instances of this kind have been those where an injury has been received, causing in the first instance symptoms of paraplegia, and subsequently of cerebral palsy. I believe I have in my recollection some knowledge of a case which terminated with all the symptoms of the general paralysis of the insane, and which resulted from a severe injury to the spine. An alienist Physician could not allow, however, that the condition was the same, for it would contradict his strict rule that the brain, or at least the mind, is first affected. The distinction is one of immense importance in a legal point of view, for, although we may meet with numerous cases which being strictly interpreted would demand the appellation general paralysis, yet it is best to withhold the term, for I believe I am right in saying that in a court of justice an expert who used this expression would necessarily imply that the patient was mentally incapable at the very first moment that any symptom of general paralysis exhibited itself.

Many years ago I had the advantage of attending a course of lectures delivered by Dr. Conolly at Hanwell, and I remember that he made the following statement, which I believe is quite correct—that general paralysis of the insane occurs mostly amongst the lower orders, and thus is seen much more frequently in public than private asylums; also that it occurs much less frequently in women, and I think he went so far as to say that he had never seen an example of the disease in a lady of the upper classes of society. I cannot but think that these facts tend to corroborate the idea that the disease is often induced by accidental causes, such as direct injuries to the head.

I believe I am right in saying that there are some in the Profession who deny the broad statement that the disease is incurable, and necessarily fatal in a given period. I can venture no opinion on the subject, but there appears no *à priori* objection to the disease being recovered from in its earliest stages.

TWO LECTURES
ON
PARASITIC FUNGI AFFECTING PLANTS.

DELIVERED AT THE

Hospital for Skin Diseases, Blackfriars,

By TUFFEN WEST, F.L.S., F.R.M.S.

It may not be amiss to preface the following by a few introductory remarks on fungi, the parts of which they are composed, and the way in which their presence may induce disease, either in vegetation or in animal life.

Fungi may be defined as plants of a low type, and of the humblest structure. Mushrooms, toadstools, and puff-balls are fungi; so are the blue moulds of paste and of cheese, whilst brewers' yeast presents us with one of the tribe in its simplest form.

Fungi are almost universally present in decaying organisms. The multiplied observations of scientific men in various parts leave no room for question that they are the principal agents in inducing ferment-changes and decay. Many kinds infest plants, occurring principally on the under (or respiratory) surface of the leaves. When such occur in greater number than usual, their effects may prove of serious consequence to the gardener or the husbandman, and even may be sources of national calamity, when, as in Ireland, the produce of one kind of vegetable is too exclusively relied on for the staple article of food. The injury done to vines by their parasite fungus—the oïdium—will be in the recollection of all. As examples of these leaf-loving fungi, readily accessible and familiar to most, may be named the one found on bramble leaves, whilst it is almost impossible to take up a straw without finding brown spots on it (called "mildew" by the farmer). These spots are constituted by masses of spores of a minute fungus.

The term "mycelium" is given to delicate transparent filaments, which represent the root-fibres of higher plants; these are present in all fungi. In favourable circumstances these threads become, by multiplication with repeated forking, much matted together, and are then called "thallus." The structures bearing the fruit are in their simplest condition only short upright branches, but various forms, often very elaborate, are assumed by combination of these elements. The fruits of fungi are designated "spores." "Sporules," "sporidia," "sporidiola," are synonymous terms, and should be disused. At the ends and along the edges of mycelium threads it is common to find rounded or oval bodies, having much the appearance of, and commonly designated, "spores," from which, however, they should be distinguished as being merely buds, here called "conidia." The mycelium is so much alike in all cases that it is practically hopeless to seek to distinguish fungi by any characters resident in this part of their structure. The place of growth and arrangement of parts due to this cause furnish useful provisional characters. Dimorphism—the occurrence of the same plant in two or three different states—has been well authenticated in several fungi, and is on good grounds suspected to occur in more. The occurrence in many plants of cutaneous diseases from the presence of parasitic fungi is in itself a fact of interest, when it is remembered that certain of the skin diseases affecting mankind are due to the same cause. Is it possible that transplantation from one to the other may occur? The present state of science seems quite to favour such a view, and the subject has been thought to possess sufficient interest to justify its being thus brought before the notice of the Profession.

Lecture I.

The existence in many of the higher plants of diseases accompanied with parasitic fungi, and unquestionably induced thereby, has led to the attempt to ascertain how far careful study of these plant-parasites may throw light on some difficult questions connected with analogous structures found in certain diseases of the human skin. The greater simplicity in the conditions of vegetable growth, and the readiness with which its processes can be observed under the microscope, lead to a reasonable expectation that in time questions relating both to practice and to hygiene may be assisted in their solution by such study.

The epiphyllous fungi attack plants entirely irrespective of the health of their "hosts," which, however, when attacked, manifest symptoms of irritation and ill health in various ways, due to chemical changes set up in them by the parasite, and altering their nutrition. "Redness and swelling" are with some very marked (*e.g.*, *Æcidium compositarum* δ *Lapsani*, *Trichobasis betæ*, *Aregma bulbosum*), and there are good reasons for supposing that heat is also a concomitant. These indications of suffering from the presence of the parasite correspond strikingly with the classical definition of "inflammation."

The parts of plants are not always invaded alike; some—indeed, most of the fungi in question—prefer to nestle in the tissues immediately beneath the cuticle of the leaves on their lower surface, others on the stems (*e.g.*, *Puccinia graminis*, *Ustilago hypodytes*), whilst a few invade one or other of the parts composing the flower (smut and bunt).

The effects of the fungi differ greatly on different plants, some of which are sufficiently hardy to recover rapidly; but the softer herbaceous plants, through sap-drainage and deterioration, are usually quickly destroyed. In their mature

condition, they occur on leaves of different ages, according to the genus and, in some cases, the species. Æcidium in its different forms almost always inhabits the young leaves; the Uredo-fruits mostly affect older leaves; the Pucciniæ, leaves whose most vigorous condition is past; and in two species, occurring on the stems respectively of hemlock and asparagus, the fruit is not matured until winter, after the stalks of the plants have been long dead. It is not yet quite settled whether the Erysiphei pass into the tissues; in their oïdial condition (*e.g.*, vine-blight) they appear on the most vigorous leaves, and some pass to the state of mature fruit, with very slight, if any, visible disturbance to the tissues of their host. Plants growing near together are often attacked by the same species of fungus. The explanation of the fact is easy. The spores from an infected plant of the previous year, or motile gemmæ just thrown off by members of the genera *Cystopus*, *Peronospora*, *Oïdium*, however brought, whether carried by the wind or by insects, present in the soil, in or upon the seed, do undoubtedly spread in the way of a contagion induced by pre-existing germs.

Care must be taken not to confound the action of true parasites with that of the fungi appearing on dead or dying vegetable matter. The first grow with the growth of their hosts, and in their vegetative portion, die at and through their death; with some there are evident precautions to prevent premature injury to the tissues of an infected plant. The latter feed upon, and reduce to simpler elements, decaying matters which would otherwise cumber the ground and even prove noxious: these belong to totally different tribes.

The parasitic fungi are apt to recur with so much regularity year by year in the same spots that, when their habitats have once been found, a supply from the same place may at the right period be calculated on with tolerable certainty. The presence of fungus-mycelium may be readily demonstrated (if present) in the apparently healthy tissues of healthy-looking plants. Parasites of this class produce changes differing greatly in appearance according to the kind of plant attacked and the invader—hectic red in some, sickly pallor in others, blackness followed rapidly by offensive decay in a third division. These appearances are so characteristic that the educated eye may often diagnose the kinds met with in a quiet stroll through country lanes, by their effects, with as much ease and certainty as in practice; the types of disease presented will not seldom betray their nature by their peculiar *physique*. Seasons largely influence the prevalence or scarcity of these fungi; moisture favours their growth. As yet the present exceptional summer has produced large numbers, whilst some kinds, found but sparingly hitherto by me, have been abundant notwithstanding the heat and drought. Special meteorological conditions are known to largely influence their growth; a close still air likewise: hence their luxuriance often in shady spots, and on plants sheltered from the breezes by rank, thickly crowded herbage. The fungi which attack plants placed in situations which are (for them) unusually moist (as ferns in a wet fern-case, or plants in a damp greenhouse) are quite different from those to which they would have been liable in their native habitats. It is doubtful if the feeble health of the vegetables have any direct effect in inducing the attacks of parasitic fungi, as it is certain that intestinal worms develope when their germs are placed in favourable situations, and that the health of their hosts has nothing to do with facilitating access to such places. The state of weather favouring growth of the fungi is unfavourable to healthy life in the higher plants; hence the rapidity with which the latter fall a prey to the abounding parasitic fungi in unhealthy seasons. During winter the epiphyllous fungi disappear, but the first fine days of spring rapidly call forth again their latent vitality; with the leaves they come, and with them disappear. A few (*Melampsoræ*) which appear as "rusts" in the autumn continue their growth on the decaying leaves, in damp spots, on which, in the following spring, they are found to have attained to a higher type of structure. Evergreens are almost free from them; five only are known to be subject to their attacks in this country—all rare except perhaps the *Puccinia buxi*. This comparative immunity may be due in measure to the density of their cuticles.

It may be stated as a general rule that each species of plant has its own parasitic fungus, except in some of the larger natural orders, as the *Leguminosæ*, *Compositæ*, etc., where the same parasitic fungus will be found attacking many of the specific forms therein included. It is rare to find plants belonging to different natural orders attacked by the same species of fungus. There are many species (and even genera) of plants which have not been ascertained to be liable to parasitic fungi. It is difficult to suggest any reason for such exemption. Hairiness of the surface will favour the arrest of floating spores, smooth polished surfaces the contrary. As in the case of galls, so it is again here. An abundant supply of nutritive juices, with thin cuticle, favours their production: hence the mutual preference for young leaves, stalks, and twigs in a state of active growth and sap-circulation. It is well known that the cellular are the least specialised of the tissues of plants, the woody and vascular the most complex; and it may not be without interest to remark that the first stages of decay are attended by fungi of the simplest types—*Fusarium*, *Penicillium*, *Mucor*, *Botrytis*—whilst the reduction of the more specialised tissues seems to demand fungi of more elaborate organisation — *Sphæriæ* (ascigerous fungi with corneous envelopes), *Peziza* (naked ascigerous fungi)—and in vastly greater variety of specific type. As during life one plant furnishes oil of lavender, a second quinine, and a third strychnia, so during life will the tissues of the potato seem only adapted to nourish its peculiar *Peronospora*, corn its *Puccinia*, mint its *Æcidium*, yet after death will all alike be preyed upon by the same kinds of fungus, and suffer alike.

There are 235 reputed species of epiphyllous fungi described as native to Britain, but several of the supposed genera are now considered by the best authorities to be only transitory conditions, so that the number is certain to be eventually much reduced. The following represent some of the principal types:

I.—Æcidium.

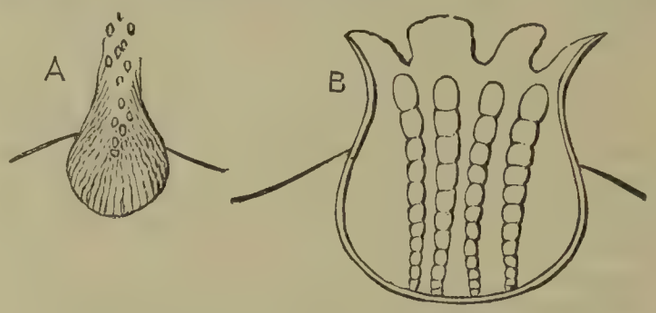


Fig. 1.—A. Spermogone containing spermatia ("sperm-cells"); B. "Spores," germ-cells produced in special sheaths (peridia).

With this genus are associated three others separated only by slight characters—*Ræstelia*, *Peridermium*, *Endophyllum*. Spermogonia freely produced, ultimate destination of the germ-cells unknown; it has been thought, and may possibly be so, that from them, on the same or other plants, Puccinia-fruits may arise.

II.—Uredinei ("Rusts").

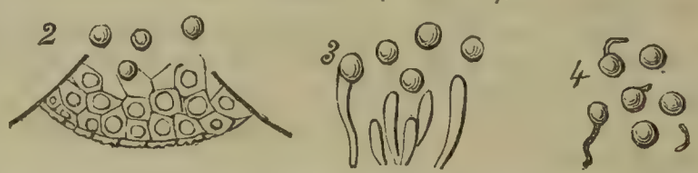


Fig. 2. *Uredo*, spores developed within cells, afterwards free. 3. *Lecythea* spores free, along with them elongated cells (paraphyses). 4. *Trichobasis*, spores free, often with a short peduncle attached. (Spermogones are known to accompany some of the forms.)

Several of these are known to be, and perhaps all may be, conditions of

III.—Pucciniæi.

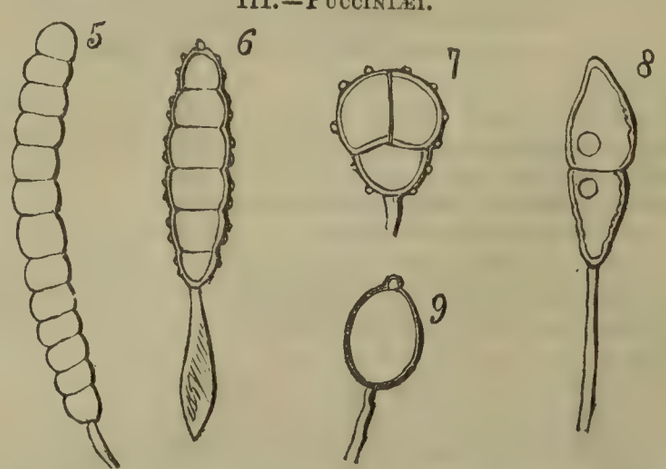


Fig. 5. *Xenodochus* (grows on burnet). 6. *Aregma* (Rosaceæ). 7. *Triphragmium* (meadowsweet). 8. *Puccinia* (grasses). 9. *Uromyces* (vetches).

Sperm-cells rare, but known to occur with some species. *Podisoma* and *Gymnosporangium* are associated genera, in which the Puccinia-fruits are imbedded in a tremelloid, gelatinous mass.

IV.—Ustilaginei (Smut and Bunt).

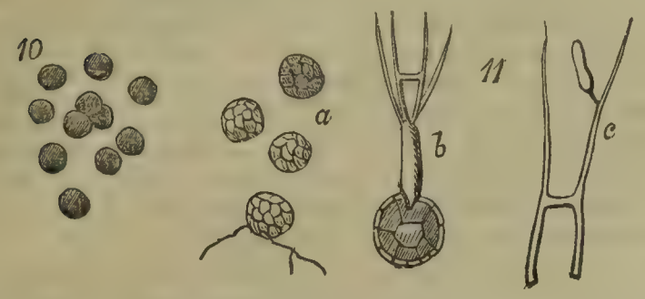


Fig. 10. *Ustilago* ("smut"), sexual conditions unknown. 11. *Tilletia* ("bunt"): *a*, spores, which on germination, *b*, emit a filament, at the extremity of which short branches arise—these conjugate in pairs (as with syzygites and some algæ), after which union a secondary fruit, *c*, is produced.

The essential nature of these changes has yet to be ascertained.

V.—Peronosporei.

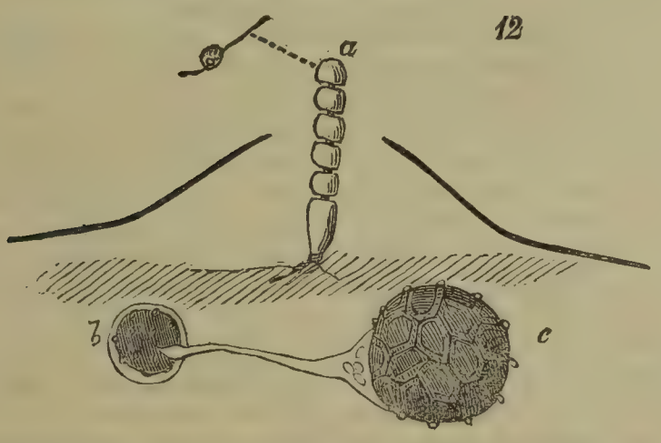


Fig. 12. *Cystopus*: *a*, "spores," arranged in beaded threads, at first subcutaneous, then external through rupture of the plant-integument; their contents undergo segmentation and afterwards become motile; *b*, sperm-cell; *c*, germ-cell; a filament is produced from the former, which becomes closely applied to the latter, whilst without investment, after which a strong warted coat is formed.

Both "sperm-" and "germ-cells" grow immersed in the tissues of the plant.

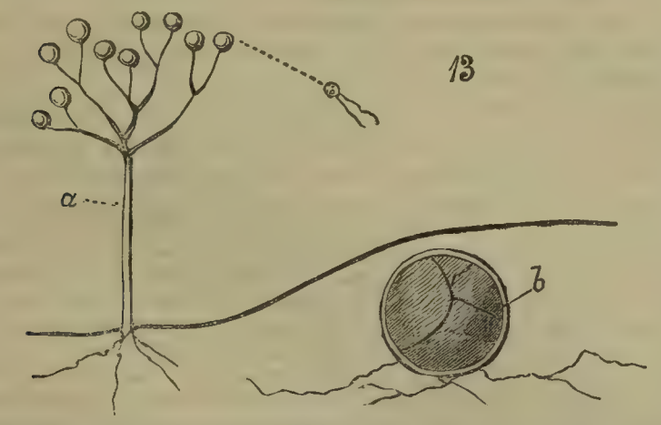


Fig. 13. *Peronospora*: *a*, arborescent threads, external to the surface of the leaf, bear at their tips gemmæ, the contents of which, after segmentation, become motile; *b*, germ-cell ("oo-spore"), immersed; sperm-cells??

In this genus the most deadly in their effects on vegetation of the epiphyllous fungi are comprised. Suckers, analogous perhaps to the tendrils of higher plants, occur on the mycelium of members both of this and the former genus.

VI.—Erysiphei.

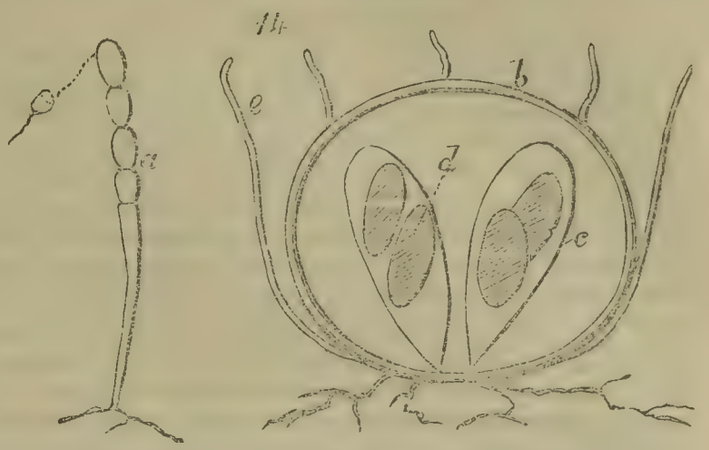


Fig. 14. *Erysiphe*; mycelium creeping over the external surface of the leaf, and throwing up at intervals jointed threads. *a*, the contents of the joints after segmentation become motile gemmæ; *b*, fruit borne externally, globular and horny in texture, containing within them asci (*c*) or "spore-sacs"; *d*, spores; *e*, appendages.

The immature conditions of fungi in this order constitute the spurious genus Oïdium, so well known in connexion with the vine disease. Sexual conditions obscure.

With regard to the fungi found parasitic in diseases of the human skin, so much of their life-history yet remains to be discovered, that speculation on their affinities cannot at the present time be other than barren of result. The well-known mycelium represents principally the vegetative system or root-fibres of the higher plants, whilst it is very doubtful if the so-called "spores" (sporules, or sporidia), have any claim to be regarded as other than *gemmæ*—portions of mycelium thrown off to spread the plant, but having no connexion with true sexual reproduction or its results. The greatest care and patience will be required ere we can hope to learn their entire life-history, sufficiently even to know if what we meet in the different affections be really true species, native to the skin—forms fruiting when growing on plants, but barren on the skin—or common moulds (Penicillium, etc.) vegetating in conditions unfavourable to the production of true fruit. Artificial growth in water, glycerine, or liq. potassæ (!) can in nowise imitate the conditions under which they occur naturally; growth on rice-starch, having been successful in resolving some other cases of similar difficulty, appears likely to prove the best material for furnishing the requisite pabulum. Beale's carmine fluid has in some cases enabled me to trace mycelium amongst surrounding tissues in a very happy manner.

Puccinia favi (a) resembles *P. graminis* so closely (to judge from the figures and descriptions given of it) that one is led to ask whether it be not more probable that spores of the latter may have occurred to its discoverer as an accidental concomitant with favus-crusts than that it should be so excessively rare as to have eluded all further search for seventeen years by an army of good observers skilled in the use of first-class instruments. The incidental notices of its occurrence by subsequent observers do not produce on the mind a satisfactory conviction that they have really met with what Ardsten described. Spores are abundant in the air at particular periods; is it not possible that a favus patient or two, engaged in threshing, or passing near a spot where this operation was going forward, may have got a few spores of the corn-mildew on their skin, and so been the means, all unwittingly, of causing grave error. In such a view of the case, notwithstanding the eminent authorities who have regarded it differently, we must consider the *Achorion* as having no connexion at all with the *Puccinia*. It seems not improbable that "alternation of generations" may occur—that is to say, that a certain point in development may be reached by a fungus on one plant, that the parasite may reach a further stage on a second plant under a different form, whilst maturity may not be attained until it have passed through a third or fourth stage, characterised in each case by a different outward condition, as well as involving a different plant each time as host.

The study of these organisms presents an inviting field for a student possessed of the requisite qualifications, time, a good instrument, fertility of resource, and patience without limit. By the commencement of next session

(a) *Vide* Robin, "Végétaux Parasites," p. 613; contains copious quotations from Ardsten's account of this, with references to the original.

a herbarium, containing a large proportion of the epiphyllous fungi known to inhabit Britain, will be placed in the library, together with numerous mountings and dissections of the same for microscopic examination; these will be readily accessible under suitable regulations. It is hoped these facilities for obtaining an insight into a confessedly intricate subject will be taken advantage of. I have an abundance of duplicate specimens, and can generally supply many in the living state at short notice. The officers of this Hospital earnestly desire to utilise the opportunities for studying skin diseases afforded by the vast number of patients attending in the course of the year. And, in pursuance of such intention, they propose to give occasional lectures on the Comparative Anatomy of Skin Parasites, viewed as a branch of natural history studies; and when further research in any such direction is required, pains will be taken to indicate it, and, so far as other engagements will allow, to assist students therein.

ORIGINAL COMMUNICATIONS.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

Force in Bengal in 1825; *in* 1826—*Inquiry into State of* 38*th Regiment—State of Barracks—Economy—Hospitals—Sickness in Fort William—March to Berhampore—Duties of Cavalry; Infantry; generally—Exposure to Sun—Dress.*

The history of army sanitation in India dates no further back than 1825. In that year the forces of the regular army serving on the Bengal(a) side of the country included the 11th and 16th Light Dragoons, the 14th and 59th Regiments of Foot (all these being engaged at the siege of Bhurtpore); the 31st and 44th Regiments in Fort William; the 13th, 38th, 47th, 67th, and 87th Regiments, employed in Ava. In the following year—namely, 1826—the strength of the British forces, according to official returns, amounted to only 7976 men; these being variously stationed, at Fort William, Berhampore, Chinsurah, Ghazepore, Dinapore, Cawnpore, and Meerut. The fortress of Bhurtpore having fallen, and peace been declared in Ava, the regiments employed at those places had returned to their stations, with the exception of the 67th, which regiment had embarked for England. "The troops, who had so lately been in the highest state of mental excitement and bodily exertion, sank at once into repose and inaction, and indulged in all the enjoyments and excesses they found means of doing."(b) It is further recorded that some regiments more than others, having obtained very large booty, were enabled, on its proceeds, to exceed in dissipation of all kinds, more especially in spirits and other deleterious drinks, which were procurable in abundance in the native bazaars.

In the month of April the 38th Regiment, which had embarked for Ava on April 5, 1824, upwards of 1000 bayonets strong, returned with a strength of only 27 officers and 462 rank and file. Fever, dysentery, and scurvy had in that short interval thinned its ranks to such an extent that a public inquiry was instituted,(c) the opinion tendered by which will now read strangely, it having been to the effect that the influence of climate had overcome military authority, and that forethought could have had but little control over events as they occurred there in ameliorating the disease. This inquiry is only interesting to us of the present day as indicating the first instance of which we have information of a desire to trace, if possible, the operation of causes inimical to the health of the soldier in India.

The barracks in which the men at this time were accommodated afforded, as a rule, not more than 48 to 54 superficial feet per man. The barrack buildings, except at Fort William and Berhampore, were only one story in height. Each was about 237 feet long, including two rooms at each end for non-commissioned officers; the breadth was 24 feet, and the greater number were entirely surrounded by a verandah 9 feet broad. The roof was of thatch. Fifteen doors opened into the building at either side, and two at either end, and between adjoining buildings a clear interval of 90 feet existed. It does not appear, however, that they were provided with either punkahs or tatties. Bedsteads were provided in but a few, as will be seen as we proceed; the men procured such as their means or desires led them to. Bedding was meagre in quantity; all buildings connected with barracks in a state of neglect or of insufficiency; rations in insufficient quantity at some stations, and too large at others; means of amusement few. Spirits were issued as part of the daily ration, while any quantity could be procured in the bazaar or from the wives of the married men. It was deemed necessary to health that men should, during the hot season, be confined to their barrack rooms from 8 a.m. till 5 p.m., although without means of amusement. Drills and parades seem upon the whole to have been moderate in degree and duration, and duty so light that, as a rule, the men had thirteen nights in bed.

The regimental Hospitals consisted of one-story-high buildings, which, like the barracks, were covered with thatch. Each building was 294 feet long, 24 feet wide, and surrounded by a verandah 9 feet in breadth. The outside wall was 11 feet high, that between the verandah and ward 20 feet. On either side were fifteen doors—in some cases what were called "half doors," and glazed windows; in others, simply doors. At either end were two windows. The interior of the building was divided by means of cross walls, extending up to the roof, into three wards. No opening existed for vertical ventilation. It was an ordinary arrangement to have a portion of one end of the verandah partitioned off, so as to form a surgery, and at the other for a dead-house.

The state of matters brought about by the return of the troops from Ava before adequate arrangements had been made for them is thus described(d):—"The arrival of the 13th, 38th, and 47th Regiments at Calcutta was unfortunately in the hottest season of the year. There was accommodation for only one battalion in Fort William, and it was occupied by H.M. 67th Regiment until the corps sailed for England. No quarter was procurable out of it, and encamping them in the hot weather was out of the question. Their sick daily and hourly increased, and there was no Hospital accommodation for them. The General Presidency Hospital was crowded to the greatest excess; the wards with four times the number they should have had, and places filled with sick that had never been intended for any. The recruits who had lately arrived from England were also crowded in Fort William. They suffered much from disease; a third of them were actually in Hospital, and more should have been sent there had there been room.

In the midst of all these embarrassments, cholera exploded among the troops, and many fell victims to its attacks, which were of the most concentrated form. It became urgently necessary to provide forthwith for the troops by all the means possible. The 13th and 38th were ordered to proceed to the upper station of Berhampore, 131 miles from Calcutta, and measures were adopted to prepare Chinsurah as speedily as possible for the accommodation of as many as the buildings there would properly contain.

There occurred some delays and difficulties before the boats and conveyances were in readiness for the movement of the troops. However, at the end of April the 13th and 38th Regiments commenced their route. The weather was unusually hot and oppressive; the thermometer at 110° in the officers' boats. From the shallow state of the river the boats could only reach Nuddeah, seventy miles from Calcutta; the men had therefore to march a considerable distance to reach Berhampore. The left division made the first march of twenty-two miles during the night, which they had judiciously commenced about 10 p.m., moving slowly, and halting occasionally where there was water. The heat of the weather soon began to tell, particularly upon the recruits; many fell sick. They appeared to receive much benefit from bathing their heads with cold water, but in several there seemed to be a general sinking of the vital powers, or collapse, so that it was necessary to give some of them an opiate before they could be bled, which was in all, as we are informed, "effected most copiously. Remittent fever succeeded in most of these cases. The division arrived at Berhampore with fifty-six sick who ultimately recovered."

During the immediately succeeding years, as no field service occurred, commanding and other officers were able to bestow their attention upon the various circumstances of a soldier's

(a) The following remarks refer specially to Bengal, being founded on the reports in the office of the principal army Medical officer in that presidency.

(b) Inspector-General's Report for 1826, page 18.

(c) *Ibid.* p. 59.

(d) Inspector-General's Report for 1826, page 65.

life in cantonments; and it is gratifying to observe that, as a rule, they continued to exert themselves for his benefit. In only a few instances does it appear that some want of consideration was shown towards them; and we find that whenever this was the case, the Army Medical officer was ever ready to advocate the cause of the men placed under his charge. In the following remarks, therefore, I would desire, as far as means of doing so are available, to communicate to the reader some idea of the conditions, more especially as to duty and the economy of regiments, under which in former times our soldiers in India passed their long years of service in that country—making only such comments thereon as appear to be necessary.

With regard to the cavalry, we learn that when on duty the men were kept a moderate time on parade; that much attention was paid to their messing and to the regularity of their meals, as well in the field as in quarters. The men were supplied with good provisions, and in sufficient quantity. Health inspections were performed weekly, and men who upon those occasions were found to be suffering from disease were sent at once to Hospital. Men who were not on duty were made to ride out in the early morning; and all, after stables, went to breakfast. During the cold season the time of all was sufficiently occupied, but for a great part of the year time hung heavy on their hands; and then we learn that all efforts were directed to the suppression of drunkenness, yet all such failed to check the prevalence of that vice.(e)

In the infantry the duties were regulated so as to correspond with the season and climate of the particular station. From March till November parades morning and evening, with and without arms, took place, the morning parades being held at gunfire.(f) Duties were so conducted as to expose the men as little as possible to the weather. In the hot season roll-calls took place frequently during the day, so as to prevent the men from leaving their barrack rooms and strolling about. Great attention was paid to the rationing of the men.

With regard to the troops generally, we read in the report for 1839 that—

"The duties performed by soldiers in Indian cantonments are never too heavy. They have no duties of fatigue at any time. Their ordinary duties are therefore merely those of guards and orderlies; care is always taken that the sentinels are, except in a very few places, sheltered from the sun in the daytime, and from the dews or rain at night. Parades are rarely more than once in the day, except for the purpose of seeing that the men are present. On the march from one station to another the men are necessarily more exposed, as they must occasionally have some work to perform when baggage is left behind, or its progress impeded by rivers or creeks; but even under such circumstances every care is taken that they are not overworked or much exposed, and it seldom happens that they suffer from this cause when proper judgment is exercised in conducting the march, and the weather is not very tempestuous or rainy."

The Inspector-General goes on to observe that "in the general quiet state of Indian cantonments, the soldiers have too little instead of too much labour, either in the way of duties or of field exercise and parades, and it would be well for them if some light employment without exposure could be got to occupy their time. Out-of-door employment in most of the cantonments during the heat of the day is out of the question," but he thinks that "if every soldier were obliged to clean his own arms and appointments, which is now entirely done by natives, some of their time would be advantageously filled up, and they would retain their military habits more perfectly, and most probably have a greater pride in having their accoutrements clean and in the most efficient state. This," Dr. McLeod maintains, "would be no hardship. It is the duty of a soldier in any other place, and in all services. It is only in India that it is otherwise, and that, I have no doubt, originating in the best motives; but certainly it is a misapplied philanthropy, and is in no way productive of comfort, health, or efficiency." Of the correctness of the views thus expressed each succeeding year brought additional confirmation; and at the present time, while I write, there are, I venture to assert, but few officers of experience who do not heartily endorse the views of Dr. McLeod that the soldiers have too little occupation. Let it be observed, however, that useful and interesting occupation is a very different thing from a succession of frettings about immaterial trifles connected with the manner of arranging their accoutrements, their beds, their boxes, etc., in a barrack-room, as well as others that come in the same category in reference to regimental routine.

As a rule, the utmost attention was paid to the interior economy of regiments, and to the comfort of the men; and, with but few exceptions, they were not harassed with duty. We read also in old reports that in the cooler months all the men paraded for exercise at frequent regular periods, the parades seldom or never exceeding an hour in duration. As a rule, the clothing is recorded to have been excellent and abundant, and, moreover, as having been varied to suit the season.(g) During the period of the year when, on account of the great heat, drills were impracticable, the usual custom in regiments was to march the men in the early morning to a little distance for exercise; but it would certainly appear that in some regiments an unnecessary amount of guard and sentry duty was demanded of them, as, for example, in the 13th Foot, in which it is stated that in 1834(h) the men had only four nights in bed to one on duty—a circumstance which of itself must have exerted a very pernicious effect upon health. Nor was the state of matters in this respect so bad in the 13th as we find it to have been during the succeeding year in the 3rd Foot, for it is stated in the report for 1835 that in the Buffs the soldiers had only three consecutive nights in bed in the hot season, and two in the drilling season.

With regard to parades and drill, Dr. McLeod considered that there were very few corps in the Bengal command in which they were so severe as to have had an injurious effect upon health. He observed, however, that "in regiments just arrived it is difficult to persuade the soldier, and at times the officers, that injury can arise from walking about in the sun, but it is not long before examples of bad effects from this cause become too frequent to be doubted, and they learn to be more guarded;" and he continues:—"It is a curious circumstance, and not very easy of satisfactory explanation, that exposure to the sun in this country is more injurious to health than in other tropical climates—the West Indies, for example—and yet it is a fact not difficult of proof, and which those who have served in both countries will willingly admit." That these remarks are quite as applicable now as they were in 1839 will be apparent to every officer who knows India, for it is not a little extraordinary that as each succeeding regiment lands in the country its officers refuse to be guided by the experience of the past.

"In some regiments," Dr. Sandham observes, "there is too great partiality to making the men wear cloth jackets; and it is in such regiments generally that the men at drill or parade are kept out too late an hour in the morning, and again out too soon in the afternoon. The evenings are the most oppressive part of the day; it is too at this time that among the soldiers apoplectic seizures occur from extreme heat, occasionally in men of sober habits." (i) Fortunately for the soldier, this partiality by some officers for what they call "soldier-like dress" has been for some years defeated by the publication of most stringent orders on the subject, the very dates being laid down on and after which thin clothing must be worn during the hot months of the year, so that the evils which are here and elsewhere in these notes alluded to as having arisen from the use of unsuitable dress, are now among the things of the past.

(To be continued.)

(e) Report for 1830, and for 1832, page 70.
(f) Report 1830, page 314.

(g) Report, 1835, page 432. (h) Report, page 59. (i) Report, 1840-1.

THE RELATION OF FOOD TO WORK AND ITS BEARING ON MEDICAL PRACTICE.

By W. H. BROADBENT, M.D.,
Assistant-Physician and Lecturer on Physiology at St. Mary's Hospital.

It is by the extension of the principles of physical and chemical science into Medicine that Medicine will itself become a science. Nothing so much retards progress towards this great end as the premature attempts with which every step forward seems to be attended to apply straightway to practice the particular conclusion which has been latest reached, usually without regard to other aspects of the many-sided questions presented by disease. The so-called teachings of science are contradicted by clinical experience, and science is discredited.

It is important, then, that erroneous deductions from these sciences should be at once controverted, and especially when they are propounded by one speaking with the authority of the Rev. Professor Haughton, and enforced by the eloquence and humour which fascinated the meeting at Oxford. It may seem an ungrateful return for the pleasure his discourse afforded to all who heard it, to pull it to pieces; but it seems to me that there are errors in the "application of theory to diseased conditions of body" which it is impossible to leave unnoticed.

In typhus fever the gist of the application is contained in the following phrase:—"In modern times the Physician either does not interfere at all, or adopts the *rational process of retarding the disintegration of the tissues consumed to supply the fever heat by furnishing in their stead fuel, in the form of wine and beef-tea, sufficient to maintain the increase of temperature imperiously required.*" This was much more strongly put in the address as delivered, and, harmless and innocent as it appears in print, it involves the entire principle of treatment of acute disease by stimulants, for all acute disease is attended by elevation of temperature, and alcohol is, *par excellence*, the substitutive fuel. From this point of view, therefore, I shall discuss it. A very close parallel would be to attempt to retard the combustion of the chairs and tables of a house on fire by furnishing in their stead petroleum or brandy. Experience apart, the one proceeding might be supported by much the same reasoning as the other. But it is not with arguments such as this that I would meet Professor Haughton. I would point out, first, that, brief as is the sentence I have quoted, it contains two important assumptions—first, that by furnishing fuel the disintegration of the tissues is retarded; secondly, that there is a certain increase of temperature imperiously required, which must be maintained in some way or other. These appear on the surface. The latter of these may be dismissed with the remark that the elevation of temperature is merely the consequence and indication of the rapid oxidation.

If we go deeper, and endeavour to make out what is the true place in the fever of the oxidation by which the heat is evolved—whether it constitutes the essence of the process or is secondary; if secondary, whether it is a necessary and inevitable consequence of antecedent change, or superadded upon it; whether its arrest is possible, and if so, whether beneficial—it will be seen that the elements of uncertainty are multiplied indefinitely.

Let us ask the simple question, Why does fever come to an end? The only answer we can make is, that evidently some cycle of change in the blood and tissues is completed. The oxidation might be an integral part of this change, and its retardation, if practicable, be only injurious.

We know extremely little of the real nature of fever. It is a sort of revolution in the system of which we see only the external turbulent manifestations, comprehending little of the hidden operations out of which they rise. (See the admirable remarks of Dr. Gull.) According to the general views we entertain, we may consider these operations to have their seat in the blood, or in the tissues, or in both. But, whatever opinions may be held on this point, it seems clear that the tissue disintegration or oxidation is not primary or initial, but consequent on some antecedent change—antecedent, that is, in point of causation. Without entering upon any extended argument, this will perhaps appear by varying a little the question previously put, and asking, Why does typhus come to an end after a certain definite time? The fact that the different degree of temperature attained in different cases—*i.e.*, the varying rate of oxidation, or the different amount of oxidisable matter present in the tissues to begin with or given as food, or the varying relation between these two factors—has little or no influence in determining the duration of the fever, shows that it is not a mere question of oxidation. If, then, the oxidation be secondary upon some antecedent process, it may be (*a*) inevitable, or (*b*) not only inevitable, but desirable, as destroying secondary compounds of a poisonous nature, or (*c*) it may not be directly consequent upon the "assimilation" (to quote Dr. Gull) or other process constituting the essence of the fever, but collateral. Whilst such points as these remain undecided, and others might be raised, I submit that we cannot, in the name of science, say that by beef-tea and wine, in fever, we retard tissue disintegration or oxidation. This conclusion carries the principle of the alcoholic treatment of all acute disease. For the present we must be content to be guided by experience. Even the valuable *indicia* placed in our hands by Dr. Anstie must be tested by experience; where alcohol steadies and strengthens the pulse and reduces the temperature, the immediate result is good, and the presumption is strong that the ultimate effects will be good also, but they are not necessarily certainly so. The work of physical and chemical science in Medicine, and the task of those who see in the application of the principles of physical and chemical science to the elucidation of the problem of disease and its treatment, the Medicine of the future, is, for the present, to interpret phenomena, to explain what is definitively known, and to suggest experiment, not to lay down laws, to theorise, not to dogmatise.

Prof. Haughton's remarks on cholera will probably bring into the field a much more formidable antagonist than myself, and on this subject, lest I should come in for side-blows, I maintain a prudent silence. In his investigations of diabetes he has admirably exemplified the true work of science. I find myself at issue with him only on the question implied in the introductory sentence—the seat of the chemical change by means of which work is produced. But this is physiological, and I propose to myself to discuss it in a reply to the paper of Mr. W. C. Heaton, to which he refers. One other criticism. The ammoniacal state of the urine I venture to attribute to its retention in the bladder during the sopor of the fever, and not to any eagerness for combustible matter, which must indeed be urgent if so poor a substance as urea is seized upon.

RED LINE ROUND THE FUNIS AS A SIGN OF RETARDED BIRTH.(a)

By Dr. J. B. BOND.

Although it was, many years ago, a matter of controversy whether or not a pregnant woman ever carried her child much beyond nine solar months, it is now, as you know, universally admitted that although a large majority do not vary much from two hundred and seventy days, it sometimes happens that the term of fœtal life is very much prolonged. All the plans hitherto recommended for recognising such cases have proved unsatisfactory. If the following cases shall have the effect of pointing out a means more worthy of credit, my object in bringing them before the Society will be accomplished.

In the year 1849 I was sent for, on March 24, to see Mrs. W., who felt quite sure she had been pregnant some weeks more than nine months. I found her very large and very "clumsy," but without any signs of labour.

On May 9 I was again called to Mrs. W. She had, when she sent for me, some slight pains, but these had entirely subsided before I reached her place of residence, more than ten miles in the country.

On May 16, between her eleventh and twelfth month according to her own reckoning, I was again in attendance. I found the os uteri dilated, the membranes ruptured, and a natural presentation. After a long and painful labour she was delivered of a very large still-born male child—it had perished during labour. On examination I found encircling the umbilicus of the child, just where the funis joins it, a bright red ring less than two lines wide.

Since 1849 I have observed this red ring in three other cases, in all of which there were good reasons for believing that the children had been retained in utero beyond nine months. Only one of these children was still-born. Judging from my own experience only (for I have never seen or heard this red ring at birth referred to by others), I believe it always indicates retardation, and that in such cases it may always be found if carefully looked for.

Since reading the foregoing paper I have received the following note from my friend Dr. G. J. Farish, one of our most respected and intelligent Practitioners. It goes far, I think, to confirm the opinion I then expressed, that this red ring at birth would eventually prove a useful help in forming an opinion as to whether a child had been retained in utero beyond the usual time or not.

"Yarmouth, N.S., July 15, 1868.

"Since I heard your paper read at our Medical Society on Saturday evening, I have had a case which may possibly throw some light upon the appearance of the funis then spoken of by you.

"Seventeen days ago I was told by the husband of Mrs. A., living in the country, that I should probably be sent for during

(a) A paper read before the Yarmouth (Nova Scotia) Medical Society, July 12, 1868.

the day, as his wife had been expecting her confinement for several weeks, and was then suffering much. I heard nothing more from her until I was called to-day. The statement she gave me of her case, on arrival, was that she had been pregnant ten and a half months; that she judged so from the time of the cessation of the menses and the increase of her size; that in her former pregnancies she had been remarkably light and active up to the very day of her confinement, but in the present instance had been in much pain and burdensome to herself for the last four or five weeks, and had been on the point of sending for me several times. She is of a large frame and robust constitution, quite intelligent, and, from that and her previous experience, capable of forming an opinion on her own case. Upon my questioning her more closely, she persisted in the assertion that she was at the least ten months pregnant. I may add that there is not the slightest reason to suspect her truthfulness.

"The labour was natural. The shoulders, being broad, were retained a few minutes after the head was expelled; the fœtus was a large and well-developed male. I examined it carefully, and found on the sound skin, at the junction of the cord with the body, a strongly marked vascular red band of more than a line in breadth, encircling the cord, and exactly resembling that healthy inflammatory line which is seen on the edge of a slight burn when the slough is separating from the uninjured part around it, and agreeing in appearance with that described in your paper already alluded to.

"Whether this band may exist in cases where there is no reason to suspect protracted gestation, and whether it is always present in such protracted cases, I cannot say.

"Yours truly,

"To Dr. Bond." "G. J. Farish.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(*Continued from page 95.*)

Case 120.—*Non-adherent Tumour and Prolapsed Uterus—Spontaneous Rupture—Tapping Two Days before Ovariotomy—Recovery.*

A widow, 39 years old, was sent to Mr. Wells by Mr. Eames, of Pulham, and was admitted May 6, 1868. She was married twelve years before, and had a child 11 years old. Her husband had been dead ten years. The catamenia had been regular till seven months before admission, and then ceased. Except an attack of rheumatic fever fifteen years ago, she had been well until March, 1867. She then began to suffer from prolapse of the uterus, and the abdomen began to enlarge. Increase was gradual at first, but had been very rapid since March, 1868. She had lost flesh, both legs were œdematous, the abdomen was filled by an ovarian cyst, the uterus and posterior wall of the vagina prolapsed, the left lung showed signs of compression, and the second sound of the heart was so prolonged and accentuated that some traces of the old rheumatism were suspected. On May 12 Mr. Wells was sent for, as the patient was apparently dying. She had complained of sudden pain and vomiting, and became faint. No large cyst could be detected, but Mr. Wells tapped at the most elastic part of the abdomen, to the right of the umbilicus, and about two pints of jelly-like matter escaped. Some relief followed. About two pints more fluid oozed away during the next day, but there was no febrile disturbance, and ovariotomy was performed on the 14th. Dr. Keith, of Edinburgh, was present. Chloroform was given by Dr. Junker. An incision five inches long was made midway between umbilicus and pubes. There were no adhesions. Four or five pints of ovarian jelly were free in the peritoneal cavity. These escaped, and a thin-walled cyst filled with tough colloid matter was opened, broken up, and drawn out. Rather a thick pedicle was enclosed in a large clamp near the left side of the uterus, and was kept outside with a little traction. Scarcely any blood was lost, but a great deal of sponging was necessary to clean the peritoneal cavity from the ovarian jelly. The right ovary was healthy. The colloid jelly and cyst walls together weighed twenty-five pounds. There was no sickness, and very little pain after operation. The clamp came off on the fourth day, the bowels acted on the eighth, and the patient left the Hospital twenty-four days after operation.

Case 121.—*Non-adherent Multilocular Cyst—One Tapping—Ovariotomy—Recovery.*

An unmarried musical governess, 30 years of age, applied to Mr. Wells in August, 1866, suffering from a large ovarian cyst, which filled the abdomen and encroached upon the thorax. Swelling of the body began eight years before, but had been more rapid for the last two years. Menstruation was regular. The left leg was much swollen. Mr. Wells advised ovariotomy without much delay; but the patient's mother strongly objected, and she was lost sight of for a year and a half. She then applied again, and was admitted to Hospital April 20, 1868. The girth at the umbilical level was then fifty-two inches, the distance from sternum to pubes twenty-three inches, and from one ilium to the other across the abdomen thirty-one inches. The uterus was so anteverted and anteflexed that it was impossible to introduce a sound. On this account, and in consequence of the œdematous condition of the abdominal wall, Mr. Wells decided upon a preliminary tapping before ovariotomy, and, on April 22, removed thirty-six pints of dark viscid fluid. She left relieved eight days afterwards, was readmitted on May 23, and ovariotomy was performed on the 26th. Ether was first administered; but, after inhaling for twenty-five minutes without effect, chloroform was substituted, and almost immediate insensibility followed. There was a very thick layer of fat in the abdominal wall. A large non-adherent cyst was exposed by a five-inch incision. It was tapped, emptied, partly drawn out, opened, inner cysts broken up, and the whole withdrawn without any ovarian fluid entering the peritoneal cavity. A broad pedicle on the right side was secured in a large clamp and kept outside with some traction on the broad ligament, but none on the uterus. Scarcely any blood was lost. The left ovary was healthy. Fourteen pints of fluid and three pounds five ounces of solid matter were removed. Only one opiate was given, and there was no sickness. Metrostaxis commenced on the first day after operation, and ceased on the third. The bowels acted on the eighth day, the clamp came off on the ninth, and the patient went to the country on the twenty-seventh.

Case 122.—*Non-adherent Cyst, never tapped—Ovariotomy—Recovery.*

An unmarried housemaid, 23 years old, was sent by Dr. Llewellyn Williams, of Kensington, and was admitted June 7, 1868. An ovarian cyst had been detected by Dr. Williams only a fortnight before, but it had probably commenced about two years before, and increased very gradually. The uterus was pushed backwards by an elastic tumour, felt in front and to the right. The general health was good. Ovariotomy was performed on June 10, 1868. Chloromethyl was given by Dr. Junker. A non-adherent cyst was exposed, tapped, emptied, and withdrawn through an opening which hardly extended three inches through the peritoneum, and four through the skin. A group of secondary cysts, as large as two fists, successively passed through the same opening. A short pedicle on the right side was secured in a small clamp, and was kept out with a little traction. There was scarcely any bleeding. The left ovary was bigger than a large walnut, owing to three vesicles which projected from its outer surface. These were punctured and emptied, but the ovary was not further disturbed. Eighteen pints of fluid and two pounds of small cysts were removed. Only one opiate was required. There was no sickness, nor any bad symptom, and recovery was uninterrupted. The patient went to Brentwood twenty-three days after operation, and has been seen since her return in excellent health.

Case 123.—*Non-adherent Cyst—Prolapsed Uterus—Fatty Tumour—One Tapping—Ovariotomy—Recovery.*

A painter's wife, aged 42, mother of seven children, was admitted in January, 1868, with an ovarian cyst, prolapse of the uterus, œdema of both legs, varicose veins of the left leg, and a fatty tumour in the abdominal wall. The ovarian cyst had only been detected about nine months before admission, but it had probably commenced some eight years earlier. As there was a troublesome cough, viscid expectoration, with some crepitation and dulness over the apex of the left lung down to the fourth rib, Mr. Wells tapped on January 13, and removed seventeen pints of clear fluid. The prolapsed uterus was

easily replaced after the tapping. The patient left the Hospital six days afterwards, and was readmitted June 9, 1868. She had not menstruated since December, 1867. The uterus was again permanently prolapsed. Ovariotomy was performed June 17, 1868. Chloromethyl was given by Dr. Junker. A non-adherent cyst was exposed, tapped, emptied, and withdrawn easily through a four-inch opening. A long thin pedicle on the right side was secured in a small clamp, and kept outside without traction. Scarcely any blood was lost. The right ovary was healthy. The uterus was replaced, and the fatty tumour in the abdominal wall excised. Thirteen pints of fluid were measured. The empty cyst weighed only nine ounces. There was no sickness after operation, but several opiates were required during the first three days on account of severe backache. It seemed to depend upon the altered position of the uterus, and was relieved after profuse leucorrhœal discharge on the third day. The clamp came away, and the bowels acted, on the ninth day. The patient left the Hospital twenty-six days after operation, and has been seen recently in good health.

Case 124.—*Ovarian Cyst—Fibroid Tumour of Uterus—Albuminuria—Sixteen Tappings—Two Iodine Injections—Ovariotomy—Recovery.*

This case is very remarkable from the facts that the patient was nine years under treatment before it was thought prudent to venture upon ovariotomy, yet that this operation was at length successfully performed after sixteen tappings and two injections of iodine had proved ineffectual. On these grounds the usual limits of space may be exceeded in narrating the history of this case.

An unmarried national schoolmistress first applied to Mr. Wells in May, 1859. She was then 40 years of age, and was in a very distressing condition. The abdomen was largely distended by an ovarian cyst, which extended upwards under the false ribs, pushing them outwards and the lower part of the sternum forwards. Dyspnœa was so urgent that the patient reclined propped up in bed, with blue lips and anxious face, exerting all the accessory muscles of respiration. She was much emaciated, having suffered for many months with frequent vomiting, and she had been often tormented with difficult micturition. The legs, especially the left, were extremely œdematous. The menstrual discharge appeared regularly and in excess. The following was the history of the disease :—

The catamenia first appeared when the patient was 13 years old. They had recurred regularly, but with much pain. While still a young girl, she caught cold during a period, and did not menstruate again for some months. Nothing more was observed until the summer of 1849, when the patient fell in getting over a gate, and came down violently astride on the top bar. She lay for some time unconscious, and, on coming to herself, found her underclothing soaked with blood. Flooding continued for a week, accompanied by pain in the back. The accident occurred midway between two periods, but the subsequent menstrual discharge began at the expected time. During the whole of the next winter, 1849-50, the patient was in a feeble state of health, and the menstruation, though regular, became more abundant, usually lasting nine days. In May, 1850, the discharge became almost constant, and sea-bathing was recommended. To this the patient attributed the cessation of the flooding in August, 1850. About this time she first noticed a hard tumour just above the pubes, in the middle line, and about the size of a large orange. During the next four months, this tumour, or the abdomen, increased in size, and continued to do so during the whole of 1852. But her general health remained tolerably good, the weight of the abdomen being the only troublesome symptom. In 1853, she saw Dr. Rigby and Dr. West, and was advised to defer tapping as long as possible. At this time the tumour had extended to two inches above the umbilicus. For some five or six years the abdomen gradually increased in size, and the symptoms in severity, until she came to Mr. Wells in 1859 in the distressing condition above described.

On May 23, 1859, Mr. Wells tapped her in a London lodging, and removed fifty pints of greenish fluid. The cyst collapsed, but a hard tumour as large as an orange, evidently a fibroid tumour of the fundus uteri, was felt above the pubes. The respiration was at once relieved, the œdema of the legs soon disappeared, and the patient began to gain flesh. There was no reappearance of fluid till September. After this, increase was steady, and the patient was admitted to the Samaritan Hospital, and tapped the second time December 23, 1859. The fluid resembled that removed before, and more than thirty-four pints escaped. On readmission in May, 1860, the question of ovariotomy was considered, but it was decided to try what could be done by iodine injection. Accordingly, on May 7, 1860, Mr. Wells removed thirty-eight pints of fluid, and injected three ounces of a strong solution of iodine into the cyst, leaving it there. Excessive pain, but no other grave symptom, followed. Fluid formed faster than after simple tapping, and in August forty-four pints of fluid were removed. In March, 1861, another trial was made of iodine injection, seven ounces of strong tincture of iodine being injected, but the greater part allowed to flow out again. Very severe pain followed, but again the fluid reformed faster than after simple tapping. The patient all this time was enabled to earn her living as a national schoolmistress, coming into Hospital occasionally for a few days, and returning to her duty soon after tapping. The following table gives the dates of the tappings and the quantity of fluid removed :—

No.	Date.	Quantity. Pints.	Interval. Days.
1.	May 23, 1859	50	—
2.	December 23, 1859	32	214
3.	May 7, 1860	38 (iodine)	136
4.	August 18, 1860	41	103
5.	March 28, 1861	42 (iodine)	222
6.	August 17, 1861	40	142
7.	April 26, 1862	32	252
8.	March 4, 1863	40	312
9.	August 17, 1863	32	166
10.	May 16, 1864	43	272
11.	December 27, 1864	39	225
12.	August 7, 1865	37	223
13.	March 12, 1866	35	217
14.	October 2, 1866	33	214
15.	March 25, 1867	47	174
16.	October 30, 1867	47	219

It is thus seen that the most rapid increase was after the iodine injections, and that increase was not more rapid in proportion to the number of tappings. But after the first iodine injection the character of the fluid was greatly altered. Before that it was green and viscid; afterwards it was always clear, of a pale lemon colour, specific gravity about 1014, not viscid, and exhibiting only oil globules and epithelial cells under the microscope. Ovariotomy was discussed before almost every tapping, but was negatived on various grounds. First, the complete relief given for several months, with hardly any risk, by tapping was a strong argument against any more hazardous proceeding. Then for two years or more after the second iodine injection albumen was frequently detected in the urine, and there was defective vision referred to the chronic form of retinitis which often accompanies albuminuria. After repeated long courses of steel, these conditions disappeared, and at length ovariotomy was performed, June 25, 1868. Dr. Fordyce Barker, of New York, was present. Chloromethyl was administered by Dr. Junker. Mr. Wells began by tapping with an ordinary trochar about six inches above the pubes, and nearly emptied the cyst. He then opened the peritoneal cavity towards the pubes to the extent of three to four inches, and exposed a thin flaccid cyst, which was free below, but closely adherent towards the umbilicus. The adhesions were extremely firm, but were separated without the use of knife or scissors. A broad thin pedicle on the right side was secured in a middle-sized clamp, and kept out with some traction on the broad ligament, but not on the uterus. One long shred of omentum which had been adherent was cut away and tied, the ligature cut off short and returned. Some bleeding vessels where adhesions had been separated were stopped by torsion, or compression with strong forceps. All clots and serum were carefully sponged away. The left ovary was healthy. A fibroid projection from the fundus uteri was seen; but it was not larger than a walnut—much smaller than when felt after the first tapping. Forty-two pints of fluid were removed. The empty cyst weighed 2 lbs. 6 oz. Three opiates were given during the first three hours after operation, but no more were required. There was no sickness. The highest pulse noted was 80, the highest temperature 100·2°. The bowels acted on the eighth day, and the clamp came off on the tenth. The patient went to Brentwood on the twenty-fifth day. She complained while there of occasional abdominal pain, but was seen on her return in very good health. She said that the pain after each of the iodine injections was "a hundred times" more than after the ovariotomy.

(*To be continued.*)

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Medical Times and Gazette.

SATURDAY, AUGUST 29, 1868.

TENTH REPORT OF THE MEDICAL OFFICER OF THE PRIVY COUNCIL.

The Royal Commission on Public Health, whenever it is appointed, will find a good deal of its work already cut and dried in the pages of the Medical Officer to the Privy Council's Reports, or, at any rate, it will find therein numerous indications of the line which a comprehensive sanitary inquiry must take to yield results at all satisfactory. Every year, for example, special and glaring instances of sanitary neglect are made the subject of particular investigation by Mr. Simon's assistants, and their lesson is mostly enforced by him in a style peculiar to himself, and well calculated to attract public attention, even if in some cases the remedy proposed is open to question.

In the report before us we are apprised of the success which has attended the principle applied to vaccinators of "payment according to results" during its first year of operation. 231 vaccinators received gratuities amounting in the whole to £1824, the recipients of the first class being 61 and of the second class 170 in number. The largest aggregate payment of the year was £67 7s. 4d. as a second-class gratuity on 2021 vaccinations, and the smallest 15s. 4d. as a second-class gratuity on 23 vaccinations, the gratuity rate in both instances being eightpence per case.

The "occasional" inquiries of the Department during 1867 had reference to the outbreaks of typhoid fever at Winterton, Guildford, and Terling, of which the story has been already told in our pages. Undoubtedly all these were cases in which Nature exacted severe penalties for flagrant violations of her laws; the great pity being that the "local authorities," to whose default of duty the mischief, in all human probability, was mainly owing, did not suffer the consequences which fell on the people of whose sanitary welfare they had charge. As illustrations of that excremental poisoning to whose prevalence Mr. Simon has in his previous reports referred, he brings the facts relating to the unhealthiness of these three places prominently under the notice of the makers and administrators of sanitary law in England, and, after showing the dependence of typhoid fever "on conditions which it is disgusting to specify," he raises a question which, to say the least, has the merit of involving a definite issue of no small significance.

"It seems to me that the time has now come when, not only as regards commercial water companies, but also as regards local sanitary authorities, certain sorts of malfeasance should involve an obvious and unquestionable liability to pay pecuniary damages to persons whom the malfeasance has injured. I am not qualified to say that some liability to this effect may not at present be latent in our law, but I believe that at least it has never hitherto been judicially denied or affirmed, and it is evident that in this state of the case years may elapse before any aggrieved person, unless unusually rich and public-spirited, will be willing to incur considerable legal costs in testing his so doubtful claim to redress. I venture to submit that in this point of view the sanitary rights of the public are but very imperfectly secured, and that explicit legislation in the matter seems to me greatly to be desired. The effect of such legislation would be that what I may call *the fixed and finished parts* of sanitary science, as distinguished from those which are in any degree uncertain and speculative, would very rapidly become ordinary rules of conduct in civil life. In cases of alleged sanitary wrong, courts of law would have the facts in evidence before them, and judges and juries would determine whether wrong (in legal sense) had been done, and would assess the pecuniary damages in proportion."

Taking the case of Guildford as one in point, Mr. Simon holds that the distribution of fouled water there last year "is as proper a case for judge and jury, on action for damages by any of the 500 people who had typhoid fever in the town, as any case in which a railway collision brings some scores of passengers into harm;" and such legal proceedings would be far more conclusive and effective, in his opinion, in bringing home to the "consciences" of the water-purveyors the fact that they gave typhoid fever to their customers, and in conveying a warning to other possible offenders, than any departmental statistics and remonstrances.

And as regards the Winterton and Terling cases, the affirmation (assumed to be inevitable) in a court of law that the provisions of the Nuisance Removal Acts had been utterly neglected, and that the sufferings of the population or of any part of the population had resulted from that neglect, would establish the fact that "injury," in that legal sense which implies a title to redress, had been done by the local authority; "and if hereupon," says Mr. Simon, "each person who had suffered as above could recover his compensation from the rates, local authorities would immediately have the knowledge conveyed to them, in a far more practical form than it has yet assumed in their eyes, that sanitary neglect is a mistaken parsimony."

As we should be sorry to run the risk of over- or understating the drift of any part of Mr. Simon's new propositions, we give *ipsissimis verbis* what he deems to be the desiderata involved:—

"First. That for any purveyor of water wilfully or neglectfully to distribute foul water or (where filtering is required) unfiltered water, and for any local authority to make default in such duties in relation to the public health as are by statute expressly imposed on it, should be (if they be not already) indictable offences, and that the production of disease by offences as aforesaid should be also (if not already) indictable. Secondly. That it should be the province of some named central authority to take at its discretion legal proceedings against offenders as above; and thirdly, that where such proceedings had led to conviction, all propositions affirmed in the verdict as to the causing of disease by the convicted person or authority at the time and place in question should afterwards be held proven for the purposes of whatever civil actions for damages might then be brought by private persons on account of injury sustained by the disease. It would, of course, in any action for damages, be matter for question and proof whether the particular suffering had resulted wholly or in part from private fault, either in resistance to a local authority or otherwise; but, looking to the spirit of our present nuisance laws, especially to Section 20 of the Act of 1866, I apprehend that nuisances on private premises could not, *primâ facie*, be deemed matters of solely private responsibility; and in regard of a large class of such cases, it may be doubtful whether an authority could quite exonerate itself of responsibility for the nuisances, even as against the owner of the premises, unless it showed that it had taken all proceedings required of it by law in such matters, or at least that the district possessed all proper facilities for the abatement of private nuisances. As regards such indictments as are above proposed, in which generally the indictment would be only for ulterior purposes, and the proceedings, therefore, only nominally penal, precedent exists in the indictability of parishes or other responsible parties for omissions to repair highways and bridges."

Such, then, is the new scheme of sanitary law which the chief sanitary adviser of the Government proposes for adop-

tion. That he is quite aware of some of the difficulties which would attend any attempt to put his scheme in practical operation is quite evident, but that he overlooks others which, in our judgment, would be paramount is clear also. If the causes of disease were in even a majority of cases as easily ascertainable as the cause of a railway collision, it is very questionable if the evidence for the apportionment of blame would not be found, in nine instances out of ten, utterly insufficient to satisfy a court of law in awarding damages for the "injury" done, setting aside altogether the inherent difficulties of a money-value assessment of the results of such "injury." We merely give this as our first impression of the practicability of Mr. Simon's suggestion, which, however, is well worth careful consideration, and may possibly come under more critical notice in our pages on a subsequent occasion.

Of the "systematic" inquiries undertaken by the Department from time to time, the present report gives the results of further investigations by Dr. Buchanan on the relation between Phthisis and dampness of soil; of Dr. Sanderson's experiments in reference to the Communicability of Tubercle by Inoculation; and of Dr. Thudichum's researches intended to promote an improved Chemical Identification of diseases. We hope to notice these valuable contributions to Medical science in due course.

THE OXFORD ADDRESSES.

The simple fact of our having printed at full length the addresses of Drs. Acland, Gull, Rolleston, and Haughton, is a sufficient evidence of the opinion that we entertain of their value. No one who carefully studies them can fail to profit by them; but as a large number of our readers, especially busy country Practitioners, have so little leisure that they can seldom reckon on an hour's undisturbed reading, we deem it expedient to produce in a very condensed form the pith and marrow of these admirable essays. Dr. Acland, the President of the British Medical Association, chose as his subject "The Medicine of Modern Times." He begins by noticing the position occupied by our Professional knowledge in relation to other branches of knowledge, and then proceeds "to consider the objects which ought to be held in view when we discuss the temper required of us by our times, and the training proper for the formation of that character and temper." Several of the most important instances of the direct application of scientific method to the progress of Medical knowledge, by means of light, sound, electricity, and direct touch, are briefly but clearly given. The Physician now, as a matter of daily usage, employs in forming his diagnosis scientific appliances of which half a century ago there was no conception. Laennec with the stethoscope applied acoustics to map out the unseen conditions of the thoracic organs, and his discoveries have been followed and enlarged by a host of Physicians in all countries; Czermak and Cruise have laid open to us many organs previously incapable of being seen; and Helmholtz has taught us how to witness the previously hidden secrets of the eye, thus applying the laws of geometrical optics to Medicine. The microscope and the test-tube are in the hands of every member of the Profession, "and answer in a moment questions once unanswerable, though on them depend the issues of life and death." By means of the skilful apparatus of Marey touch is made to register the wave phenomena of the pulse and heart; while the exploration of the nervous system has been extended by electrical appliances by Dr. Duchenne, of Boulogne, and others; and the thermometer has become as necessary an instrument in fevers and other diseases (for the purpose of ascertaining approximately the amount of metamorphosis of tissue) as the stethoscope is in chest diseases. Although we recognise as fully as Dr. Acland can do the great value of such instruments as the ophthalmoscope, the laryngoscope, the endoscope, and the sphygmograph as aids to diagnosis, we can hardly expect that, with our comparatively short Medical curriculum, the average Medical student can make himself familiar with their use until after he has passed his final examinations. To those who, after taking their degree, can afford to spend a year or two in Paris or one or two of the best German schools, and are not compelled at once to enter upon the cares and labours of practice, we cannot give better advice than that they should attend the classes arranged for special instruction in the uses of the above-mentioned instruments, and that they should enrol themselves as students in one of the many excellent physiological laboratories to be found in Paris and in many of the German schools.

Passing from the present to the past, the learned Professor notices the practical wisdom, the scientific spirit, and often the truly scientific methods of such men as Morgagni, Sydenham, and Hunter; and, taking as his text the words of Newton —"The main business of natural philosophy is to argue from phenomena without feigning hypotheses, and to deduce causes from effects till we come to the very *first* cause, which is certainly not mechanical"—shows that biologists and physicists have conjointly arrived at the conclusion, first, that there is an "exquisite interdependence between our entire fauna and flora in the chemical circulation of matter on our globe;" and, secondly, that "all action of which we are immediately cognisant is but the result of the operation of solar heat upon, and through, interdependent and correlative existences; that all things in this system are capable only of interchange; that there is no destruction of what exists; no creation of new energy." This doctrine of the conservation of energy tends in many ways to bring the phenomena of living bodies more closely within the influence of known physical forces, and consequently tends to diminish the already much-doubted existence of a "vital principle." It tends, on the other hand, to support the hypothesis of Darwin by showing the mutual correlations that run into the very structure of the universe; but it explains nothing regarding the origin of things, and gives us no information regarding the cause of organisation or of the working of a single organic cell.

The fact that no department of natural knowledge should be rejected as barren in its results, in so far as they may bear on the progress of Medical science, is illustrated by the subject of spontaneous generation; and reference is made to the observations of Pasteur in connexion with infection, and to those of Lister on suppuration and the carbolic acid treatment. Recent inquiries on the relations of vaccination to syphilis, on the origin of tubercle, and on the origin of the cattle-plague, have presented a most remarkable series of biological and pathological investigations. Any moderately informed person, reflecting on the nature of these illustrations, must admit the vastness of the subjects now comprised under the head of modern Medicine; and if he were a man of a practical turn of mind, he would probably ask—What are the powers by which Medicine can really influence the intricate processes affecting the healthy state? The reply which Dr. Acland gives to the hypothetical question is this:—"There are two methods by which the art must work: first, the method of pure science, which works by observation and experiment, in physics, chemistry, anatomy, and physiology, by the study of agents, and, where necessary, by vivisections; and secondly, the empirical method, which attempts to cure by rules derived from tradition, probability, and tentative experiment." Amongst the branches of science most likely to aid us in affording new therapeutic agents must be mentioned one which a very few years ago had no existence—namely, synthetic chemistry. Millions of bodies of the alcohol and aldehyde series, of the organic acids of different types, of the amides, etc., are literally waiting for their turn to be constructed, and many of them (if we may judge from the powerful properties for good or evil which similar bodies that have been already formed

are known to possess) will doubtless possess properties which may be either therapeutical (like bichloride of methylene or chloroform) or highly poisonous (like nitro-glycerine). Hence synthetic chemistry offers us a positively unlimited number of substances for experiment, some of which may, and doubtless will, prove to be of extreme therapeutic value.

The importance of sanitary science, or State Medicine, is the next subject which Dr. Acland considers; but this, as well as his observations on the relation of modern Medicine to spiritual beliefs, we pass over, in order to give space for a few words on the learned Professor's views regarding the preparation of the Physician for his duties. We would strongly urge upon those of our readers who have sons intended for the Medical Profession to read and take to heart Dr. Acland's words on this subject (see *Medical Times and Gazette*, p. 156), and, at the same time, to recollect that, during the very short period that has elapsed since he delivered his address, the University, responding almost, as it would seem, to his call, has removed those barriers which till now excluded all but the comparatively wealthy from the benefits of a university education, by no longer requiring that a student should be entered at and reside in a college or hall, but allowing him to live (under certain very proper restrictions) *where* and, in regard to expenses, altogether *as* he pleases, and thus to enjoy all the educational advantages which the University has to offer, excepting those which solely belong to members of the individual colleges. (See *Med. Times and Gaz.*, Aug. 22, p. 216.) None but Oxford and Cambridge men can form any true conception of the enormous boon that has thus been granted to the middle classes, and perhaps especially to the Medical Profession.

Thanking Dr. Acland for the pleasure which we have derived from the study of his address, we turn to another intellectual treat in the address on the present position of Clinical Medicine, by Dr. Gull. As this is an essay which every Medical Practitioner, whether young or old, should study till he has thoroughly mastered it, we shall merely indicate the leading points which are discussed in it. To Clinical Medicine, says Dr. Gull, the body becomes a pathological museum, and in every part of it we recognise certain proclivities to morbid action. A knowledge of the nature of the changes that are likely to affect a certain organ, and of the age at which any such change most commonly occurs, often, as in certain brain diseases, enables us to suspect such conditions, and possibly to baffle their progress. Similarly, a knowledge of the fact that some textures or organs are very liable to certain forms of disease, while others are singularly exempt from such diseases, often aids our diagnosis. We would point out as specially worthy of study Dr. Gull's remarks on the very different forms in which morbid brain force shows itself—how in one member of a family it may show itself in insanity, in a second as epilepsy, in a third as dyspepsia, in a fourth as some special neuralgia, in a fifth in amenorrhœa, hæmatemesis, or hæmoptysis, in a sixth in some intestinal pain, generally in the colon; and the extent to which brain force extends is seen "in the flatulent dyspepsia of the student, the tears of the distressed, the dry mouth of the anxious, and the jaundice of fright."

Clinical Medicine has gained much in recognising the relation of the tissues to the age of the patient; and Dr. Gull ingeniously points out the similarity between the diseases of childhood, when the organism has not attained its forces, and those of senility, when it is losing them.

The following sentence is very suggestive, and our readers would do well to collect all the facts in their reach on the subject to which it refers:—

"Although for practical purposes it is convenient to intensify the differences between cancer, tubercle, and the inflammatory process, we have abundant evidence of intimate relations between them. Thus, the children of parents dying of cancer are not rarely tubercular, and those of the third generation are liable to various forms of chronic inflammation. It is not improbable that that which seems most special to us in cancer and tubercle may depend more on gradation than change of diathesis, and that both are allied to more common degenerations."

A further pursuit of the inoculation experiments which have been recently going on will, it is to be hoped, throw some light on the local origin and mode of infection of both tubercle and cancer.

Glancing at the subject of fever, Dr. Gull takes occasion to express his dissatisfaction that it should be regarded as due to zymosis, or in any sense as a blood disease, and expresses his conviction that the susceptibility to the contagious fevers in no way lies in the blood except so far as this may be the channel through which the poisons reach the nervous tissues, in which the true fever processes begin and end. After a few remarks on the question as to whether there is or is not a *materies morbi* in rheumatic fever, he proceeds to consider the subject of diagnosis, and he discusses it under the following heads:—It being universally admitted that diagnosis ultimately rests upon an exhaustive pathology, it follows that, without a knowledge of what is *possible* in disease, diagnosis must be defective; but we are unacquainted with many pathological states, and may not be fully acquainted with any, and hence our diagnosis must be *so far* defective. Indeed, our knowledge of diagnosis falls far behind the pathological knowledge we at present possess. Again, a knowledge of the *probable* in disease, which we can only learn from long and varied experience, if supported by a large knowledge of pathology, will often enable us, as by prophetic insight, to diagnosticate conditions which the most accurately made physical examination could not explain. In this way, for example, we may diagnose embolism and various diseases of the brain, chest, and abdomen. In the diagnosis of abdominal diseases, Dr. Gull points out that we want an increase in the number of our more cardinal facts, and that at present our diagnosis is mostly one of inference from our knowledge of the liability of the several organs to special lesions. We infer alcoholic changes in the liver from the aspect of the face and eyes, and we suspect peritoneal cancer in aged persons from the pain with effusion. The physical aids to diagnosis by which we, as it were, supplement our special senses, and the importance of the microscope and the test-tube (which we take as the symbol of chemistry generally), have been already noticed, and, in reference to these points, we will simply remark that Dr. Gull mentions two special wants which chemistry has not yet satisfied—namely, (1) analyses of the residuum or solid contents of the urine in disease, in which we may hope to discover new elements for diagnosis; and (2) ready clinical means for recognising what is discovered by more elaborate processes. Chemists have recently done so much in microscopico-chemical inquiries that we cannot help thinking that we should rather be thankful for the aids the chemists have given us in this respect than complain that we have got so little.

As health is our object, hygiene and therapeutics, says Dr. Gull, claim the last and highest place in our thoughts. We have already alluded to both these topics in connexion with Dr. Acland's address, and shall therefore content ourselves with a few "last words" on Dr. Gull's views on the subject of therapeutics. After referring to the fact that the Surgeon now trusts to time and rest rather than to more powerful agencies, he adds that we need now to import into Medicine a large part of the best of these Surgical principles.

"We now know," he observes, "that we cannot directly control the morbid processes in pneumonia, pleurisy, or pericarditis. We know, further, that the means formerly considered essential to the cure of these diseases, tested by better clinical observations, were either useless or pernicious; that instead of favouring the plastic processes in inflammation, whereby the normal decline of the disease was promoted, the effused material was often more or less degraded and spoilt

by the treatment employed, and remained in the affected parts either as a foreign body or in different degrees approaching thereto. And this must always have been so, had we continued to regard these effusions as simply foreign products; but as soon as we perceived their physiological relations, and that they had a life like the tissues from which they sprang, they took a different aspect, and it became our duty, often without much interference, to stand by and watch this course to the end. The duties of a Physician are not, however, of a negative kind. There is a sufficient sphere for our activity in ways too numerous to mention—in the relief of symptoms where the lesion may be left to its natural course, in the treatment of the lesion itself where we have means adapted to it, and in maintaining the health where the degeneration or lesion is incurable."

No one can read this sentence without being tempted to study the whole address.

LORD AMBERLEY AND THE DIALECTICAL SOCIETY.

We have in the *Medical Times and Gazette* repeatedly protested against any violation of the strictest reserve and delicacy in matters pertaining to sex, and we have warned our Medical brethren of the peril that will befall us if we once allow the public to suppose that we, as a profession, ever meddle with practices which may furnish a handle for accusations of indelicacy or pruriency, or interference with nature.

The subject of limitation of families is one with which, if well advised, the Medical Profession will have nothing to do. To begin with, the main question at issue—Is a large population an evil?—is by no means settled. When it is will be time enough to look for a remedy. As we have said, there are cases in which women bear children too fast for their health. The remedy is the temporary continence which common sense prescribes. But as for healthy, honest, young married people, why should they limit their families? A man may not be able to bring up his children in luxury, but there is little fear of lacking necessaries. If they cannot live by brains, they must live by hands; and if they don't find work in one place they must seek it in another.

To debar the poor from paternity would be to erect a strange distinction indeed between classes. In some countries, it is true, persons are not allowed to marry without producing proof that they are possessed of a certain amount of property, but it is not found that limitations on marriage conduce to morality. Children, either legitimate or illegitimate, are born. The classes, in fact, who marry improvidently, and beget children recklessly, are not those who will be continent without marriage. It is impossible for healthy young married people, free from natural incapacity, to live without children, and live without sin.

Still, let us suppose that children, instead of being the greatest blessings, as we hold them to be, are the greatest evils, how are healthy man and wife living together to avoid having them? Nature will make herself felt, and if children are to be forbidden, married life will soon be defiled with strange unnatural contrivances. Such things we, as a profession, abhor, and will have nothing to do with them.

If once it be supposed that Medical men will condescend to teach married people how to limit their families, the very same instruction will be sought by unmarried persons who have not the gift of continence. Not only, then, might we become aiders and abettors in immorality, but there is no crime in which we might not be made accomplices.(a) Nothing can be more frank and honourable than the relations of Medical men to their patients in this country, but it is not so in all. For instance, no person who prescribes is allowed to dispense medicines in Spanish colonies. Once let it be supposed that we pander to the passions and frailties of mankind, or meddle with matters of a prurient taint, and Medicine will be no profession for a gentleman.

Our readers do not need to be reminded of two notable instances of late years in which the Medical Profession has emphatically disavowed any tolerance of undue interference with sexual matters. They cannot have forgotten the grave censure which fell on two Practitioners, both men of the greatest possible skill, ingenuity, and dexterity in operations. In one of these cases the unusual step was taken of expulsion from a Medical society, an expulsion concurred in by many who pitied the offender, but felt the necessity of keeping our Profession free from all interference with matters of a scandalous or prurient nature.

We have therefore emphatically enough repudiated what we conceived to be Lord Amberley's proposition to make limitation of families a Medical question. In so doing we quoted his words from the report of the proceedings of the Dialectical Society which appeared in the *Medical Press and Circular* of July 22, and put on those words the construction which they seemed to us and to others obviously to bear.

We have received, however, a letter from Lord Amberley, in which he expresses sentiments which would meet the approval of the most Conservative of the electors of South Devon. He admits with us that Medical men might feel insulted had he really proposed that they should make themselves accomplices in unnatural crimes, such as interfering with the results of marriage. But he assures us that, so far from desiring them to do anything of the sort, he should consider any Medical man who did so quite unworthy of his profession; in fact, he assures us that he alluded to certain malpractices which are common in America, not, as might appear from the report, to recommend them, but solely to reprobate and condemn them. Lord Amberley denies that he ever intended to advocate those malpractices, or to insult our Profession by inviting its members to have a hand in them.

We are very glad to find that Lord Amberley's real sentiments are so sound and honourable. We never should have gathered this from the report of the proceedings of the Dialectical Society which appeared in the *Medical Press and Circular* of July 22. We are most glad to accept Lord Amberley's exposition, and to make it public. At the same time we must say that the affair furnishes the most convincing proof of the indiscretion of selecting such a subject for discussion and of publishing the proceedings. The subject is so slippery, it involves in its very nature so near an approach to evil, that sentiments uttered with the best intentions seem to bear base interpretations. The moral is, that if people will amuse themselves with dirt, they must not wonder if they get splashed.(b)

THE WEEK.

TOPICS OF THE DAY.

It will be seen from our Paris correspondent's letter that the French Government has forced the Faculty of Medicine of Paris to admit an American lady to examination. This has been done in direct contravention of the publicly expressed opinion of the Professors. The effects likely to accrue are sketched by our correspondent. The prospect of young French men and women dissecting the human body together may perhaps find favour with Miss Becker, the lady who has been enlightening the British Association upon the equality of men and women in everything save in *physique*, and the debasement to which women have been subjected by receiving a different education from that of men. The age is advancing, and with it the development of the race. The process is

(a) It is well known that the murderer Tawell poisoned his victim by prussic acid under pretence of a local application to hinder conception.

(b) The Dialectical Society is not a Medical society, although a few Medical men are members. Neither is it a "private society" any more than the Obstetrical, or Harveian, or any other which admits members according to printed rules. Whether the Society be private or not, its proceedings are published from time to time in the *Medical Press and Circular*, and have been commented on in our own and other journals.

rapidly tending to obliterate national differences, and in time we may expect that it will tend to annul sexual distinctions also. Modesty, which used to be the peculiar attribute of women, is gradually, it seems, becoming restricted to the male. It may be doubted, however, whether this phase of development really lends any support to the Darwinian hypothesis. It certainly is not the result of any process of natural selection, for it is hardly credible that any of these metamorphosed beings would be naturally selected by any of our own coarse and domineering sex as a mate.

The Act passed by the last Parliament to amend the law relating to railways, in the fourth section contains two clauses of considerable importance to the Medical Profession relating to compensation for accidents. The first is that—

"Where a person has been injured or killed by an accident on a railway, the Board of Trade, upon application in writing made jointly by the Company from whom compensation is claimed and the person if he is injured, or his representative if he is killed, may, if they think fit, appoint an arbitrator, who shall determine the compensation (if any) to be paid by the Company."

This clause will, we should hope, prevent the majority of these cases going into open court at all. The unbiased judgment of a skilled arbitrator must generally be of far more real value to the cause of truth and justice than the haphazard verdict of a British jury after they have been bewildered and wearied by the badgering of witnesses, the counter-statements of the Doctors, and the eloquence of the rival counsel. The other clause is even of more importance, as it recognises a principle for which we have always contended—that is, that in these cases the judgment of the court should be assisted by the opinion of an unbiassed and uninterested Medical man—in fact, by a Medical assessor. The clause provides that—

"Whenever any person injured by an accident on a railway claims compensation on account of the injury, any judge of the court in which proceedings to recover such compensation are taken, or any person who, by the consent of the parties or otherwise, has power to fix the amount of compensation, may order that the person injured be examined by some duly qualified Medical Practitioner named in the order, and not being a witness on either side, and may make such order with respect to the costs of such examination as he may think fit."

The reports of the observations made with the spectroscope by the expedition sent out from Paris to India to observe the recent eclipse of the sun are full of promise. Special observations have been made on those remarkable processes or protuberances of light which were noticed in a former eclipse to extend from the bright rim surrounding the dark shadow to a distance, it was computed, of 30,000 miles. We learn from the telegram sent by Dr. Janssen to the President of the Astronomical Society (Admiral Manners) and read at the Norwich meeting, that the eclipse has been observed, that the spectrum of the protuberances is very remarkable and unexpected, and that the protuberances are of a gaseous nature. Could any message be more calculated to keep the philosophers in a fever of expectation?

Mr. Hind writes to the *Times* to say that the comet of Encke may be seen during the latter days of the present month in the early morning before sunrise. On August 29 the comet rises at 2h. 9m. a.m., on the 30th at 2h. 19m. In the year 1825 it was much brighter than it is at present, and Mr. Hind suggests that, like Biela's comet, it is destined entirely to disappear from our view, if not to be entirely dissipated. On the other hand, in the history of the periodical comets there are instances in which apparent loss of brilliancy has been found on the next appearance to have been regained.

We are glad to see that another Medical officer—Deputy-General Inspector of Hospitals Saville Marriott Pelly, of the Bombay Army—has been made a Companion of the Bath. These distinctions cost the country nothing, and they do not place a man above his fellows in rank or pay, but they appeal to a higher kind of ambition, and are therefore at least as much, if not more, prized by the recipients.

We may say one word in deprecation of the attack made on the coroner, Dr. Evan Pierce, who is conducting the inquest on the charred remains of the victims in the Abergele accident. It has been at least through the Medical inquiries instituted at the instigation of the coroner that the number of persons killed has been approximately obtained. The task he had to discharge was by no means of an ordinary character. The impossibility of identifying the bodies increased the difficulty, and in the face of such an appalling disaster occurring in an out-of-the-way Welsh district, some little uncertainty as to the mode of proceeding and informality in the investigation are by no means wonderful. Every one credits Dr. Pierce with the best intentions, and since he has obtained legal assistance on technical points, the proceedings have been conducted in an unimpeachable manner.

M. Nélaton's elevation to the Upper Chamber of the French Legislature is understood to be a mark of the personal gratitude of the Emperor and Empress to the distinguished Surgeon for his treatment of the Prince Imperial, as well as of respect for his general Professional eminence. The degrading condition that M. Nélaton should give up the practice of his profession is not, we are glad to hear, annexed to the honour. It is the first time that a Medical Practitioner has been raised to the Upper Chamber of France as a reward for Professional merit. Louis-Philippe, indeed, offered a similar honour to his Physician, M. Double, but he weighted it with the request that he should not practise. M. Double, to his honour be it said, although perfectly independent of the emolument of practice, declined the offer and the condition. Perhaps, now the example has been set in France, we may yet see a Medical peer or two in the House of Lords.

The following gentlemen are advertised to deliver the introductory addresses at the London Medical Schools on October 1:—King's College, Professor Guy, M.B., F.R.S.; University College, Professor Erichsen; Guy's, Dr. Moxon; St. Thomas's, Dr. Barnes; St. Bartholomew's, Mr. Thomas Smith; St. Mary's, Paddington, Mr. James R. Lane; London, Mr. Critchett; Westminster, Mr. Francis Mason; Middlesex, Dr. J. Burdon Sanderson; Charing-cross, Dr. Pollock; St. George's, Dr. Acland, Regius Professor of Medicine in the University of Oxford.

THE RAILWAY ACCIDENT AT ABERGELE.

Few accidents have produced such an effect on the public mind as that on the North-Western Railway, near Abergele. A fatal shipwreck like that of the *Royal Charter* or of the steamer *London*, a colliery accident like that at the Oaks coal-pit, may for a time produce a profound impression on men's minds. Still, all do not require to travel by sea, only a limited number work in coal pits, but it may be said that such a calamity as that at Abergele comes home to every one; for there are few who do not nowadays travel by rail, and no railway traveller is exempt from a risk similar to that which the passengers by the Limited Irish Mail so fatally encountered. It is not our province to enter into any detailed account of the accident; still there are certain circumstances connected with it which call for comment at our hands. No one who reads the details given by the survivors can fail to be struck by the reiterated assurances—first, of the suddeness of the whole affair; secondly, of the fact that those who have perished made no sign whatever after the engine and trucks so fatally met. Of course the speed with which the fire spread, the instantaneous rush of flame along the carriages, can readily be accounted for by the exceedingly inflammable nature of the petroleum with which the escaped wagons were laden. Petroleum or rock oil is got in various parts of the world, and has of late years given rise to an extensive commerce with Pennsylvania. It consists of a great

number of substances, chiefly hydrocarbons of the firedamp or marsh gas (methyl hydrides) series, which may be separated the one from the other by distillation. Certain of the members of this complex compound are extremely volatile, and it is by the removal of these that petroleum becomes a safe and a useful light-giving oil. When these lighter members of the body become mixed with the air, they tend, as does the firedamp, their prototype, to explode, and in so doing give rise by their decomposition to an atmosphere composed of nitrogen, carbonic acid, and steam—in other words, to one containing not a particle of the vivifying agent oxygen. This volatility and the tendency to explode if mixed with the proper quantity of air, to burn rapidly if the admixture contain less oxygen, explain the rapidity with which the flames spread, as the intense heat would tend to volatilise the fluid oil and convert it into an all-pervading aeriform mass. The atmosphere, similar to that of the after-damp of coal mines, would, of itself, cause speedy insensibility and death; but it is further probable, from what has already been discovered with regard to this complex body, that some, if not all, of its constituents are capable of producing anæsthesia, dangerous, no doubt, and too nearly approaching death in its characters to be practically useful, but still a well-marked insensibility. The vapours, from the intense heat, must have been abundant, and, along with the vitiated atmosphere, would be quite enough, when called upon to act on bodies already rendered unconscious, it may be, by the shock of the collision, to destroy the faint spark of life remaining in them. There is in these facts, or, if you will, speculations, a crumb of comfort. The poor creatures, although their bodies were completely destroyed by the raging fire, had, in all probability, ceased to exist before the flames had more than touched them. The intense heat produced by the conflagration is shown not only by the fused pieces of metal found about, but by the almost complete destruction of the thirty-three human bodies discovered. Those who are familiar with the case of Parkman, who was murdered by Professor Webster, and suchlike Medico-legal *causes célèbres*, will know how extremely difficult it is to destroy a human body.

ELECTION OF ASSESSOR TO THE COUNCIL IN THE UNIVERSITY OF ABERDEEN.

Our Professional brethren must not forget that, connected with their new privileges as members of a Scotch University, should they happen to be such, there are also certain duties which it behoves them to perform. The act which is now in force has drawn the old non-resident graduates into closer communion with the body politic of the University; they have acquired a certain power in the University itself, which it behoves them to wield aright, as well as to take care to have a proper representative in Parliament. It must not be forgotten that the ruling body in a Scotch University is the University Court, composed of representatives of all grades in the University, students, graduates, professors. Although the graduates, or University Council, have no direct control over this body, they can influence its action partly by an expression of opinion, which, however, is unfortunately too seldom listened to, more directly by the representative it sends from its ranks. Now it so happens that the graduates of the University of Aberdeen will shortly have an opportunity of taking part in such an election; let us, therefore, explain how matters stand. When the Scotch Universities were put on their present footing in 1861, Dr. Kilgour, one of the best-known and most highly esteemed Practitioners in the north of Scotland, was elected assessor to the Council of the University of Aberdeen, but was displaced from his seat at the end of his first term of office by, it was alleged, the sharp practice of the clerical party, no opposition to his re-election being then anticipated. This year, again, the time for election comes round, and, determined not to be behindhand a second time, powerful efforts are being made by a large section of the graduates to secure the return of Dr. Kilgour. The enormous influx of new members of Council, all of whom living within Great Britain and Ireland take part in this election, cannot fail to have an influence on its result. It behoves our Profession, therefore, to see itself properly represented in the University Court; for, however excellent a man the Rev. Mr. Mearns may be, and against him personally no one utters a word, it is in accordance with our policy to seat a Medical man in power whenever an opportunity offers. On the present occasion, the Medical graduates will be aided by a great and powerful section of the other graduates of the University.

THE TWELFTH REPORT OF THE COMMISSIONERS OF HER MAJESTY'S CUSTOMS.

This blue-book presents to the Medical man several features of interest. In the first place, Dr. Dickson, the officer in charge, reports most favourably on the health of the men, much more so than we could have anticipated, when we think of the arduous life many of them lead. The mortality during the year has only been 5 per 1000; the rate of superannuation 1·7 per 1000. Most of the men are from 40 to 50 years old, and, except by death or superannuation, few or none leave the service. There has, however, been a considerable amount of sickness, the average number of men on the daily sick list being 38·4 out of a total force of 1149, the ratio of cases admitted to the sick list being 70 per cent. The duration of their illnesses would not, however, seem to be long—on an average, 17·3 days. As we might expect from the nature of the duties of a custom-house officer, leading to much exposure to cold and wet, the diseases most prevalent are catarrh, influenza, bronchitis, and rheumatism, the last, although not affecting so many subjects as the first, giving rise to a greater number of days' sickness; but bronchitis would also seem to have kept its victims a considerable time from their employment. Of interest also are the accounts as to the deduction of the room devoted to the dwellings of seamen from the estimated tonnage of ships, and the plans adopted for securing a proper supply of good lime-juice for the use of merchant seamen; but of these we have already given full details.

OVER-CROWDING OF CHILDREN AT ST. PANCRAS WORKHOUSE.

The reputation of St. Pancras Workhouse certainly does not improve. On Saturday last Dr. Lankester held an inquest on the body of a child, which died in the St. Pancras Infirmary under circumstances which prove that the cubic space, or at all events the ventilation, had been out of proportion to the number of inmates of a ward. The child had met with an accident, owing to the carelessness of an unpaid deaf nurse who was left in charge of the children during the absence of the paid official. In answer to the coroner's question, Dr. Gibson, the Medical officer of the Infirmary, stated that the atmosphere of the room was unfit for children in such a delicate state of health as the deceased, and also that the gangrene from which the child died was such as came on in children from living in over-crowded rooms. The jury found a verdict of accidental death, and "appended a unanimous resolution drawing the attention of the Board of Guardians to the over-crowding, and recommending that children unable to walk should be placed in cribs, and not in ordinary beds."

THE TEWKESBURY RURAL HOSPITAL.

Of all the Hospitals started on the model of Mr. Napper's now famous institution at Cranley, few, if any, have been more successful, from a monetary point of view, than that at Tewkesbury. Year after year—for it is now in the fourth year of its existence—we have been pleased to notice its favourable

financial position; last year closed with a balance of £264 odd in hand, this year sees that sum increased to £286 odd. Probably, however, in connexion with these rural Hospitals, the most pleasing feature is the list of gifts from patrons or kind neighbours. This list shows what a kindly interest the rich, and even those not so far removed from their own class, take in the poorer inmates of the Hospital. The number of patients admitted throughout the year has been sixty-two, and Mr. Devereux, the esteemed Surgeon of the institution, gives, in the form of a table, an interesting account of each patient's ailments. From this table we can see that some of the cases have been most serious ones. Only one death is recorded—that of a man whose arm was cut by a chaff-cutting machine, and the brachial artery divided; he lost too much blood to rally.

FROM ABROAD.—ROMAN REGISTRATION RETURNS—JOBERT DE LAMBALLE.

THE Pontifical Government has taken a very laudable step by commencing a monthly statistical account of the Hospitals of Rome, the first number, that for May, 1868, having recently appeared. The report is drawn up under the auspices of an enlightened nobleman, Count de' Cinque Quintili, who is, we believe, the director of these establishments, and who, we have been informed, administers his trust in the most admirable manner. Some of these establishments, indeed, may vie with those of any other country. The report is also enriched by one on the meteorology of Rome, contributed by that well-known labourer in physical science, Padre Angelo Secchi, Director of the Observatory at the Roman College.

This being the first report, it is preceded by some account of the Roman population. In April, 1867, there were 215,573 inhabitants—viz., 114,459 males and 100,657 females, together with 457 "heterodox" persons whose sexes were not separately registered. These 215,573 were thus composed:—Cardinals 30, bishops 35, priests and clerics 1469, seminarists and ecclesiastical collegians 828. Next come religious institutions 5047 (2832 males and 2215 females), convents 1900 (258 males and 1642 females), and charitable institutions 1863 (775 males and 1088 females). Altogether, the religious and charitable bodies consist of 11,172 persons, 6227 males and 4945 females. Of course, amongst this class of the population, the great predominance of males was to be expected; but it is very remarkable that among the lay population inhabiting the various parishes of Rome, 191,614 in number, that 98,176 of these are males, and but 93,438 females. To complete the population of Rome, we have to add 7360 soldiers, 4650 Israelites (2418 males and 2232 females), 457 "heterodox," and 320 prisoners (278 males and 42 females). Excluding these last four categories, there exist in Rome among every 100 inhabitants 1·115 belonging to the secular clergy, 2·488 to the regular clergy, 0·918 to the convents and charitable institutions, and 94·495 to family life. In the entire parishes there are 84·64 females to 100 males, and in the entire population 87 to 100. The families are returned as 42,313 in number, 41,113 belonging to urban parishes with a population of 196,217, and 1200 to rural parishes with a population of 6569. The "civil state" of the population is thus summed up:—Ecclesiastical 11,172 or 5·509 per cent. (6227 or 3·070 males and 4925 or 2·428 females); minors (*i.e.* under 14) 47,023 or 23·189 (24,219 or 11·943 males and 22,804 or 11·245 females); unmarried 65,820 or 31·965 (36,016 or 17·764 males and 29,804 or 14·200 females); married 63,453 or 31·266 (32,982 or 16·264 males and 30,471 or 15·002 females); widowed 15,318 or 7·554 (4959 or 2·445 males and 10,359 or 5·108 females). On May 1 there existed in the various Hospitals 1498 patients (825 males and 673 females), and during the month there were admitted 1075 (770 males and 305 females). The recoveries amounted to 997, and the deaths to 147. During the month there occurred 337 births (156 males and 181 females), so that it would seem the Romans differ from others not only in the greater preponderance of living males, but in that of new-born females. The total number of deaths amounted to 512 (males 290 and females 222), and deducting 49 of these as having occurred in rural districts, the deaths during the month still exceeded the births by 126! At Rome, as elsewhere, phthisis stands in the first rank as the cause of death, 50 deaths out of the 512 being due to it. Detailed tables are given of all the causes of death, the classification employed in Paris being followed.

The anniversary of the French Medical Faculty has passed off this year very quietly, and Professor Richet delivered a successful eulogium on Jobert. He confessed that it was a life he would not have meddled with had a choice been left him. Natalis Guillot, another deceased Professor of the Faculty, had left injunctions that his memory should not be thus celebrated, while accounts of the career of Velpeau and Jarjavy are reserved apparently for others, since M. Richet's colleagues decided that Jobert should fall to his lot. After an attentive perusal of his writings and a consideration of his career, he has come to the conclusion that he was a great deal better than his reputation. That might easily be so. Certainly, his career was a remarkable one, even among the remarkable careers of so many of the French celebrities. Born on a straw pallet, through which his mother said she felt the damp ground, supplied with scarcely any education at all, existing during his *internat* at St. Louis upon next to nothing, we find him, having gained the post of *agrégé* in 1830, suddenly shooting into prosperity and celebrity, post after post falling to his share. It is true that he was devoured by an insatiable ambition, and had to undergo many mortifications in consequence. His failure to obtain the chair of Dupuytren irritated him greatly, and it was not till after the abolition of the *concours* that he obtained admission into the Faculty. His practice was immense, and, as he charged very high fees, the amount of money he accumulated was enormous—uselessly accumulated, we may say; for, having separated early from his wife (who prophesied the termination of his days in a lunatic asylum), he lived a wretched, lonely, and unfriendless life, and, save in occasional and eccentric acts of charity, benefiting no one by what he had gained. He died a millionnaire without a will, and, after his death, notes, silver, and gold were found in his house in profusion, the inventory amounting to some 650,000 francs, many letters containing large sums never having been even opened. In his Professional relations he was equally unsatisfactory, his treatment of patients, pupils, and *confrères* being always capricious and sometimes brutal. However, we must not in criticising his career forget its disastrous termination in an asylum, the probability being that much of the eccentricity, and even some of the success in life, was due to disease. M. Richet passed over his defects kindly and considerately; but in reference to his Surgical merits, we are inclined to think he has taken a somewhat more favourable view than posterity will ratify. This portion of the eulogium is almost an anatomical demonstration, not, however, altogether ill-suited to the audience to which it was addressed. That he was a most skilful operator, and did much to advance plastic Surgery, there can be no doubt; but, in the words of Signor Fumagalli, a less partial biographer than M. Richet, he was rather an industrious artist than a scientific Surgeon.

HEALTH OF THE TROOPS AT ALDERSHOT.

WE have been informed that diarrhœa, in some instances of the choleraic character, has latterly been rather prevalent in the camp at Aldershot, and that during the week ending 14th inst. there occurred in one of the regiments two cases of severe English cholera from which the patients recovered, and one case of decided spasmodic cholera which terminated fatally in twenty-four hours. We are glad, however, to learn that

during the following week, ending 21st inst., although diarrhœa was of frequent occurrence, there were no futher cases of a choleraic nature, and no deaths. Scarlatina and measles have for some months prevailed among the children in camp, and have caused a considerable mortality.

THEORIES OF CHOLERA.

THE ZYMOTIC THEORY.

(*Continued from page* 216.)

In a former article we followed Dr. Farr's account of the existence and nature of that living matter, in molecular form, to which is attributed the power of generating zymotic disease. Now for an account of its behaviour in some important respects. Here much may be learned by a comparative study of *vaccine*.

"This contains a limpid, albuminous, saline fluid, leucocytes, and a multitude of molecules, which M. Chaveau calls 'elementary granulations,' and which I call *vaccinads*. Like the particles of tannate of iron colouring ink, they are never completely deposited in the lower strata of the lymph, and they pass through all kinds of filters. By decantation the leucocytes can be separated from the plasma, while the residue retains all the lymph's activity. The albuminous liquor, with its salts, withdrawn by absorption into an upper layer of distilled water, standing on the lymph forty-eight hours, leaves granules at the bottom. Experiments were made with the two liquors on children, on horses, and on heifers. (1) No effects were produced by the albuminous liquor. (2) The granular fluid produced the full effects of vaccine lymph, *vaccinine*.

"This was the first result of M. Chaveau's researches. In a subsequent series of experiments he tried the effect of pure and of diluted vaccine lymph. First, he tested the pure lymph by vaccinating successfully a certain number of patients, and then found that the lymph diluted in from two to fifteen times its quantity of water took effect in nearly every puncture. This proved that water did not destroy the granules, and that the number was so great that 10 milligrams of the fluid, for instance, were so diffused in 150 milligrams that every milligram of the solution on the lancet-point contained vaccine granules enough to insure their propagation in children and animals. Diluted in fifty times the volume of water, the solution rarely took effect; when it did take effect the pustule was pure and unmodified. With a dilution in 150 times its volume of water, M. Chaveau succeeded once. He then diluted 8 milligrams of lymph with 3200 volumes of water, and failed with this dilution to produce the disease after many trials; but, reasoning on the matter, he inferred that, as the failure was probably due to his missing the floating vaccine granules (*vaccinads*), they being still present, he should get the usual result by injecting the whole of the dilution into the veins of a horse. He tried the experiment, and produced one of the finest specimens of horse-pox.

"We can reason still further upon these experiments. As the eight milligrams of lymph were distributed through 3200 milligrams of water, then the chance of taking up on the point of a lancet granules enough to take effect would be inconsiderable. But if the whole of the 3208 milligrams of the fluid were inserted in the arms of 3208 persons, it is certain that the great majority would escape, and it is pretty nearly as certain, as the matter of all the granules would be present and would be inserted, that one, two, or more of the vaccinations would take effect. To fix our ideas, divide the water into eight portions, each of 401 milligrams, and let the *one* milligram of lymph remain fixed in the midst of 400 parts of water. Then if a milligram of fluid is inserted in the arm of each person only one can be attacked, while the 400 escape; and so it might be in the rest of the eight groups exposed to the chance of infection.

"3200 children could be produced in succession as persons who had been all vaccinated with the water in question without effect; and, according to the common fallacy, it would be asserted that the water was pure and stainless. The positive infection of one individual would be set aside by the preponderance of 400 over *one*.

"By the logical method, as the proportions vaccinated with effect are by hypothesis eight in 3208, while in other series of cases, where pure or a less infected water is employed, *none* or *one* or *two* in 3208 are attacked, it is inferred that the vaccine granules diffused in the water were the probable cause of the eight vaccine pustules.

"But this is an understatement of the case, for the granules would be distributed irregularly through the water, and thousands of negative instances might occur in succession without invalidating the induction.

"Our excellent English microscopist Beale had, before Chaveau, declared that the 'active properties of vaccine lymph are entirely and solely due' to these corpuscles. He has figured them, and says that, under very high magnifying powers, they are seen as multitudes of very minute particles exhibiting most active molecular movements.

"Zymotic matters, which may for shortness be called *zymes*, have some property analogous to those of ferments, which, like the torula, thrive in oxygen; or to those, on the other hand, which, like the butyric ferment, only live in its absence: these analogies may throw some light on the preference for the skin and the breathing passages exposed to the air in some, and for the intestinal tube where there is no oxygen in other zymotic diseases. The cholera zyme belongs evidently to the latter class.

"Again, vibrions, the ferments of putrefaction, are suppressed or extinguished in acid solutions: they do not multiply in such conditions. They are not met with in wines. Their antagonists reign in that kingdom.

"The cholera zyme appears also, like the vibrion, to suffer in acid solutions where it does not multiply; if we can venture to refer the incontestable efficacy of solutions of sulphuric acid to its effects on the zymotic matter in premonitory diarrhœa. The permanganate of potash by giving off oxygen may have some effect on this kind of ferment, not only in water, but in the intestines, if it could travel so far into a region usually destitute of oxygen. Camphor, aromatics, creasote, carbolic acid, chlorine, vinegar, and some salts appear to destroy many ferments, and may render zymotic matter inert. How opium acts, as it unquestionably does, in premonitory diarrhœa is not yet cleared up.

"As the state of the stomach and small intestines varies in the different stages of digestion, it is evident that vivacious cholera molecules in ingested liquids might, in nine cases out of ten, be destroyed by the gastric juice, or by the other secretions. If these molecules have the force of ferments, so have the ptyaline, the pepsine, and the pancreatic juice; the gastric molecules also convert matter, and in the presence of acids, either hydrochloric or lactic, into nutritive matter; so it is only after a struggle, or under unfavourable conditions, that the zymotic corpuscles carry the day. If the stomach at the end of a meal holds more food than its secretions can convert, or if taken at an inopportune juncture, perhaps fasting in hot weather, a glass of cholerised water may be fatal, whereas at another hour, or in another person, it may be destroyed, or pass away innocuous.

"Alcohol diluted does not destroy *cholerine*, as may be inferred from the experience of the fleet in the Black Sea, where the sailors who drank grog suffered, and the officers escaped. Spirit drinkers, it is agreed, enjoy no exemption; nay, as their digestion is weakened, the foreign ferment the more easily triumphs.

"Heat influences all zymotic matter, and carried up to a certain elevation destroys it. A temperature of 65° Centigrade destroys, says M. Dumas in his report to the Institute, all the ferments, the known parasitic vegetables, and their analogies as yet undistinguished in wine. To destroy the germs of the greater part of them in *water*, a temperature of 100° is required, and in some cases a heat still greater; in wines the presence of alcohol insures their destruction at the lower temperature of 65° or even 50°. Cold, upon the other hand, suspends the action of these germs. This is also what is observed in cholera. The waters of rivers, saturated with sewage ferments, present rapid changes at temperatures above 15° C., and destroy the oxygen; at the boiling temperature, or at a temperature, say, of 130° C., it is probable that zymotic matter is rendered inert. Dr. Henry disinfected scarlet-fever clothing by exposure to a temperature of 100° C. Boiling water is evidently a capital precaution. But it must not be assumed, without further investigation, that cholera matter is invariably destroyed in boiling water, and still less in the waters used for making coffee or tea, where it so often happens that the temperature never reaches 100° C.

"Filtration, as has been shown by Chaveau, does not stop the passage of vaccine granules, nor does it remove the characteristic opalescence of cholera water. One volume of cholera

flux, mixed with 500 volumes of distilled water, produces an opalescent liquid, which retains its opalescence after passing through filter paper; and, after passing this filtered liquid rapidly through animal charcoal, the opalescence, though diminished, is not entirely removed. Effectual filtration, however, removes a considerable proportion of the choleraic matter, and certainly diminishes its energy; but, as the process is usually performed, it is far from affording infallible security. This might be anticipated from the exceeding minuteness of the choleraic molecules.

"Many zymotic matters retain their activity in the dry state, and are preserved by exclusion from the air.

"The researches of M. Pacini confirm the zymotic theory. In cholera he examined the mucous membrane of a considerable proportion of the small intestine, after having washed it lightly with the minutest precaution, without touching it, to detach from its surface the abundant detritus with which it is covered in that disease; placing it under water to render the villi clearer, he noticed that a very considerable number of villi were gone, and that on numerous spots the mucous membrane looked like velvet that had lost its pile. Without all these precautions the absence of villi would only have been detected where the shaven spots were of some magnitude. He has prepared specimens of these choleraic erosions, which resemble the perforating ulcer of the stomach. Erosions were not always visible; in some cases necrosed spots of one or two centimetres square were discovered, which, if detached, would have left such apparent erosions. Some small fragments and several villi were found in the choleraic dejections. All the villi which were found detached in the intestines, and others still adherent, as well as the necrosed patches of the mucous membrane, were completely invaded by a thick mass of very fine molecules, about the thousandth part of a millimetre in diameter: with these molecules the tissue of necrosed fragments was infiltrated, giving it a whitish, opaque appearance, and an unnatural density and consistence. On the surface of the patches were similar molecules enclosed in mucus; great numbers were agglomerated in small globular white masses, large enough in some cases to be seen with the naked eye. He could not, however, affirm their identity, as they were very like other corpuscles found in abundance in the intestinal fluids mixed with vibrions and other infusoria, constituting, both in cholera and in health, what Bloch has justly called 'the chaos of intestinal infusoria.' These infiltrated molecules have been found by other authors in the mucous membrane. From the first, Pacini felt certain that the erosions were not inflammatory, but traumatic lesions, where the agent, like the edge of a knife, cut point after point away, during the whole of the algid stage, and even after death, as is proved by the detritus chiefly of epithelium on the surface washed time after time by the cholera flux. The lesions from the first diarrhœa to the end of the algid stage are then produced by a cause independent of the life of the individual; they are wrought by the infiltrated corpuscles, which in multiplying themselves break down the tissue of the mucous membrane. The corpuscles thus multiplying are living, as in the case of ferments. Now (he adds), as it is shown subsequently that it is by the destruction of the mere surface of the mucous membrane that these corpuscles occasion the characteristic aqueous discharges of cholera, we are justified in admitting that such molecules constitute the specific cause of cholera, and that consequently they may be called the cholera ferment (cholerine.)"

Pacini thus accepts the zymotic theory, and as the fruit of twelve years' researches and studies of the phenomena of cholera, he has succeeded in constructing from the well-observed facts of pathology, physiology, and physics, equations to express the laws of those phenomena. By means of these equations he has been able to develope a "mathematical theory" of cholera, which shows the relation of the various elements in the algid stage in cases of varying duration. Without perplexing our non-mathematical readers by a display of the symbols and calculations so ingeniously brought together, we may say that anybody with a talent for following out complicated formulæ will find matter for profitable study in Dr. Farr's illustrations of Pacini's theory.

THE Library of the Obstetrical Society, 291, Regent-street, W., will be closed from the 1st to the 14th September, inclusive.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(*From our Special Correspondent.*)

NORWICH, August 26.

THE week has passed away like a dream, and the Norwich meeting belongs to history. If it has not been so large a meeting as many of its predecessors, it has been an active one, animated from beginning to end, and sustained by a truly princely hospitality.

In the Physiological Department, the discussions have been excellent, the subjects advanced, and the attendances larger, I believe, than on any previous occasion.

On Thursday morning, after an address to the whole of the Section of Biology by the President, the Rev. Mr. Berkeley, the officers of the section who specially followed physiology went to their separate meeting room and commenced business. Mr. Flower, F.R.S., Curator of the Hunterian Museum, occupied the chair as Vice-Chairman of the section, and, in a quiet, short, effective way, opened the proceedings. The following papers and discussions were then taken throughout the week for reading and debate:—

THURSDAY, AUGUST 20.

W. H. FLOWER, F.R.S.,

On the Notation and Homologies of the Teeth of the Mammalia.

The author stated that the subject which he proposed to bring before the meeting was an endeavour to ascertain how much of the generally adopted system of classification of the homologies and notation of the teeth of the mammalia—a system mainly owing to the researches of Professor Owen—stands the test of renewed investigations; how much seems doubtful and requires further examination before it can be received into the common stock of scientific knowledge; or how much (if any) is at actual variance with well-ascertained facts. One of the most important of the generalisations alluded to is the division of the class Mammalia, in regard to the times of formation and the succession of their teeth, into two groups; the monophyodonts are those that generate a single set of teeth, and the diphyodonts are those that generate two sets of teeth; the monophyodonts including the orders Monotremata, Edentata, and Cetacea, all the rest of the first class being diphyodonts. The teeth of the former group are more simple and uniform in character, not distinctly divisible into sets to which the terms incisor, canine, premolar, and molar have been applied, and follow no numerical law. The group is, in fact, equivalent to that to which the term homodont has been applied by some authors. On the other hand, in the mammalian orders with two sets of teeth, these organs are said to acquire fixed individual characters, to receive special denominations, and can be determined from species to species, being equivalent to the heterodonts. The author then showed that among the homodonts the armadillo was certainly a diphyodont, having two complete sets of teeth, and among the heterodonts many were partially, and probably some completely, monophyodonts. Moreover, that almost every intermediate condition between complete diphyodont and simple monophyodont dentition existed, especially in the sirenia, elephants, rodents, and marsupials. He then, by the aid of diagrams, showed particularly two modes of transition between monophyodont and diphyodont dentition—one in which the number of teeth changed was reduced to a single one on each side of each jaw, as in marsupials, and the other in which the first set of teeth, retaining their full number, were reduced to mere functionless rudiments, even disappearing before birth, as in the case of the seals, especially the great elephant seal. These observations showed that the terms "monophyodont" and "diphyodont," though useful additions to our language as a means of indicating briefly certain physiological conditions, have not, as applied to the mammalian class, precisely the significance their author originally attributed to them. The classification and special homologies of the teeth of the heterodont mammals were next discussed. Certain generalisations as to the prevailing numbers of each kind of teeth in different groups of animals were sustained, but deviations were shown from some of the rules laid down—such as that when the premolars fall short of the typical number, the

absent ones are from the forepart of the series. The general inference was that, although in the main the system of notation of the mammalian teeth propounded by Professor Owen was a great advance upon any one previously advocated, we must hesitate before adopting it as final and complete in all its details, and need not relax in our endeavour to discover some more certain method of determination.

Dr. Richardson, F.R.S.,

On some Effects of Extreme Cold on Organic Function.

Dr. Richardson passed in brief review his experiments performed at Dundee in relation to the effects of freezing the centres of the nervous system. He showed that in the lower classes of animals, such as frogs, the nervous centres can be frozen for long periods of time, with recovery after entire unconsciousness and apparent death. The points added on this occasion were in continuation of this line of research. He first dwelt on the question whether frozen animals—such as frogs—respire during insensibility, and explained that they did not. In proof of this, he said that animals so treated could be placed without harm in gases which would not support life, such as nitrogen and hydrogen, and could be recovered at the precise moment of solution from the frozen state when respiration was recommencing. He had placed animals in this way in hydrogen, nitrogen, and carbonic acid. In other experiments, when the animal was frozen it was immersed in ether, and allowed to lie under the fluid until, by the rising of bubbles of air, indications of returning life were gained; then, taken out, the animal would recover. The gradual return of heat was thus the pure restorative, and the facts helped to explain many accounts as to restoration after freezing, which up to this time had been stated as strongly on one side as they were doubted on the other. The second point considered had relation to the effects on the circulation of freezing the brain. Dr. Richardson here showed that in warm-blooded animals the effect of reducing the temperature of the brain was to produce a gradual slowness of the circulation, and when the freezing was carried to the lower part or base of the brain, to produce the condition of heart and pulse known as intermittency, followed, if the operation were continued, by the entire cessation of the heart's movement. This was a point of great practical moment, as indicating the influence of the brain on the heart. Whenever the brain was reduced in physical power, as from immense mental fatigue, or shock, or anxiety, irregular action (intermittency of the heart) was almost the necessary result. Most people were conscious of this, and often thought with great alarm that they were suffering from disease of the heart, when, in fact, they were merely labouring under temporary exhaustion of the brain. The third point went to show that under the influence of extreme cold on the nervous centres (the brain and spinal cord) the extreme effect of such active poisons as strychnine could for a time be entirely suspended. This raised a hope that in such diseases as tetanus a new and successful mode of treatment might be gradually evolved. The fourth point had relation to the influence of extreme cold in preventing and even in removing the rigidity of death. Because the body after death cools, the inference had been drawn that the rigidity of death was due to the process of cooling. This was the exact reverse of the fact. The rigidity of death was quickened by heat, and prevented by cold, probably for an illimitable period of time, the cold being sustained. Further, by taking an animal already rigid, freezing it, and thawing, the first rigidity could be removed, and the body become flaccid. The last point touched upon related to the effect of freezing and rapidly thawing the skin of certain regions of the body. It was shown that birds treated in this manner presented the extremest irregularity of movement and other signs of nervous disturbance. Thus by freezing and rapidly thawing the skin on the side of the neck of a pigeon, the bird for a time walked sideways in the opposite direction. The author concluded by noticing the able researches of Dr. Weir Mitchell, of Philadelphia.

Professor Rolleston, F.R.S.,

On the Physiology of Pain.

The main points in this paper were—1st. The drawing attention to the fact that the authority of Dubois Reymond had been erroneously adduced by Niemeyer in support of the view which would ascribe the production of pain in neuralgia to arterial dilatation as opposed to arterial contraction. 2nd. The writer adduced reasons for thinking that shock as well as vasomotor disturbance could cause pain, as shown by Dr. Handfield Jones with reference to paralysis. 3rd. He drew attention to the value of counter-irritation, especially of the fifth nerve, as a preventive or anæsthetic agent.

Dr. Cobbold, F.R.S.,

On Flukes from the Indian Elephant, with Remarks on their Affinities.

Dr. Cobbold gave a description of a new species of fluke removed from an elephant which had died at Rangoon. Prof. Huxley had also received specimens from Burmah, accompanied with statements to the effect that the distoma in question had given rise to an epidemic in that country. We had here, in point of fact, the "rot" disease affecting these huge pachydermatous animals. The entozoon previously noticed by Dr. Jackson, of America, had never been properly described. Specimens (probably of this species) were preserved in the museum of the "Boston Society for Medical Improvement and Observation." The parasite was not, as had been supposed, a species of distoma. It was closely allied to, but quite distinct from, the common fluke. Several of the examples transmitted to Prof. Huxley might now be seen in the Hunterian Museum at the Royal College of Surgeons. It was explained that the prevalence or absence of any particular species of trematodes during any season was due to varying atmospheric influences. Thus an unusual amount of wet and heat was eminently favourable to the development of the larval or cercarian forms which immediately preceded the adult state. The number of individuals agamogenetically produced bore a strict relation to the conditions under which their immediate progenitors were placed.

(To be concluded.)

THE ABERGELE ACCIDENT.

(From our Special Correspondent.)

According to your request, I send you a short account of the condition of the bodies of the unfortunate sufferers by the dreadful accident which occurred on the London and North-Western line of railway, between the stations of Abergele and Llandulas, on Thursday last. I went over to Abergele, and was kindly furnished with the enclosed particulars by the Medical men who were present and made minute examinations of the remains of the sufferers. It is not my intention to enter in detail into any particulars as regards the nature and cause of this sad calamity, as the daily papers have furnished to all readers a lengthened account of this dreadful disaster. My object is simply to relate facts which may prove of interest to the Medical Profession, giving a description, as far as possible, of the condition of the bodies, or what may be more properly termed, in most of the cases, the "charred fragments of human remains," as not merely the soft parts, but the bones, are, in many instances, completely destroyed, and any positive recognition of the remains by relatives or acquaintances is rendered utterly impossible. This complete destruction was the result not only of the burning of the woodwork of the carriages, but as the flooring of the carriages gave way to the fire the unfortunate occupants were precipitated into the raging flames of the petroleum, with which the ground underneath had become saturated. It is impossible from the condition of the remains to draw any inferences as to the amount of suffering endured. Probably, at least some of the victims happily were immediately stunned by the concussion, and this might, in some degree, account for the assertion that no cries for help were heard from the burning mass, and in no instance was there any attempt perceived at escape—so suddenly followed the conflagration upon the first shock of the collision. More probably, however, the unhappy passengers were stupefied by the vapour and smoke of the burning petroleum and the heat of the carriages. The following is a list and remarks made upon examination:—

Coffin No. 1.—Evidently the remains of a female; skull partially consumed; pelvis intact, containing all the organs in a perfect state, including uterus and bladder. The mouth quite burnt, one tooth only remaining. Portion of silk dress

under right arm unburnt. Supposed to be the body of Lady Farnham.

2.—Trunk of female body. Limbs entirely consumed. Ribs burnt. The pelvis contained the uterus and bladder. Identification quite impossible.

3.—Portion of body of female. Part of lungs unburnt. Pelvis contained uterus and bladder. Identification quite impossible.

4.—Remains of a male body. Neck, thorax, and abdomen all intact; also a small portion of light hair on the lower part of the trunk; evidently the remains of a muscular man. Supposed to be Lord Farnham's valet.

5.—Remains of male body. Head containing teeth quite perfect on both upper and lower jaws; portion of right arm unburnt; body quite perfect; extremities charred.

6.—Remains of body. Nothing remains but the left portion of the thorax, containing heart and lung, both much charred.

7.—Portion of skull and vertebra, also the liver much charred; pelvis quite consumed.

8.—Skull and portion of the vertebræ of child; nothing else remains.

9.—Remains of a male body; portion of skull, thorax, and abdomen intact; arms and legs much burnt; pelvis and scrotum unburnt.

10.—Remains of a female body very much burnt; uterus and bladder intact; the extremities quite destroyed.

11.—Male body. Portion of skull; left side of the face, with a quantity of whiskers. Body much burnt; lower part of abdomen much charred.

12.—Female body. Portion of skull, thorax, and pelvis; the latter contained the bladder and uterus intact. Whole mass enveloped in crinoline wires.

13.—Charred remains, consisting of contents of thorax and vertebræ, partially burnt as far down as lumbar vertebra. Pelvis quite destroyed. "Sex unknown."

14.—Female body. Tall and slender. Body much burnt; the lower part of abdomen not much charred; the contents of pelvis destroyed. Answers to the description of Lady Chinnery.

15.—Male body. Very much burnt; nothing left for identification.

16.—Human remains. Part of skull and thorax; sex not known.

17.—Male body. Very much burnt; the whole body a blackened, shapeless mass, broken down.

18.—Female body. Pelvis and contents intact; body much charred; arms and legs all burnt and destroyed.

19.—Female body, evidently of a child, very much burnt; the contents of the pelvis intact.

20.—Remains of body. Sex unknown, but articles found with what little remained denoted a female; the body quite reduced to ashes.

21.—Female body, enveloped in crinoline wires; contents of pelvis intact; head and extremities much burnt.

22.—Charred human remains; sex unknown; nothing left but a portion of vertebræ and thorax.

23.—Male body. Very much burnt; limbs entirely consumed.

24.—Human body. Fearfully burnt and charred; sex unknown; nothing left but vertebræ and small portion of thorax.

25.—Body of a male child. Skull consumed; thorax and abdomen intact, and portion of lower extremity unburnt.

26.—Female body. The remains of a very stout female—contents of pelvis intact, the rest of body very much charred; limbs entirely destroyed.

27.—Male body. Very much burnt; arms and legs quite destroyed.

28.—Female body. Extremities and skull totally destroyed; contents of pelvis intact.

29.—Male body. Skull burnt; arms and portion of legs burnt; contents of pelvis intact; spring of truss round loins.

30.—Female body. Contents of pelvis alone remaining.

31.—Female body. Totally reduced to ashes, except pelvis.

32.—Remains of body. Sex unknown. The pelvis and organs contained therein being completely destroyed.

33.—Remains of body. Sex unknown. Nothing but vertebra and thorax left.

A WOMAN at Bedminster has been poisoned by taking vermin powder containing strychnine. Dr. W. Bird Herapath conducted the analysis.

ARMY MEDICAL DEPARTMENT.

List of Gentlemen who competed successfully for Appointments as Assistant-Surgeons in H.M. British Service at the Competitive Examination held at Chelsea on August 10, 1868.

Order of Merit.	Names.	No. of Marks at Chelsea.
1.	Chatterton, J.	2210
2.	Stokes, A. K.	2160
3.	Corry, G.	2055
4.	Saunderson, W. H.	1950
5.	Crean, J. J.	1915
6.	Scanlon, J.	1900
7.	Adye-Curran, F. G.	1875
8.	Faris, T.	1855
9.	Triphook, G. R.	1780
10.	Stannard, H.	1745
11.	Webb, J. H.	1730
12.	Sharpe, W.	1725
13.	Bennett, R. D.	1695
14.	Maunsell, H. E.	1670
15.	Thornley, J. G.	1655
16.	Duke, A. N.	1630
17.	Carroll, T. E.	1600
18.	Davy, F. A.	1585
19.	White, H. B.	1560
20.	Bradford, R. M.	1530
21.	Maxwell, E. C.	1530

MR. LE GROS CLARK'S SIXTH LECTURE AT THE ROYAL COLLEGE OF SURGEONS,

ON THE PRINCIPLES OF SURGICAL DIAGNOSIS, ESPECIALLY IN REFERENCE TO SHOCK AND VISCERAL LESIONS.

JUNE 12, 1868.

LESIONS of the spinal cord may be suddenly and speedily fatal, or their effects may be deferred, insidious, prolonged, destructive of health, and, in most cases, ultimately of life also. In each class the pathological condition is the same, modified only by the element of time. The mobility of the vertebral column, though partly compensated for by some beautiful contrivances to secure safety, exposes it to increased risk. Fracture is not rare, especially in the inferior half of the cervical region and the lower extremity of the dorsal. The manner in which fracture is produced has an important bearing upon its character; indirect violence is the most common, bending the sacrum forwards. Dislocation is not uncommon combined with fracture, but simple dislocation below the second cervical vertebra Mr. Clark has never met with. An interesting specimen was exhibited of fracture of the fourth lumbar, with dislocation backwards of the fifth, the lower border of which was only a quarter of an inch below the level of that of the fourth. Though at first there was complete paraplegia, at the end of five weeks sensation was entirely, and motion partially, restored, but the patient died seven weeks after the accident from sloughing of the nates, etc. Strains of the spinal ligaments are not uncommon from the application of force insufficient to cause fracture, and they are sometimes attended with symptoms of irritation of the spinal cord, local tenderness, with defective innervation of the lower extremities, which are sometimes enduring. The same is seen after some railway injuries. The mischief is probably purely meningeal in its nature. These injuries are also early accompanied by hæmaturia, but the kidney is not inflamed, and no organic renal disease follows in the cases which recover.

Simple concussion may occur from a fall on the nates or back, and is diagnosed by the absence of symptoms of other injury. Paraplegia, often transient, results, and, even when well marked, the shock is not severe. When the symptoms are persistent, a cautious prognosis must be given, since they then are often due to extravasation into the theca. Partial absorption of this hæmorrhage is the cause of the unequal affection of the columns of motion and sensation subsequently seen in many cases. A good illustration of the effect of hæmorrhage is afforded by a man who was injured by a collision in the tunnel four or five miles from Brighton. After the accident he walked into the town, and then, in twenty hours, he became completely paraplegic. In two years' time he had recovered completely, but one spot on the spine continued tender.

Cases of concussion from railway accidents have assumed considerable importance, both from their scientific and legal interest. Their consequences seem rather to point to general nervous shock than to special shock of the spinal cord; for the functions of the organic nerves appear to be implicated. Emotional shock often, doubtless, plays an important part in the production of the symptoms. Among these are irregular and tardy reaction after the collapse, numbness and tingling sensations—sometimes local, sometimes universal—rigor, continued sickness, excito-motor spasm, sensations of heat and cold in the head, insomnia or continued drowsiness, ocular spectra, hyperæsthesia, great emotional excitability. Some cases recover; in others the sufferer becomes enfeebled, and gradually sinks or becomes the victim of some acute disease. The pathology of these conditions has yet to be worked out; but something has been done by the labours of Mr. Lockhart Clarke, who examined the cord of a man who had suffered for three years and a half from the consequences of a railway injury, defective physical power, unsteady gait, slow intellect, and hesitating speech. The posterior columns of the cord had undergone a remarkable atrophy, being smaller, darker, and more opaque, especially in the upper part of the cervical enlargement. This condition resembles very closely that described by Dr. Radcliffe as occurring in locomotor ataxy. The general conclusions respecting these states may be said to be that complete paraplegia results from compression of the cord from fracture or hæmorrhage, or from acute softening, which may extend up the cord till the chief centre of respiration is reached, and the patient dies asphyxiated. Incomplete paralysis indicates lesions of particular parts of the cord. Suspension of voluntary motion and diminished sensibility indicate lesions of the anterior columns and grey matter. Partial loss of motion and nearly complete loss of sensibility, accompanied with heightened reflex activity, show lesions of the posterior columns and grey matter in a very limited part of the cord. But when the same columns are deeply affected for two or three inches, the anæsthesia is accompanied by that loss of muscular co-ordination in the limbs which, with acute shifting pains, constitutes what is called locomotor ataxy.

Simple dislocation in the upper cervical region causes instantaneous death, as in an interesting case of disease of the ligaments of the axis referred to by the lecturer, in which subluxation had occurred many times before, the bones having spontaneously slipped again into place, but on one occasion it went on to complete dislocation, causing instant death.

The symptoms of pure shock—which in lesions of the abdominal organs are much more marked than in those which have been considered in the preceding lectures—appeal immediately to the cycloganglionic system of nerves, and organic life is primarily affected, the phenomena of animal life secondarily. In lesions of the brain and spinal cord this order of phenomena is inverted.

In conclusion, the lecturer regretted that he had had to omit much concerning other lesions of the cord, especially tetanus, and other matters connected with the subject, to say nothing of lesions of the other viscera. These he might hope yet to consider if the confidence of the Council were extended to him during another season. With a few words of apology for shortcomings, and thanking the Council and Members for their attendance, Mr. Clark brought his last lecture to a close.

THE LATE DR. ELLIOTSON.

(*From a Correspondent.*)

The death of Dr. Elliotson forcibly recalls the stormy debates upon the subject of animal magnetism to which his advocacy of it gave rise so many years ago. The able and dispassionate review of his life in your issue of August 8, leaves little to be desired. At the same time there are one or two allusions and statements which we should like still further to confirm and somewhat amplify, although without any direct reference to the judicious remarks the writer makes.

Now that the struggle and the main cause of it have passed away, we are able to regard the combatants with the equanimity which distance from the conflict and the dulling influence of the lapse of time inspire. We have most carefully, and without bias, gone through the discussions which took place thirty years ago and subsequently, and placing side by side, these and the standard works of the present day on physiology and psychology, we have endeavoured to answer the question, Who was right? Well, our conclusion is, the latter support the correctness of the opponents of Dr. Elliotson as to *theory*; while they support, *in the main*, the correctness of Dr. Elliotson as to *fact*. These works tell us that animal magnetism is a myth; but they also tell us that the facts which appeared to establish it are, for the most part, confirmed by subsequent observation, proving certain important and highly interesting physiological and psychological laws, quite independent of animal magnetism. Dr. Elliotson was wrong; his opponents were right. Dr. Elliotson was right; his opponents were wrong. And so, as in most fierce disputes, it turns out that "both were right, and both were wrong." Unacquainted, or at least unfamiliar, as we then were with the marvellous influence of expectant attention, suggestion, monotonous sounds and movements, excito-motor and ideo-motor acts, reflex action of the brain, etc., we may, perhaps, be excused if we were too ready to explain all the phenomena of so-called animal magnetism by the easy solution of "its all imposture." It is certainly curious to look back now and read the unqualified denial by even eminent Medical men of the genuineness of phenomena which no one now denies, but which our authorities explain on sound, although enlarged, physiological principles. Even in the case of the Okeys, which so naturally suggested imposture, we find two of the sturdiest opponents of animal magnetism (as such) stating some years after that, in their opinion, the phenomena in question might fairly be attributed to other causes than intentional imposition. Professor Laycock, while regretting that Dr. Elliotson should have been deceived as to the character of the phenomena, adds, they "were undoubtedly not feigned;" and Mr. Braid shows that the psychology of hypnotism, while lending no sanction to, but disproving, animal magnetism, "readily accounts for the result of Mr. Wakley's experiments with the Okeys." Referring to the wonderful acuteness of smell in such cases, he adds—"May not this account for the fact of Dr. Elliotson's patient, Okey, discovering the peculiar odour of patients *in articulo mortis*?" Be this as it may, however, the action of the Hospital authorities in interfering with these misplaced exhibitions in the wards of the institution was manifestly a duty, and Dr. Elliotson's resignation was but one of several inconsiderate acts which arose from his fiery impulsive nature. Indeed, his inability to brook the slightest opposition, whether from friend or foe, was, if we mistake not, his cardinal sin—the real cause of his fall. However much he may in some instances have been illtreated by his Professional brethren (and we do not deny that the shallow cry of imposture raised so indiscriminately against the phenomena of mesmerism was calculated to disgust and exasperate him), he undoubtedly condescended to retaliate in very unparliamentary language, and made the grand mistake of vituperating not only the class above referred to, but those who were disposed candidly to investigate the facts brought forward, but who could not adopt his explanations of them.

A few words on anæsthesia in connexion with Dr. Elliotson and mesmerism. A passage written by Dr. Forbes in the *British and Foreign Review* on its employment in Surgical operations is now of real historical interest, and the period which it marks ought not to be overlooked by any one who undertakes to write a complete history of anæsthetics. Four years before (in 1842) at a discussion of the Medico-Chirurgical Society on an operation performed without pain under the influence of mesmerism (so-called) a distinguished member of the Profession asserted that the fact was unworthy of the Society's consideration, because pain is a wise provision of nature, and patients are all the better for it, and recover better! In 1843 appeared Dr. Elliotson's well-known work, "Numerous Cases of Surgical Operations without Pain in the Mesmeric State." Then, after the lapse of a few years, a large number of capital operations in various countries (especially in India by Dr. Esdaile) having been painlessly performed, a considerable change of opinion evidently took place, and Dr. Forbes, in his *Review* for October, 1846, thus writes:—"Indeed, we hesitate not to assert that the testimony is now of so varied and extensive a kind, so strong, and, in a certain proportion of cases, so seemingly unexceptionable, as to authorise us—nay, in honesty, to compel us—to recommend that an immediate and complete trial of the practice be made in Surgical cases." But scarcely had this number of the *Review* appeared when the first operation under the influence of ether was performed! This was on October 16, and the news reaching England on December 17, its discovery was announced in the *Medical Gazette* of the 18th, under the head of "Animal Magnetism Superseded," and on the following

day Liston operated for the first time upon a patient under its influence. It was soon seen that many phenomena, such as partial consciousness, calling out as if in pain, sensitiveness to slight touch, were quite consistent with perfect anæsthesia, and were not, as many had supposed when they occurred in mesmeric patients, proofs of imposture. Here, then, Dr. Elliotson and his opponents were both right and wrong—he wrong in asserting that mesmerism would be the anæsthetic ultimately adopted by the Profession, but right in his belief that operations had been painlessly performed under its influence. We can but smile now at the objection, already referred to, then raised against the prevention of pain; perhaps some would think we ought rather to blush that members of our Profession should on *this* ground have opposed Dr. Elliotson's attempt to introduce painless operations in Surgery. Perhaps the prejudice was not more singular than that of the esteemed editor of Chelius against the employment of ether, who wrote, "I have considerable doubt of the propriety of putting a patient into so unnatural a condition as results from inhaling ether, which seems scarcely different from severe intoxication—a state in which no Surgeon would be desirous of having a patient who was about to be submitted to a serious operation." (*South's Chelius*, 1847, vol. ii. p. 1009). Recurring, however, to the main phenomena of so-called animal magnetism—the coma, rigidity, etc.—we can now see clearly enough, after the investigations and sound physiological explanations of Mr. Braid, Professor Laycock, Dr. Carpenter, Sir H. Holland, Professor Bennett, and others, that they can all be produced by certain recognised methods, alike without imposture and without animal magnetism. Once again, true facts, but false theories. We now honour Dr. Carpenter and others who dared to look the facts in the face, and instead of denying them (so easy to the dogmatist) pressed them into the service of psychology and physiology. Gradual as was the admission and the reasonable explanation of the facts in dispute, they may be said to have been generally regarded in the light they now are by the year 1853, when Dr. Carpenter, in his "Human Physiology," thus pronounced his verdict:—

"It appears to the author that the time has now come when a tolerably definite opinion may be formed regarding a large number of the phenomena commonly included under the term 'mesmerism.' Notwithstanding the exposures of various pretenders which have taken place from time to time, there remains a considerable mass of phenomena which cannot be so readily disposed of, and which appear to him to have as just a title to the attention of the scientific physiologist as that which is possessed by any other class of well-ascertained facts." Dr. Carpenter then briefly enumerates "the principal phenomena which he regards as having been veritably presented in a sufficient number of instances to entitle them to be considered as genuine and regular manifestations of the peculiar bodily and mental condition under discussion:—1. A state of complete coma or perfect insensibility. . . . In this condition severe Surgical operations may be performed without any consciousness on the part of the patient. 2. A state of somnambulism or sleep-waking, which may present all the varieties of natural somnambulism from a very limited awakening of the mental powers to the state of complete double consciousness, in which the individual manifests all the ordinary powers of his mind, but remembers nothing of what has passed when restored to his natural waking state . . . characterised by the facility with which the thoughts are directed into any channel which the observer may desire by the principle of 'suggestion.' 3. A frequent phenomenon of this condition, and one which has its parallel in natural somnambulism, is a remarkable exaltation of one or more of the senses, so that the individual becomes susceptible of influences which, in his natural condition, would not be in the least perceived. 4. The muscular system may also be excited to action in unusual modes and with unusual energy. Notwithstanding the fallacy of many of the cases of cataleptic rigidity which have been publicly exhibited, the author is satisfied, from investigations privately made, of the possibility of artificially inducing this condition." Lastly, Dr. Carpenter observes that, as regards the therapeutic influence of mesmerism, the same effects may be produced by other forms of artificial somnambulism (as Braidism) by simply fixing the attention upon the part, and, even in the waking state, by confident expectant attention.

Substitute, then, "Braidism" or "hypnotism" for mesmerism or animal magnetism, and we can look back on the phenomena so prominently brought into notice thirty years ago by Dr. Elliotson, and perceive that in the heat of controversy both of the contending parties made great mistakes, and that much time would have been saved had we at once, as a Profession, fearlessly investigated the reputed facts, and separated the chaff from the grain, instead of adopting something of the tone of wholesale denunciation and contempt. Let the course pursued by a few of the ornaments of our Profession, at a later period, be a lesson and a guide for us in the future.

REVIEWS.

RECENT WORKS ON GYNÆCOLOGY AND OBSTETRICS.(a)

(*Concluded from page* 226.)

We have left Dr. Matthews Duncan's book to the latter part of our article, chiefly because he is a pioneer; he is always breaking new ground, and the subjects of which he treats did not admit of comparison with the contents of the other volumes. It consists of a series of essays, which he has classified under the five following heads:—(1) The Statics of Pregnancy, (2) The Pelvis studied with a View to Obstetrics, (3) On some Points in the Physiology and Pathology of Pregnancy and the Puerperal State, (4) On some Topics in Natural and Morbid Parturition, and (5) Miscellaneous Subjects. The concluding chapter of the "Statics of Pregnancy" contains much interesting matter on "The Mode of Presentation of Dead Children in Labour." It has been long known that dead fœtuses much more frequently present the breech or shoulder than living ones. The statistics of Dr. Collins, based on 16,634 births, of which 1129 were born dead and 527 putrid, show us that a breech presentation occurs once in 62 living, and once in 6 putrid children, while the shoulder presents once in 555 living, and once in 82 putrid children. From observations made on the position in which the fœtus will float under different conditions (as when fresh, putrid, premature, or full time) in saline solutions of about its own ordinary specific gravity (sp. gr. 1040 to sp. gr. 1053), Dr. Duncan arrives at the following conclusions:—

"1. The healthy fœtus floats obliquely, with its head lowest, in a fluid of its own specific gravity—a position corresponding to that which it has in utero.

"2. The fœtus has a specific gravity of about 1050, while that of the liquor amnii, at the full time, is nearly 1010.

"3. Soon after the death of the fœtus in utero, changes take place in it which alter its position of equilibrium in a fluid of its own specific gravity, so as to be generally the reverse of that of the healthy fœtus—that is, so as to be oblique, with its head highest.

"4. It may happen that an advanced stage of decomposition of the fœtus, with collapse of the cranium, may make its position of equilibrium, when floating, again oblique, with the head lowest.

"5. These circumstances have probably considerable influence in determining the frequent malpresentations of dead children."—P. 54.

We regret that we cannot afford space to notice our author's "account of the causation of the regular development of the pelvis," and the application of his views to explain the production of oblique deformity of the pelvis, or his highly prac-

(a) 1. "Researches on Obstetrics," by J. Matthews Duncan, A.M., M.D., Lecturer on Midwifery in Surgeons' Hall Medical School, Edinburgh, etc. Pp. 467. 1868. Edinburgh: Adam and Charles Black.

2. "The Diagnosis, Pathology, and Treatment of the Diseases of Women, including the Diagnosis of Pregnancy," by Graily Hewitt, M.D. Lond., Professor of Midwifery and Diseases of Women at University College. Second edition, revised and enlarged. Pp. 700. 1868. London: Longmans.

3. "A Practical Treatise on the Diseases of Women," by T. Gaillard Thomas, M.D., Professor of Obstetrics and the Diseases of Women in the College of Physicians and Surgeons, New York. Pp. 625. 1868. Philadelphia: Henry C. Lea.

4. "The Principles and Practice of Obstetrics," by Gunning S. Bedford, A.M., M.D., Professor of Obstetrics, the Diseases of Women, and Clinical Obstetrics in the University of New York. Fourth edition, revised and enlarged. Pp. 763. 1868. New York: Wood and Co.

5. "Obstetric Clinic, a Practical Contribution to the Study of Obstetrics and the Diseases of Women and Children," by George T. Elliot, jun., A.M., M.D., Professor of Obstetrics in the Bellevue Hospital Medical College, New York. Pp. 458. 1868. New York: Appleton and Co.

6. "Résumé du Cours d'Accouchements donné à l'Université de Gand," par le Professeur van Leynseele. Pp. 457. 1866. Gand: Muquardt.

7. "Die Nerven der Gebärmutter und ihre Endigung in den glatten Muskelfasern, ein Beitrag zur Anatomie und Gynäkologie," von Dr. F. Frankenhäuser. 1867. Jena: Manka.

8. "Pathological Anatomy of the Female Sexual Organs," by Julius M. Klob, M.D., Professor of the University of Vienna. Translated from the German by Joseph Kammerer, M.D., and Benjamin F. Dawson, M.D. New York: Moorhead, Simpson, and Bond. London: Trübner. Pp. 296.

tical chapter (Part III.) "on the presence or absence of fœtid discharge in cases of imperfect deliverance." The Fourth Part begins with an experimental investigation of the amount of power exerted in ordinary labours. He first shows that the strength of the membranes to resist impending rupture "gives us a means of ascertaining the power of labour in the easiest class of natural cases" (p. 300). In association with Professor Tait, the eminent Professor of Natural Philosophy in the University of Edinburgh, he made a number of ingenious experiments with the view of determining the resisting power of the membranes; and it was found *inter alia* (1) that thickness of the membranes is no indication of strength; (2) that the amnionic membrane, which appears the thinnest and most delicate of all, is much the strongest of the three, and the decidual is usually the weakest, and gives way first when a bursting pressure is applied to all three membranes; (3) that the decidua bursts at a tension of ·35 lb. per linear inch, corresponding, under the circumstances supposed to exist in actual labour, to a forced pressure of nearly 5 lbs., and that the chorion is a little stronger, its average tensile strength being ·62 lb. per linear inch, corresponding to a propelling power in labour of nearly 9 lbs.; and (4) that the strength of the amnion is very variable, the force required to rupture the weakest amnion showing that the power of the labour was at least 4·08 lbs., and for the strongest a power of 37·58 lbs., the average power indicated being 16·73 lbs., while the average tensile strength was 1·19 lb. "It is a common belief," says Dr. Duncan, "that uterine pains increase in strength after evacuation of the liquor amnii. Whether this be true or not, I do not here consider; but it is certain that if the uterine contractions remain of the same force after as they had before the partial evacuation of the liquor amnii, the power of the labour or the extruding force will be increased, as curvature of the contracting organ is increased." (P. 315.) The fact that Dr. Poppel, of Munich, had a year or two previously (in 1863) taken up a similar line of inquiry was unknown to Dr. Duncan till after he had completed his investigation, and in no way detracts from the value of his essay. According to Poppel's experiments, in a very easy labour a power varying from 4 to 19 lbs. presses the head through the pelvis, while Duncan, using meantime Poppel's experiments and calculations, but taking the diameter of the passage at 4½ inches, while Poppel gives it at 4, makes the corresponding power vary from about 6 to about 27 lbs. "If we regard the figure of 4 lbs. given by Poppel as equal to the power exerted in the easiest labour he has observed, or the corresponding figure of 6 lbs. according to my calculations, and keep in mind that the average weight of an adult fœtus exceeds either of the above weights, we are led to the conclusion that in the easiest labours almost no resistance is encountered by the child; that it glides into the world propelled by the smallest force capable of doing so, and that, with the mother in a favourable position, the weight of the child is enough to bring it into the world—a result which many clinical facts at least appear to confirm. I can at present offer nothing positive from which to calculate the strength of labour in the general run of cases; but my belief is that in ordinary labours the power exerted is not in general much above the lower limit."—Pp. 319-20.

With this subject, which is probably altogether new to most of our readers, we conclude our notice of Dr. Duncan's valuable contribution to obstetric science, and pass to Dr. Klob.

Professor Klob, whose excellent epitome of the pathology of the uterus comes last on our list, arranges his subject in a very simple manner. He classifies the anomalies of the uterus into anomalies of formation, anomalies of nutrition and of function.

With regard to the first class, the author gives a very interesting account of the fœtal development of the uterus, pointing out its anomalies from excess and arrest of development. He states that, "at the time of birth, the uterus has undergone its primary development, and its further growth ceases. It is only at the beginning of puberty, when the organ has to perform its actual function, that it undergoes a second stage of development, whilst from birth to the fourteenth year but slight changes are noticeable" (p. 5).

"Immediately at the commencement of menstruation the ciliated epithelium of the mucous membrane is cast off, and a luxuriant production of epithelial cells commences, resembling the rete Malpighi, which undergoes desquamation until the termination of menstruation, when they again become ciliated epithelium." Having given this short outline, the author describes the deviations that take place.

Cases of excess of development are rare, those of arrest numerous; thus there may be absence of uterus, rudimentary uterus, one-horned uterus, double uterus, two-horned uterus, non-horned separate uterus, and congenital atresia of the uterine cavity. All these alterations of form arise from arrest of development during the fœtal growth of the uterus.

The author also mentions what he describes as anomalies of formation—as obliquity of the uterus, anvil-shaped uterus, extramedian site of uterus. He describes the anomalies of uterine development during childhood—the *uterus fœtalis*, when, in adult females, a cylindrical uterus is found, caused by a continuance of disproportion between the body and cervix; and the *uterus infantilis*, in which the organ, as a whole, has the form of a virgin uterus, but is altogether smaller. The author then proceeds to consider "Anomalies of Formation in the latter parts of Extra-uterine Life."

Having briefly alluded to anomalies in the site of the uterus, he passes on to the flexions of the uterus, and mentions anteflexion as the most frequent of these. He says: "Up to the commencement of puberty the uterus is neither bent forwards nor backwards; only at the development of the period does it assume a slight curve forward, the angle of the curve coinciding with the bend of the internal orifice, and in consequence of which the organ corresponds to the convexity of the posterior wall of the bladder" (p. 56). With regard to the causes of this anteflexion, Rokitansky and Virchow hold opposite opinions, but both agree as to its frequency. The cervix in anteflexion always deviates posteriorly, the os uteri points a little backwards, and, in consequence of the bending of the uterus, its cavity is narrowed at the point of flexion, or may be entirely occluded; consequently, mucous catarrh may be formed, and the menstrual fluid may collect in and distend the womb. The reflux of blood from the uterine to the hypogastric veins is interrupted, and, in consequence, frequently a very considerable dilatation of the plexus pampiniformis takes place, because the blood can only flow through the spermatic vein. The effect of this displacement on conception is very remarkable. The author states that Mayer found sixty anteflexions in 272 sterile women, but that other circumstances must be taken into consideration, especially derangements of menstruation, and also the altered position of the vaginal portion of the os uteri looking backwards. After an anteflexed uterus becomes impregnated it becomes straightened.

Retroflexion he attributes to *atrophy of the submucous tissue* round the internal orifice, especially in its posterior semicircle; but in most cases, especially in young persons, the fundus and body of the retroflexed uterus are hypertrophied, and chiefly the posterior walls, which is often owing to successive parturitions. In this latter case retroflexion may take place so much the easier, as the round ligaments, peritoneum, etc., are always more elastic after even a single pregnancy, and will but slightly oppose a gradual deflexion posteriorly of the body of the uterus. As a further cause of retroflexion constipation of the bowels must be considered, because the constant distension of the rectum forces the vaginal portion and cervix forwards and upwards as far as the utero-sacral ligaments will allow, and facilitates a sinking of the fundus towards Douglas's sac. Fibroid tumours and tumours in general which grow from the posterior wall of the body and fundus will also cause the uterus to gravitate backwards and produce retroflexion. Retroflexion is of rarer occurrence than anteflexion. Scanzoni in fifty-four cases of flexion notes forty-six anteflexions and only eight retroflexions.

The author then proceeds to consider *versions* of the uterus, the difference from flexions consisting in a greater rigidity of the uterine tissue. A relaxed or atrophied uterus seldom undergoes version, for the reason that a certain degree of rigidity and firmness of its tissues is necessary for version. "It may therefore be inferred," he says, "that in many cases a commencing flexion is changed into a version simply from the cause that, notwithstanding the pressure exerted upon the uterine substance at the point of the incipient flexion, atrophy of tissue did not take place" (p. 72).

We cannot follow him through the versions, elevation and prolapse, but may quote him as to one form of prolapse—viz., Virchow's prolapsus of the uterus *without sinking of the fundus*. He mentions a case of complete inversion of the vagina, with the external orifice of the uterus situated at the extreme end, and yet the fundus uteri was not only at its normal elevation, *but rather above it*. The enormous elongation of the uterus affected chiefly the cervix. The entire length of the uterus, from fundus to external orifice, measured six inches and a half, three of which belonged to the cervix.

It is very important to ascertain and observe this distinction, because in cases like Virchow's the usual practice of pushing back the cervix, with the idea of replacing the womb and supporting it with pessaries, would do infinite harm by causing inflammation of the pelvic peritoneum.

After treating of inversions and hysterocele, the author proceeds to consider the *alteration of the form of the uterus*, commencing with stricture, which takes place chiefly at the internal orifice.

Hydrometra, or Dropsy of the Uterus.—This may affect the body alone or the body and cervix, and generally depends upon stricture. In rare cases, with strictures of both orifices, we find distension and dilatation of the cavities of both body and cervix. The cavity of the body is distended in the shape of a globe, the cervical canal in the form of a pouch. In such cases the uterus acquires the hour-glass shape. It is always in a state of hypertrophy; for although in the highest degrees of this disease the walls of both body and fundus are exceedingly thin, still, on the whole, the uterus possesses more substance than in its normal condition. Hydrometra has no consequences worthy of note except when it is combined with displacements of the uterus, especially retroflexion. *Physometra*, or the inflation of air in the uterus, sometimes takes place. Valentin considers two conditions necessary—first, there must be a decomposing substance in the uterus; and secondly, the escape of the products of the decomposition be prevented. The substances which are likely to be decomposed are generally those connected with pregnancy and labour, either a dead fœtus, remnants of membranes, or portions of placenta.

Hæmatometra means an accumulation of blood in the non-gravid uterus. According to the amount of the accumulation, the uterus is distended in various degrees. The blood is mostly black, deficient in fibrin, discoloured in various degrees to a blackish brown, thickened rather than coagulated, tar-like, and sometimes mixed with crystals of cholestearin. This is generally a collection of menstrual blood caused by a stricture of the genital canal or imperforate hymen. In consequence of this distension of the uterus, peritonitis may ensue, which may terminate fatally.

The third division of our author's subject is adventitious growths. He mentions new formations of the connective tissue in the uterus by which it is uniformly increased in diameter. Its body and fundus assume a spherical shape, and frequently attain the size of a man's fist, and even larger; in the vaginal portion of the uterus, the cervix, leading to hypertrophy and polypus-like elongations. The degrees of this affection are various. Monstrous elongations, especially of the anterior lip of the cervix, have been observed. The lower portion of the elongation may appear even outside the vulva. In opposition to the diffuse growths of connective tissue, the author places those partial circumscribed formations generally known by the name of polypi. They are divided according to the uterine stratum in which they are developed—1st, into polypoid growths of the uterine mucous membrane; 2nd, into *papillomata*, presenting the characters of tumours of connective tissue; 3rd, into fibrous polypi, which are developed in the uterine tissue proper. Fibrous polypi are followed by round fibroid tumours, the former being highly vascular, the latter not so. The simple round fibroid tumour is developed from a limited portion of uterine connective tissue, and grows independently, displacing the surrounding tissue. These tumours vary from an almost imperceptible size to that of a man's head. The seat of the tumour is almost exclusively in the body and fundus uteri. When in the cavity of the uterus, they sometimes remove themselves. An inflammatory process is developed in the bed of the tumour, generally the most dependent part. This leads to the formation of pus or ichor, the sac gives way, the tumour is detached, and expelled by the contraction of the uterus. Hence the practice of artificial enucleation of these tumours is justifiable. These tumours are subject to *fatty* and *calcareous* degeneration.

Round uterine fibroid tumours never occur before puberty, and very rarely before the thirtieth year. From that period their frequency increases, and at the climacteric period 40 per cent. of the uteri of females who die after 50 years contain fibroid tumours. *Cystoid tumours* are next considered, including an account of Naboth's vesicles. *Vascular* tumours follow, by which the author understands two classes of cases, the first embracing hæmorrhage after delivery, resulting in consequence of the tumefaction and non-contractility of the uterus at the point of placental attachment, and including what has been recently called *placental polypus*. To the second class belong cases of excessive vascularity of various adventitious growths, especially papillary tumours, which gives them a red, spongy, and readily bleeding surface. "This is undoubtedly the kind of tumour which Jäger considered as the vascular tumour of the uterus" (p. 184). The *cavernous ectasia*, caused by non-involution of the venous structures after delivery, is next discussed. Then we come to "*epithelial cancer*," which may appear under one of two forms—as cancroid papillary tumours, and as a diffuse growth of epithelial cells from the connective tissue of the vagina or cervix.

After a very interesting account of carcinoma and a sketch of tuberculosis, Professor Klob goes on to the anomalies of nutrition, as hyperæmia, hypertrophy, atrophy, catarrh, etc., and then gives a very elaborate account of the puerperal affections of the uterus.

The work is most elaborate, though not voluminous; it abounds in references to English writers, as Rigby, Simpson, Barnes, Bennet, Tilt, Oldham, and Lever; the account of the several anatomical items which go to make up puerperal fever is highly interesting; and we can only say further that we thank Drs. Kammerer and Dawson, who have executed the labour with great judgment, and have made us familiar with a very valuable work on uterine pathology.

FOREIGN CORRESPONDENCE.

FRANCE.

Distribution of Prizes at the Faculty—Character of Jobert—Nélaton a Senator—Probability of the Election of Claude Bernard to a like Honour—The Faculty and the Ultramontane Party—Lady Doctors in the Paris School—Transfusion of Blood in Anæmia—The Summer Diarrhœa of Paris.

PARIS, August 18.

THE annual distribution of prizes at the Faculty of Medicine, which has lately been transferred from the beginning to the end of the year, took place on the 14th inst. The only incident which disturbed the regular course of the ceremony was the appearance among the successful candidates of a gentleman who bore the unlucky name of Lempereur, and was in consequence greeted with a volley of hisses, not directed, of course, against his person, but against his name. In all other respects, the solemnity went off without the slightest disturbance.

Professor Richet, in a very able and highly interesting speech, retraced the biography of Jobert, a man whose whole career was, in every sense, a perpetual struggle against difficulties. Born in the very lowest ranks of society, endowed by nature with very moderate intellectual capacities, and almost entirely destitute of literary education, he forced up his way to the highest position in science by dint of indomitable perseverance and uninterrupted labour. The list of his discoveries belongs to the history of Surgery, but the twofold moral to be drawn from the tale of his life may be thus briefly expressed—all obstacles give way before an iron will, and nothing can compensate for the absence of a liberal education. However trite these truths may seem to be, they were exemplified in no ordinary manner in the case of Jobert. Without friends, without fortune, and without brilliant parts, he rose to eminence in spite of all obstacles, and all his success in the world scarcely made amends for the continual uneasiness to which his total ignorance of anything beyond Surgery subjected him. In fact, the egregious blunders which he was perpetually committing whenever he ventured to speak on general subjects, and the ridicule to which they exposed him, may perhaps account for his singular roughness of manner, which certainly did not proceed from an unkind heart, as many of his actions will testify.

A measure which has long been contemplated, and which honours the Medical Profession in the person of one of its most eminent members, has at last been taken. Professor Nélaton was raised to the dignity of Senator on the 15th inst. It had been expected that the same favour would be conferred upon the most illustrious representative of French Medical science, Professor Cl. Bernard. His promotion, however, seems to be deferred to some other period. It may, at least, be hoped that, the doors of the Senate having at last been opened to one of the leaders of the Profession, others will follow at no great distance. The disinterestedness of scientific men has hitherto kept them aloof from political distinctions, but now that all classes of society have awakened to the importance of political life, and claim the privileges which they consider as their due, it behoves the Medical community to

keep no longer in the background, unless they are prepared to see their interests systematically disregarded and their position ultimately lowered in the social scale. The nomination of Professor Nélaton is evidently a step in the right direction. When shall we hear of a British Medical peer?

The other distinctions, which are rather sparingly bestowed this year upon the Faculty, amount to a few promotions in the Legion of Honour. Among these we are happy to notice the name of Professor Broca. In rendering justice to the merits of this eminent Surgeon, the Government has at least shown that the clamours of the ultramontane party against the so-called *atheists* of the Faculty have not prevailed, and that, for the time being, Cardinal de Bonnechose has no chance of becoming Prime Minister.

A decision of considerable importance, but of questionable policy, has at last been forced upon the Faculty by the Minister. In spite of the opinion expressed by the Professors, the American lady who last year applied for a degree has been empowered to pass her first examination, which she achieved successfully; and, as a natural consequence, a French lady has now entered her name upon the books, and may even now be seen dissecting with the other students at the Ecole Pratique.

Whatever may be thought of the measure in itself, it is perfectly clear that a permission granted to foreign ladies cannot decently be withheld from native Frenchwomen. The barrier is now, therefore, broken down, and we may expect an inundation of female Practitioners in Paris. Of the intellectual capacities of many of these it is impossible to doubt, any more than that women in some instances are fully as intellectual as men. It may, however, be questioned whether the presence of female M.D.'s, especially in a centre like Paris, will tend in any degree to increase the respectability of the Profession at large. Many, no doubt, of these future brethren (or sisters shall we call them?) will be of irreproachable morals, but a single black sheep will be more than enough to cast disgrace upon the whole flock. Let us not forget, however, that most evils carry their own remedies with them. If it is possible for women to engage with perfect respectability in the practice of universal Medicine—if, without losing a particle of self-respect, they can undertake the cure of syphilis and attend to the various complaints of both sexes—let them do so by all means. There is no unmanly jealousy in our feelings towards them, and the obduracy of bachelors is carried to such an extreme in this age and in this country that single ladies are fully entitled to invade what has been hitherto viewed as man's own especial territory, if they can hold their ground in fair and open battle. If, on the other hand, we suppose this to be contrary to the nature of things, the experiment had better be tried at once, in order to set the matter at rest for ever. At all events, it will be the duty of examiners in universities, when ladies apply for Medical degrees, to show them no favour on the ground of deference to their sex. Where women undertake the task of men, and mix with them in the rough battle of life, they forfeit their claim to that tender regard which, under all other circumstances, men are bound to pay them. In the present case, it would be highly criminal to endanger the public health and lower the standard of science by allowing candidates of an inferior stamp to obtain a full degree, under the plea of benevolence and gentleness towards the weaker sex.

Considerable attention has lately been drawn towards a somewhat obsolete operation which, in these latter days, had been exclusively revived in puerperal cases. We allude to the transfusion of blood, which has been tried with success by Drs. Courty, of Montpellier, and Thomas, of Reims, in cases of general debility. In a patient who was dying from anæmia without any apparent cause, Professor Béhier injected several times the blood drawn from the veins of healthy subjects. The quantity thus introduced into the veins within the space of a fortnight amounted to thirty three ounces. At first the patient seemed to rally, but at a later period he exhibited symptoms of pulmonary and cerebral congestion, and died a few hours after the fourth operation. No morbid alterations of any importance were found on making the post-mortem examination; only the organs were pale, flabby, and anæmic. It may be noticed that the blood, which at first was quite watery and poor, had grown much thicker under the process of transfusion. It may perhaps be questioned whether, when the hæmatopoietic organs have lost the property of making blood, they are still capable of being excited and brought to life again by the contact of the vital fluid. This, of course, is one of the many problems which cannot be solved by argument, and must be worked out by direct and long-continued experiments.

The epidemic diarrhœa, which had prevailed in Paris for the last two months, and had given rise to a few cases of cholera, is now beginning to die out, and the close of the epidemic is, as usual, ushered in by a change in the Medical constitution for the time being; in fact, typhoid fever is gradually coming in, and the wards of our Paris Hospitals are beginning to assume their ordinary appearance at the end of a warm summer.

GENERAL CORRESPONDENCE.

HONOUR TO WHOM HONOUR IS DUE.

[To the Editor of the Medical Times and Gazette.

Sir,—Will you allow me to correct an error inadvertently made in your account of the competition for the Herbert Prize at the close of the last session at Netley?

Mr. Lewis, of the Army Medical Service, is represented to have been second to Mr. Cunningham, of the Indian Service, who gained the prize, and Mr. Whitney, also of the Indian Service, is "honourably mentioned." The fact is, Mr. Whitney was second, and proved a formidable opponent to Mr. Cunningham, and Mr. Lewis was third.

I am informed, and I believe with truth, that the first man in the Netley examinations has always been one of the candidates for the Indian Service, and I hear that in the last Chelsea examination the gentlemen for this service have again taken the lead in a very marked manner.

The "blue riband of Netley" may therefore be fairly regarded as a prize for the Indian Service alone, because in the present unattractive state of the Army Medical Department prizemen will not be induced to offer themselves.

August 23. I am, &c. India.

NEW BOOKS, WITH SHORT CRITIQUES.

On Obscure Diseases of the Brain and Disorders of the Mind. By Forbes Winslow, M.D., D.C.L. Oxon. Fourth edition. London: John Churchill and Sons. Pp. 616.

*** This work, which is perhaps the most popular of its kind, being probably read quite as extensively by the laity as by the Profession, has now reached its fourth edition. Certain subjects are in it discussed for the first time, especially those relating to epilepsy, progressive locomotor ataxy, aphasia, glosso-pharyngeal paralysis. The author dedicates the work to his son in a characteristic address.

Practical Observations on the Use and Abuse of Tobacco. By John Lizars, late Professor of Surgery to the Royal College of Surgeons, Edinburgh, and Senior Surgeon to the Royal Infirmary, Edinburgh. Ninth edition. Edinburgh: Maclachlan and Stewart. Pp. 62.

*** The present edition of this once celebrated pamphlet has been issued by Mr. Trevelyan, of Tyneholm, in the vain hope of doing away with tobacco-smoking. This oft-attempted feat has not, however, yet succeeded. Practically, smokers have it all their own way, notwithstanding the horrors contained in this pamphlet, the denunciations of Mr. Solly, the warnings of Mr Hutchinson, or those contained in any other "Counter blaste." Considering the high standing, great learning, and power of these antagonists to tobacco, the smoker might aptly reply, with Lord Lytton, "*Fumus gloria mundi.*"

An Improved Method of Extraction of Cataract; with Results of 107 Operations. By J. R. Wolfe, M.D., F.R.C.S E., Ophthalmic Surgeon to the Royal Infirmary, Aberdeen, etc. London: John Churchill and Sons. Pp. 71.

*** Dr. Wolfe here republishes in a separate form certain papers on cataract which have already made their appearance in the columns of a contemporary. The method he suggests—*i.e.*, by iridectomy and a small corneo-conjunctival flap—has, in his hands, yielded very good results, and is well worthy of general attention. The little work is the production of a skilled ophthalmologist learned in the works both of British and Continental Surgeons.

Le Choléra: Etiologie et Prophylaxie etc. Par A. Fauvel, Médecin ordinaire de l'Empereur, Médecin de l'Hôtel-Dieu etc.

Cholera: its Etiology and Prophylaxy. By A. Fauvel, Physician-in-Ordinary to the Emperor, Physician to the Hôtel-Dieu, etc. Paris: J. B. Baillière and Sons. Pp. 672.

*** This work is an account of the labours of the International Sanitary Commission which met at Constantinople in 1866. Although what was then said and done has long been known in England and elsewhere, it would seem that this information is less widely diffused in France; to meet this want, therefore, M. Fauvel issues the present work.

On Asthma; its Pathology and Treatment. By H. Hyde Salter, M.D., F.R.S., F.R.C P., Physician to Charing-cross Hospital, and Lecturer on the Principles and Practice of Medicine at the Charing-cross Medical School. Second edition. London: John Churchill and Sons. Pp. 464.

*** The new edition of his in many ways unique work has been considerably enlarged and much improved by Dr. Salter. Instead of giving, as in the former edition, the particulars of forty-four cases only, he now describes 223, several of them at considerable length. This cannot fail to prove a useful feature.

MEDICAL NEWS.

NAVAL AND MILITARY APPOINTMENTS.

LINDSAY, Staff Assistant-Surgeon ROBERT, M.B.—Assistant-Surgeon 75th Foot, *vice* Joseph William Carter Neynoe Murphy, appointed to the Staff.

PELLY, SAVILLE MARRIOTT, Deputy-Inspector-General of Hospitals, of the Bombay Army.—Companion of the Bath.

BIRTHS.

HUMBLE.—On June 16, at the Patagones, South America, the wife of the Rev. Dr. G. A. Humble, M.D., M.R.C.P., Medical missionary, of a son.

RHODES.—On August 19, at Royal-terrace, Weymouth, the wife of Charles Rhodes, M.D., of a son.

RIDING.—On August 20, at 36, Euston-square, the wife of W. S. Riding, M.D., of a son.

RICHMOND.—On August 22, at Northallerton, Yorkshire, the wife of Sylvester Richmond, M.D., of a son.

MARRIAGES.

GOLDING—CROSLEY.—On August 25, at Holy Trinity Church, Sunningdale, Berks, Frederick Nassau Golding, Esq., late Lieutenant 32nd Light Infantry, youngest son of the late Benjamin Golding, Esq., M.D., of Boltons, South Kensington, the founder of Charing-cross Hospital, to Louisa Mary Georgina, only child of Sir Charles Decimus Crosley, Kt., of Sunningdale-park, Berks, J.P. and Deputy-Lieutenant for the County of Middlesex.

HOLDEN—STERRY.—On August 18, at Neuchatel, Switzerland, Luther Holden, F.R.C.S., to Frances, daughter of the late Mr. Wasey Sterry, of Upminster, Essex.

PATERSON—MAYO.—On April 14, at Trinity Church, Adelaide, Alexander Stewart Paterson, M.D., to Kate, second daughter of George Mayo, F.R.C S.E.

RAIKES—MONRO.—On August 20, at Valley-end, Chobham, Robert Taunton Raikes, only son of Robert Raikes, Esq., of Treberfydd, Brecon, to Sophia Jane Monro, second daughter of Henry Monro, M.D., 13, Caven dish square.

THURSFIELD—HEATH.—On August 19, at Wolverley, Worcestershire, Thomas W. Thursfield, M.D., Leamington, to Alice, only daughter of Matthew Heath, Esq., of Wolverley.

DEATHS.

BURN, JESSIE NINA GERTRUDE, infant daughter of Dr. G. A. Burn, 4th Cavalry, Hyderabad Contingent, of cholera, at Moninabad, India, on July 12.

FLETCHER, Mrs., relict of the late Robert Fletcher, Surgeon, Brighton, and eldest daughter of the late Thomas Dicker, banker, Lewes, Sussex, on July 21, at 38, Wavertree-road, Liverpool, aged 78.

INGRAM, CHARLES P., M.D., youngest son of the late Hugh Ingram, Esq., on August 20, at Steyning, Sussex, aged 35.

SMITH, FREDERICK PARSON, M.R.C.S., at Aylsham, Norfolk, on August 18, aged 69.

TURNER, VIOLET KATHLEEN, infant daughter of W. F. J. Turner, M.R.C.P.E., at Ryde, Isle of Wight, on August 23.

WHIFFIN, ELIZEARD HENRY, M.D., for many years Doctor to the Hudson's Bay Company, and son of the late Rev. James Whiffin, of Gould-square, London, at his residence, Murray-street, Hobart Town, Tasmania, on June 4, aged 68.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Brixworth Union.—Mr. A. E. Woolrych has resigned the Third District; area 8241; population 1689; salary £36 per annum.

Hartlepool Union.—Mr. James Allanson has resigned the Greatham District; area 12,810; population 2237; salary £30 per annum.

Mulling Union.—Mr. Selby Norton has resigned the Fourth District; area 8633; population 4992; salary £100 per annum.

APPOINTMENTS.

Newton Abbot Union.—Mr. William S. Steele, M.R.C.S.E., L.S.A., to the St. Mary Church District.

Wakefield Union.—Mr. John W. Greenwood, M.R.C.S.E., L.S.A., to the Shitlington District.

TESTIMONIAL TO DR. JACKSON.—Dr. Jackson, late of Barnsley, has been presented by his friends and patients, on his departure from that town, with a handsome testimonial, consisting of a silver epergne, value 200 guineas, and an accompanying address. There was besides presented to him an address from the widows of the men killed in the Oaks colliery accident. It was in a great degree owing to Dr. Jackson's exertions that the effort made to raise the Oaks Relief Fund was as successful as it proved.

LEGION OF HONOUR.—Among the annual promotions we notice the following names:—To the rank of Commanders—MM. Sainte-Claire-Deville and Pasteur; Officiers—MM. Gintrac, Nonat, Depaul, Huguier, and Forget; Chevaliers—MM. Broca, Vulpian, Desgranges, Alphonse Milne-Edwards, Marey, Guyon, Labbé, Danet, Pouchet, and Amédée Latour.

A PATIENT'S GRATITUDE.—In the will of the Hon. Charlotte Bootle-Wilbraham, just proved at Liverpool, the deceased lady has bequeathed to William Lax, Esq., senior Surgeon to the Ormskirk Dispensary, a legacy of "£1000 in token of gratitude for his skill and care in attending me through a dangerous illness in 1843."

ANIMAL VACCINATION AT BRUSSELS.—The Belgian Government has established at the Zoological Gardens a new "Vaccinogenous Institution," for the purpose of supplying vaccine virus derived from "animal vaccination." This the *Presse Médicale Belge* characterises as a very impudent procedure, inasmuch as it invests the new mode, which is only on its trial, with the official sanction of Government, discrediting the Jennerian procedure in the eyes of the public, and that although an abundance of virus is furnished gratuitously by the Hospital administration.

MISS BECKER ON WOMAN.—It must have been very amusing to the members of the British Association to hear Miss Becker discourse on the mental superiority of the female sex. This lady's propositions were so well-rounded and so categorically arranged that they must have overpowered many of our weaker brethren. Her utter disregard, however, of the necessity for urging something in support of these propositions was not a little characteristic of the lady debater, and the illustrations afford a happy example of the kind of science which is popular in the ranks of the *ci-devant* weaker branch of the human family. "The superiority of sex was not always on the side of the male: witness bees," said Miss Becker. This was most infelicitous. What is the domestic economy of the beehive? True, the males are not considerately treated, but then the really mentally superior and active members of the commonwealth are creatures we should be sorry to see Miss Becker selecting for her analogy—endowed with intelligence, but *devoid* of sex. The only female in the establishment leads a scandalous life of polyandry, is made a matron of as soon as she reaches maturity, is allowed to take no share in the affairs of the republic; and, finally, is kept hard at work perpetuating the species during the term of her natural life. Is this Miss Becker's notion of the female of the future?

IN-GROWING NAIL.—Dr. Babb says that for several years he has been in the habit of employing in these cases, with uniform success, a saturated solution of persulphate of iron. A bit of cotton wool saturated with this is insinuated between the fungous flesh and the nail, letting the cotton turn back over the flesh on the outside also. Success depends much on the thoroughness with which the bit of cotton is pushed down to the bottom or edge of the ingrowing nail.—*Boston Journal*, July 9.

NOTES, QUERIES, AND REPLIES.

"He that questioneth much shall learn much."—*Bacon.*

Rusticus.—"Darwinian Theory Examined," 8vo, cloth, Nisbet, 10s. 6d.

Ishmael.—We believe that the Statute of Limitations will apply to such debts, as to others.

A Member of the Medical Profession and of the Dialectical Society.—We are not under the misapprehension our correspondent supposes.

Bibliopole.—The library will be closed during September.

A Third Year's Student.—You will have, in common with all candidates for the diploma of Membership of the College of Surgeons, to undergo an examination in Medicine, unless you already possess a Medical licence.

A Demonstrator.—It is stated by Hutchinson that Johan Heurnius was the first who taught anatomy by lectures on dead bodies at Leyden.

A Quarantine Officer.—The custom of forty days for ordeal or quarantine seems to have arisen from the doctrine of critical days, the fortieth day being considered as the last or extreme of the critical days. Bills of health arising out of this regulation were established in 1527.

Mr. Jackson.—The epigram is as follows:—

"The King employed three Doctors daily—
Willis, Heberden, and Baillie,
All exceedingly skilful men,
Baillie, Willis, Heberden,
But doubtful which most sure to kill is,
Baillie, Heberden, or Willis."

OVER-POPULATION.

The following is the report of Lord Amberley's speech, delivered at the meeting of the Dialectical Society on July 1, which appeared in the *Medical Press and Circular* of July 22, and on which our editorial comments were founded:—

"Lord Amberley said the subject brought forward by Mr. Lawrie was of

first-rate importance. There was no doubt that prevention of over-population was by far the most satisfactory method of attacking the evil. How was this idea to be best spread among the poorer classes? He was glad to hear from Mr. Bradlaugh that the working classes were beginning to debate this vital point. Unfortunately, the influence of the clergy in common with that of society, and the natural passions of mankind, were opposed to the prevention of over-population. He believed, indeed, that women would naturally have a stronger feeling against large families, had they any say in the matter, and if their opinions were more heard. He was truly glad to hear the credit of the discovery given to the illustrious Malthus. Like all other discoveries, there was something wanting in the working out of the details of Malthus' views, and in the ways in which over-population could be prevented with the least pain and discomfort. He ventured to think that the propositions of Mr. McSweeny, that the evils of over-population could be remedied by taking the hunting-grounds of the nobility, were erroneous. If it would do so, he, for one, did he possess such a park, would gladly part with it to do away with poverty; but, in fact, population would swallow up such small gifts in a few years, and leave only fewer open spaces for all to enjoy. Emigration was good, but not rapid enough to relieve the pressure caused by rapid multiplication. The practical conclusion from all of which seemed to him to be, that Mr. Malthus was correct, and that, if ever we are to escape, as a nation, from poverty, it must be by the limitation of the size of our families. He (Lord Amberley) objected to celibacy; we all naturally objected to war and famine. Well, then, the only remaining alternative seemed to him to be small families; and after all it turned out to be a Medical question how this could best be accomplished without injury to the health. He wished much he could hear the proposals of the Medical men in the room as to the best means of limiting numbers. In America ladies were in the habit of keeping back their families, but the methods they employed seemed to him to be dangerous to health. Hence he should much like to hear a discussion as to whether some innocuous measure might not be discovered. It was remarkable that the subject should have first been taken up in America, where it was not so much required as it was here."

Bromide of Potassium in the Vomiting of Pregnancy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Allow me, through the medium of your journal, to add my testimony to that of Dr. Hodgkins as to the efficacy of bromide of potassium in the treatment of vomiting in pregnancy. Seeing in your journal of week before last a paragraph by the above-named Medical man as to the result he had obtained by the administration of the bromide in an obstinate case of vomiting, I was tempted to try it in the case of a lady (a patient of mine) who was about three and a half months advanced in pregnancy, and had suffered for six weeks with the most distressing vomiting, which nothing seemed to assuage, effervescing salines, etc. I administered the bromide in five-grain doses, with 5 minims of sp. chloroformi and water. It acted like a charm—in fact, to use my patient's own expression, "I have not been sick since I took the first dose of the medicine." I write this in the hope that other Practitioners may, like myself, be tempted to try it, and let the Profession have the benefit of the results of their treatment. I am, &c. Edward Ireland, M.R.C.S.E.

The Limes, Linton, August 10.

COMMUNICATIONS have been received from—

Mr. Tuffen West; Mr. Arthur G. Mickley; Mr. E. T. Blake; Dr. Tuke; Dr. Hughlings Jackson; Mr. J. Chatto; Mr. A. Poland; Mr. Long; Mr. Whipple; Mr. Ash; Mr. Elliot; Mr. Popplewell; Mr. Ward; Black Sheep; Mr. Stocker; Mr. Holthouse; Dr. E. L. Holmes; Ishmael; India; Rusticus; Dr. Muspratt; Sir Duncan Gibb, Bart.; Mr. Parker; Mr. Ley; A Member of the Medical Profession and of the London Dialectical Society; Dr. Weber (Otago); Dr. Playfair; Dr. Ogle; Dr. Barnes; Mr. Serjeant; Mr. Mackaye; Mr. Whipple; Dr. Bold Williams; Mr. Francis Fox; Dr. W. H. Broadbent.

BOOKS RECEIVED—

Worthington on Bathing—Lizars on Tobacco—Macdonald's History of the Development of Animals—British Journal of Dental Science, July—Salter on Asthma—Report of Tewkesbury Rural Hospital—American Journal of the Medical Sciences, No. 111—Hurried to Death, by Haviland.

NEWSPAPERS RECEIVED—

Gazette des Hôpitaux—L'Union Médicale—Western Morning News—Exeter Daily Telegram—Gazette Hebdomadaire—Western Daily Press—Tribune Médicale—Gazette Médicale—Le Mouvement Médical—Barnsley Chronicle—Medical Press and Circular—Western Times.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 22, 1868.

BIRTHS.

Births of Boys, 1047; Girls, 1020; Total, 2067.
Average of 10 corresponding weeks, 1858-67, 1853·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	724	704	1428
Average of the ten years 1858-67	624·4	604·0	1228·4
Average corrected to increased population..	..	..	1351
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	2	12	1	2	7	28	3
North ..	618,210	1	8	8	2	4	12	57	5
Central	378,058	..	3	8	1	2	7	31	2
East ..	571,158	1	11	5	1	5	14	50	1
South ..	772,175	2	9	16	2	9	13	80	4
Total ..	2,803,989	5	33	49	7	22	53	246	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·575 in.
Mean temperature	61·9
Highest point of thermometer	74·8
Lowest point of thermometer	51·7
Mean dew-point temperature	57·8
General direction of wind	N.N.E., S.E., & W.S.W.
Whole amount of rain in the week	1·97

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 22, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Aug. 22.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Aug. 22.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2067	1441	1428	74·8	51·7	61·9	1·97	199
Bristol (City) . .	167487	35·7	106	75	*76	..	..	..	..	..
Birmingham (Boro')	352296	45·0	249	171	236	72·9	52·0	58·3	2·61	264
Liverpool (Borough)	500676	98·0	377	290	330	72·8	52·7	59·4	0·82	83
Manchester (City) .	366835	81·8	305	208	*319	..	..	..	..	..
Salford (Borough) .	117162	22·7	89	59	99	73·7	50·0	58·7	1·23	124
Sheffield (Borough).	232362	10·2	160	122	163	70·4	46·2	55·7	1·11	112
Bradford (Borough)	108019	16·4	147	55	77	..	..	..	..	..
Leeds (Borough) .	236746	11·0	231	120	165	72·0	53·0	59·3	0·26	26
Hull (Borough) .	108269	30·4	72	50	77	73·0	46·0	57·8	2·03	205
Newcstl-on-Tyne, do.	127701	23·9	96	68	66	68·0	47·0	54·9	0·40	40
Edinburgh (City) .	177039	40·0	137	85	106	71·7	50·0	58·4	0·90	91
Glasgow (City) .	449868	88·9	360	262	243	75·9	49·9	59·1	0·73	74
Dublin (City and some suburbs) .	319985	32·8	205	157	156	77·6	39·3	57·9	1·22	123
Total of 14 large Towns . . .	6391080	34·7	4601	3163	3541	77·6	39·3	58·3	1·21	122
					Week ending Aug. 15.	Week ending Aug. 15.				
Vienna (City) . .	(1863) 560000	..	..	..	313	..	..	† 76·3	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·575 in. The barometrical reading decreased from 29·84 in. on Thursday, August 20, to 28·97 in. on Saturday, August 22.

The general direction of the wind was N.N.E., S.E., and W.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 64·3°.

APPOINTMENTS FOR THE WEEK.

August 29. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

31. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

September 1. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

2. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

3. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

4. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVII.—Part II.

TURNING CONTINUED: TURNING IN CONTRACTED PELVIS. ARGUMENTS FOR THE OPERATION: THE HEAD COMES THROUGH MORE EASILY, BASE FIRST: THE HEAD IS COMPRESSED LATERALLY: MECHANISM OF THIS PROCESS EXPLAINED: LIMITS JUSTIFYING OPERATION: SIGNS OF DEATH OF CHILD: ULTIMATE RESORT TO CRANIOTOMY IF EXTRACTION FAILS.

The value of turning in moderate degrees of pelvic contraction rests greatly upon the truth of the following proposition:—*The head will come through the pelvis more easily if drawn through base first than if by the crown first.* Baudelocque affirmed this proposition ("L'Art des Accouchements"). He said—"The structure of the head is such that it collapses more easily in its width, and enters more easily when the child comes by the feet, if it be well directed, than when it presents head first." Osiander had maintained the same opinion. Hohl (1845) also pointed out that the bones overlapped more readily at the sutures when the base entered first. Simpson (1847) insisted strongly upon the truth of this proposition, and illustrated the mechanism of head-last labours with much ingenuity. The proposition has, however, been disputed, and that by Dr. M'Clintock (*Obstetr. Transact.* vol. iv. 1863). He says—"I do not believe that the diameters of the head are more advantageously placed with regard to those of the pelvis, nor can I believe that the head is more compressible when entering the strait with its base than when it does so with its vertex, till this be demonstrated by direct experiment."

It is also contested by Professor E. Martin, of Berlin, (*Monatsschr. f. Geburtsk.* 1867). He especially insists that when the vertex presents moulding may go on safely for hours; but that if the base come first the moulding must be effected within five minutes to save the child.

I venture to submit that I have made such clinical observations as are equivalent to direct experiments. In the first place, let me state a fact which I have often seen. A woman with a slightly contracted pelvis, in labour with a normal child presenting by the head, is delivered after a tedious time spontaneously or by the help of forceps; the head has undergone an extreme amount of moulding, so as to be even seriously distorted. The same woman in labour again is delivered breech first; the head exhibits the model globular shape, having slipped though the brim without appreciable obstruction. For examples see my outlines of heads (*Obstet. Trans.* 1866).

In the second place, I have on several occasions been called to an obstructed labour in which the head was resting on a brim contracted in the conjugate diameter. Of course, Nature had failed; the *vis a tergo* was insufficient. I have tried the long double-curved forceps, trying what a moderate compressive power aided by considerable and sustained traction would do to bring the head through, and have failed. I have then turned, and the head coming base first has been delivered *easily*. Upon this point I cannot be mistaken. And I think this greater facility can be explained. Dr. Simpson has illustrated by diagrams how the head, caught in the conjugate at a point below its biparietal diameter, is compressed transversely as traction-force is applied below, causing the mobile parietals to collapse and overlap at the sagittal suture. And surely no one can doubt that the traction-power, and therefore the compressing power, acquired by pulling on the legs and trunk is infinitely greater than can be exerted by the strongest forceps. But there is another circumstance in the clinical history of head-last labours in narrow conjugate which affords a remarkable illustration of this proposition. *The head is rarely, or never, seized in its widest transverse diameter; it is seized by the conjugate at a point anterior to its greatest width—that is, in the bi-temporal diameter;* the bi-parietal and occiput commonly finding ample opportunity for moulding in the freer space left in the side of the pelvis behind the promontory. The head, in fact, fits or moulds into the kidney-shaped brim wherever there is most room. I have given illustrations of this point also in the memoir referred to (*Obstet. Trans.* 1866). I think, therefore, it may be taken as demonstrated that the head coming base first passes the contracted brim more easily than coming crown first. And if the head comes through more easily, it may be inferred that the child will have a better prospect of being born alive.

Fig. 81.

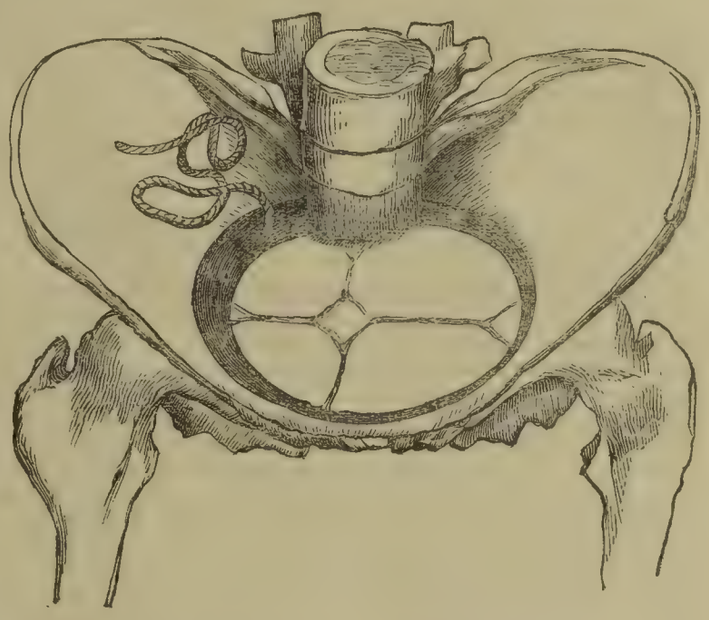


Fig. 81 represents the head entering a contracted brim, base first. It is nipped in the small transverse diameter, the greater or bi-parietal diameter and the occiput finding room in the side of the pelvis. The cord lies in the side of the pelvis to which the face is directed, and is protected by the promontory.

Can we define with any precision the conditions as to degree of pelvic contraction that are compatible with the birth of a living child? The question is not easy to answer; nor is it important to be able to answer it very precisely. The great fact upon which the justification of the operation rests is this: many children have been delivered by it alive, with safety to the mother. We know accurately only one element of the problem—namely, the degree of contraction of the pelvis. The other element, the relative size and hardness of the fœtal skull, we can but estimate. *We must assume, in many cases, a standard head.* With this assumption the practical question is reduced to this: *What is the extreme limit of pelvic contraction justifying the attempt to deliver by turning?* In other words this means: What is the narrowest pelvis that admits of the passage of a normal head? This is answered chiefly by experience. It is not to be answered by *à priori* reasoning like that urged by Dr. Fleetwood Churchill, who says, even in his last edition ("Theory and Practice of Midwifery," 1866):—"The bi-mastoid diameter in the six cases measured (by Dr. Simpson) varied from $2\frac{6}{8}$ to $3\frac{2}{8}$ inches, and a living child can pass through a pelvis of $3\frac{2}{8}$ inches antero-posterior diameter, with or without the forceps. With a pelvis of this size, then, the operation is unnecessary; and if the antero-posterior diameter be less than $2\frac{6}{8}$ inches, the operation would be impracticable. These, then, are the limits of the operation; for us to attempt to drag a child through a smaller space would be unjustifiable."

To this statement of the case serious objections may be taken. The proposition that a living child can pass through a pelvis with an antero-posterior diameter measuring 3·25″, with or without the forceps, can only be accepted with considerable qualifications. I claim to speak with the confidence drawn from large experience when I say that a head of standard proportions and firmness will hardly ever pass a conjugate reduced to 3·25″ without the forceps, and very rarely indeed with the forceps—that is, alive. I might even extend the conjugate to 3·50″, and affirm the same thing. The compressive power of the forceps, unless very long sustained, is not great, rarely great enough to reduce a bi-parietal diameter

of 4·00″ to 3·50″ without killing the child. My opinion, then, is that a standard head, especially if it happen to be a female head, which is more compressible than a male one, *may be* drawn through a conjugate of 3″, but not with much prospect of life; and that the proper range of the operation of turning is from 3·25″ to 3·75″, at the latter point coming into competition with the forceps. I believe no one advocates resort to turning when the conjugate measures less than 3″.

A correlative proposition to the foregoing is the following: —*Compression of the head in its transverse diameter is much less injurious to the child than compression in its long diameter.* The truth of this is attested or admitted by most authors who have considered the point. It is insisted upon by Radford, Ramsbotham, and Simpson. It is confirmed by the observation of the form which the head assumes under moulding in natural labour, which, as I have shown, is effected by the lengthening of the fronto-occipital diameter and the shortening of the transverse diameter. (*Obstet. Trans.* vol. vii. 1866, and *Medical Times and Gazette*, vol. ii. 1867.)

Now, it is an almost necessary consequence that when the head arrested on a contracted brim is seized by the forceps, it is seized by its fronto-occipital diameter, and to the longitudinal compression is added the increased obstruction to the entry of the head into the narrowed conjugate caused by the lateral bulging.

We will now discuss the question—What is the penalty incurred, or how can we retrieve our error, if we turn and fail to bring the head through the too contracted brim? Undoubtedly, the patient will have to go through a second operation. We are driven to perforate after all. We have tried to save the child, and have failed. Is the mother imperilled by this attempt and failure? This also must be answered by experience. Of course, the mother may suffer if we persevere in dragging the child too long and too forcibly. But we have a right to assume that the attempt is controlled by skill and discretion. The amount of force that can be safely endured is very great—far greater than those who have never seen the operation would readily credit. The violence to which the soft structures are subjected seems to be small in proportion to the traction-force exerted. There appears to be some saving or protective condition. This, I think, is found in the mechanism of the process. I refer to Lecture V. (*Medical Times and Gazette*, November, 1867) for an illustration and description of the mechanism of labour in contraction of the pelvis from projection of the promontory. This projecting promontory forms the centre of rotation around which the head must rotate in order to enter the pelvic cavity. The side of the head applied to this point scarcely moves at all. The promontory catches the fœtal skull in the fronto-temporal region. If the coarctation be decided, the skull where it is caught bends in. All the onward movement is effected by the opposite or pubic side of the skull sweeping in a circle, which I have called "the curve of the false promontory," until the equator or greatest circumference has passed the plane of the brim, when the whole head slips into the cavity with a jerk. Now, injurious pressure is avoided on the pubic side by the smoothness and flatness of the inner surface of the pelvic brim, and by a gliding movement of the soft parts intervening between the head and the bony canal. Injurious pressure is avoided over the promontory by the yielding or moulding of the head. The temporal and parietal bones will bend in, even break. Children have been born alive after this bending or breaking. Sometimes a large cephalhæmatoma forms at the point of depression. In other cases the child perishes. The observation of these cases shows that the mother will bear with safety an amount of pressure which was sufficient to kill the child.

What follows? This obvious corollary—that the mother will safely bear that lesser degree of pressure which is required to bring through a living child.

The operation, then, is justified in cases of contraction that admit of the passage of a living child. It is further justified in cases of contraction to a certain, though small, degree of contraction beyond this, which admits of the passage of a dead child. We have here, perhaps, carried the experiment to the verge of what is justifiable. Beyond this, there being no possibility of getting a child, live or dead, through the pelvis, it would of course be better not to go. And if all the conditions of the problem could be precisely ascertained beforehand, we should not go beyond this. But, whilst calculating upon an average or standard head, we may encounter a head above the standard in size or hardness, and thus, in our endeavour to save the child, we may find ourselves in a difficulty. The extrication is by perforation. By lessening the head, it is brought within the capacity of the pelvis. This is, indeed, an acknowledgment of defeat; it is beating a retreat. The justification, however, is that we accomplish in the end exactly that which those who reject the operation accomplish —namely, the safety of the mother. We have tried to do more—to save the child as well.

Is there any great difficulty or danger in perforating after turning? I believe not. The child's body is drawn well over to one side by an assistant, so as to facilitate the access of the operator's guiding fingers and the perforator to the child. The best place to perforate is in the occiput; but if that part be not easily struck, the perforator may be run up through the base of the skull. An opening into the cranium being made, the crotchet is passed into it, and the discharge of brain facilitated. Then, resuming traction on the trunk cautiously, the skull will probably collapse enough to pass easily. If not, the craniotomy forceps can be applied; or, better still, the cephalotribe, to crush up the base of the skull. Now, under the postulates of the case, this late recourse to craniotomy must not be considered as a severe or hazardous addition to the risks of the woman. The turning has been performed early in labour—that is, before the liquor amnii has all drained away, whilst the child is still freely movable, and before there is any serious exhaustion of the mother. Under these circumstances the turning, especially if conducted, as it commonly may be, on the bi-polar principle, is not necessarily a long or a severe operation. If we fail in extraction, which is soon ascertained by observing that the head makes no advance, but that its globe expands broadly above the brim of the pelvis, perforation can be performed in good time. In short, the safety of the mother is secured by carrying through both operations whilst her strength is good. If exhaustion had set in, we should not have turned at all, but have proceeded to craniotomy in the first instance. To these considerations must be added the result of experience, which is to the effect that the retrieval by the secondary operation of craniotomy is successful.

What is the chance of saving the child? Dr. Churchill urges that "the life of the child is not secured, and its chance but little increased, even if our estimate of the pelvic diameters be accurate; for, if in turning with an ordinary-sized pelvis rather more than one-third of the children are lost, the mortality will be surely much increased if its diameter be reduced more than one-fourth." I will not stop now to press the preliminary objection I entertain to submit the decision of this or any other question in obstetric practice to *à priori* arguments drawn from statistics. It would not be difficult to prove that the statistics employed by Dr. Churchill are a confused heap of incongruous facts, and that rules to guide practice drawn from them must be stultified by endless fallacies. It is enough to state that the operation is not recommended by any one when the pelvis is contracted more than one-fourth—that is, below three inches—therefore the argument, statistical or other, is beside the question. I am not able to state or to estimate the proportion of children saved or lost under the operation. It is enough to justify the operation if we save a child now and then. I believe, however, that, exercising reasonable care in selection of cases and skill in execution, more than one-half of the children may be saved. And to save even one child out of twenty is something to set against the deliberate sacrifice of all.

Not assenting to the proposition that one child out of every three is lost by turning where there is no disproportion, I do not doubt that a much larger proportion would be lost under turning where the conjugate diameter of the pelvis is less than 3″. But, as I have said, the comparison is gratuitous, for no one, I believe, recommends turning in this latter case unless the child be premature. Experience here again corrects the foregone conclusion deduced from statistical reasoning. The risk to the child is considerably less than might be fairly anticipated. It is a matter of observation that *in cases of moderate contraction the funis is safer from compression than in cases of normal pelvis.* I have found the cord commonly fall into the side of the pelvis towards which the face looks, and there it is protected in the recess formed by the side of the jutting promontory (see Fig. 81); so that if the soft parts are sufficiently dilated not to compress the cord against the child's face, and if the labour can be completed under 5″, or even a little more, the child has a very good chance indeed. This proposition is especially true in the case of premature labour with contracted pelvis. In this case the child may, in the great majority of cases, be saved by turning. I have in this way saved many children who still survive to parents who would otherwise be childless. It deserves, I think, to be laid

down as a rule in practice that *where the conjugate diameter measures from 2·75″ to 3″, delivery by turning should be the complement to the induction of labour at seven or eight months* —at least, I have acted on this rule with the happiest results.

Since the design of the proceeding is to save the child, it is obviously useless if the child is dead. How do we know when a child is dead? It is by no means easy to acquire certain knowledge of this fact. Nothing is more common than to read in clinical records "that the pulsations of the fœtal heart being no longer audible with the stethoscope," or, "the pulsation in the cord having ceased," or, "meconium having escaped," the death of the child was assumed, and the perforator was used without hesitation. I will not dispute that these are presumptive evidences of death, but I have too often experienced the satisfaction of seeing a child resuscitated after I had ceased to feel the pulsation in the cord, and after the free escape of meconium, to abandon the hope of saving the child without more certain evidence. This is found in great mobility and crackling of the cranial bones; the caput succedaneum falling into loose skin-folds; the coming away of epidermis and hairs.

So long as there is tonicity, rigidity, or firmness of the limbs, life is present; but flaccidity is not a certain sign of death. A sign of threatening imminent death is a twitching or convulsive movement of the leg held in your hand. This indicates an attempt at inspiration made to supplant the suspended placental circulation. When this is felt, it is a warning to accelerate delivery, and to excite aërial respiration.

ORIGINAL COMMUNICATIONS.

ON SYPHILITIC PEMPHIGUS.

By BALMANNO SQUIRE, M.B., F.L.S.

Most of our readers are probably aware, that the question as to whether or not there be such a disease as "syphilitic pemphigus" is even now a disputed one. This query depends on the doubt that still exists as to the nature of the *pemphigus neonatorum*, which is the only variety, if there be a variety at all, of syphilitic pemphigus, since it is only in the new-born infant that any eruption is met with which can at the same time be said to resemble pemphigus, and to be, possibly, of syphilitic origin.

For some time we had accepted the more general opinion respecting the nature of this disease—an opinion which is expressed in its name, "pemphigus neonatorum"—viz., that it is simply a kind of pemphigus occurring in new-born infants, and that it is in no way connected with syphilitic infection. This view is strengthened by the familiar fact that infantile syphilis is not usually a disease "*neonatorum;*" but (curiously enough) rarely developes itself before the end of the first month of infantile life.

It seems strange that there should be any doubt at all as to the nature of so peculiar a disease, which, if it be indeed of syphilitic origin, is the best defined of all syphilitic eruptions. It might be said of it that it is as easy of recognition as a case of shingles.

A complaint that appears only in newly-born infants—that affects both the palms and the soles, but no other part of the surface—and that is developed on the tiny extremities of the infant in the shape of clear watery bladders as large as peas, may surely claim to present great facilities for diagnosis.

The doubt as to its nature is caused probably by the rarity of the disease. But the evidence afforded by a case which lately came before us is, we think, strongly in favour of the imputation of a syphilitic origin.

A woman, who had long suffered from constitutional syphilis of the more inveterate kind, and who had on two separate occasions been under our treatment for ecthymatous syphilide which had deeply scarred her face, applied lately with her infant (which at the time was only a fortnight old) to seek advice for a skin disease which had attacked it. The infant was a seven-months child, and its father (as the woman said) was the man from whom she had contracted her disease, and with whom she was still living.

Here, at all events, was a less doubtful history than can generally be got at in cases of presumed hereditary syphilis.

The infant's palms and soles were of a uniform deep dusky-red colour, and were affected with a somewhat scanty desquamation of a flaky character (to use a vulgar phrase, but one very descriptive of the condition, they were "peeling"). The infant's anus and vulva were the seat of minute ulcers, which were, however, deep for their size and covered with a pultaceous film, and the perinæum and adjacent parts of the buttocks were of a deep tawny-red colour. The breathing was "snuffling."

The mother volunteered the statement that the disease of the perinæum was only of a few days' duration, but that the disease of the palms and soles dated from birth and presented at first "a most extraordinary" appearance—viz., that of blisters of the size of peas, containing a clear fluid. Of these "blisters" there had been several on either palm or sole. They had lasted for a few days, when they broke, and the eruption gradually acquired the condition in which it first came under our notice.

Although in this case the ulcers which are said to follow the blebs of syphilitic pemphigus were absent, we think ourselves justified in considering it as a case of veritable syphilitic pemphigus.

9, Weymouth-street, W.

AN INTERESTING CASE OF

FRACTURE OF THE ANTERIOR PART OF THE BASE OF THE SKULL, WITH REMARKS.

By ALFRED POLAND.

(From Notes by A. Copleston Roberts.)

James Y., aged 29, a railway guard. On July 4, 1868, at about 8.15 a.m., as the train was leaving the Borough-road station, he was standing with his head out of the guard's van, and the door open, when his head was struck by an iron girder, and he was thrown down to the ground. He was admitted into Guy's Hospital under Mr. Poland in half an hour. He was unconscious, bleeding freely from a cut upon the side of the head. There was great ecchymosis of the left eye, and considerable swelling of the left temporal region. Rather more than an inch above the left ear there is a wound about one inch and a half long, laying bare the bone, the periosteum being torn off to the extent of the size of a fourpenny-piece. No fracture to be seen or felt at this spot. Just below the left temporal ridge of the frontal bone there seemed to be another horizontal ridge, apparently a displaced fracture. Pulse 109, regular; respiration natural. Pupils both dilated; the right sluggish, and the left insensible to light. The face rather drawn to the left. The patient seemed to feel pain, and put up his hands to prevent the examination of his head. He seemed, however, to use his left hand much more than the right. There was some slight bleeding from the nose and mouth; none from the ears. The neck was rather swollen, and there were some slight bruises beneath angles of the jaw. An ice-bag was applied to the head after dressing of the wounds. In the evening the swelling about the left eye and temple had much increased, and there was considerable subconjunctival ecchymosis of left eye. The pulse 120, and natural. Apparently complete paralysis of right arm and leg, and he moves the left arm about in a restless manner. The patient takes no notice whatever of what is said to him, but on Mr. Poland's remarking that the fracture was through the base of the frontal bone, he repeated the words "frontal bone" twice distinctly. The pupils were both acting sluggishly. The urine drawn off, and natural.

July 5.—He wandered a great deal during the first part of the night, then slept quietly; his mother, who has been with him, states that he has moved his right arm a little. The pupils are normal; the right side appears to be still motionless; there is very little, if any, facial paralysis; pulse 96, soft and regular; respirations normal; no evidence of consciousness. In the evening the pulse rose to 114, and at 9 p.m. the temperature in the right axilla was 99·2°, in the left 98°.

6th.—He remains in much the same condition; he has moved the right arm and leg once or twice, but very slightly, the side being apparently still paralysed; no difference in the pupils, and no evidence of any very great degree of compression, not sufficient to warrant Mr. Poland in trephining over meningeal artery at the site of the wound, which he intended to, should marked symptoms justify the proceeding.

At 12 a.m.	the temperature	in the	right axilla	was 99·3°
,,	,,		left ,,	97·2°
At 9 p.m.	,,		right ,,	100·2°
,,	,,		left ,,	99·3°

7th.—He wandered a great deal during the night, but towards morning he slept sound. He has constant moving of left arm and leg, continually raising the arm; passes his water unconsciously; respiration 32 per minute; pulse 126; temperature in right axilla 100·1°, in left 99°; in the evening the pulse rose to 150, and respiration 36 per minute. He died at 8 a.m. on July 8, ninety-six hours after receipt of injury.

Post-mortem Appearances.—The head only was permitted to be examined. There was much bruising and some extravasation of blood in the scalp tissues over the left temporal region, extending as far forwards as the left eyebrow and upper lid, and downwards into the cellular tissue of the neck. The temporal muscle was infiltrated with blood and much swollen; the cranium was deprived of periosteum at the site of the wound, which was situated over the parietal bone, just behind the origin of the temporal muscle. On clearing away this latter muscle, an oblique fracture was found, commencing by a very fine hair-like fissure, more visible on the internal than the external aspect of the parietal bone, close to the anterior part of the wound. This fissure ran forwards along the temporal fossa, passing through the anterior and inferior part of the parietal bone to the upper portion of the temporal fossa, and here becoming very prominently marked by a portion of the bone being driven in, so as to allow the upper part to remain prominent, forming a transverse ridge below the temporal ridge of the frontal bone, which had been detected through the muscular structure during life. The fracture then extended along the anterior part of the base of the skull, crossing obliquely the supra-orbital plate of the frontal bone in front of the left ala minor, then passing through the posterior part of the ethmoid bone in front of the anterior clinoid process and the sella turcica, traversing the forepart of the apex of the right orbit as a small fissure, and terminating in the forepart of the middle cerebral fossa on the right side. There was some extravasation of blood between the dura mater and bone on the left side, which was diffusely spread over that part to some extent, and forming a thin layer of clot; it was derived from a small puncture of the middle meningeal artery, which the fracture had traversed; it was not sufficient to produce any perceptible compression of the convolutions. There was some extravasation of blood into the cellular tissue of the left orbit, but not sufficient to cause protrusion of the eyeball; and also slight traces in the right orbit. In neither case were the optic nerves injured. The brain was in all respects healthy, except at its base, where there was found extensive superficial laceration of the under surface of the middle lobe on the right side at the spot where the fissure terminated. This condition involved a considerable portion of the lobe, and was confined to the cortical structure. Inflammatory softening was just commencing. A more accurate examination could not be made, as the body had to be removed from the Hospital at once; and it was only by great efforts that we were enabled to obtain the above cursory examination.

Remarks.—There are many interesting points in this case which are worthy of note—the extraordinary route of the fracture across the anterior part of the base, commencing and ending in a fine fissure, the one end where the blow was received, and the other end where its effects terminated by the destructive mischief to the brain, just as if a train of powder had been laid and one end lit, and the other end had exploded and produced the fatal result. This case was hardly one of *contre-coup*, but was justly a direct transmission of force expended upon the under surface of the right middle lobe. The fracture in this case did little other mischief in its course. It is true it ran through the groove of the middle meningeal artery and nicked this vessel, but the artery did not pour out more blood than was necessary to bathe the surface without producing compression to any very marked extent. The fracture was much displaced in traversing under the temporal muscle, but did there no mischief. The track along the base through the roof of the orbit likewise did no extensive injury otherwise than producing extravasation into the orbit of moderate extent, and causing ecchymosis of the eyeball and eyelid. The symptoms in the case were tolerably consistent with the injury. The man was for the most part unconscious the whole time he was alive, and only on one occasion did he evince any functional capacity in his brain by the singular repetition of the words uttered by the Surgeon. He had evidently concussion, contusion, bruised brain, lacerated brain. The pupils in his case gave us the usual unsatisfactory signs. The right side was paralysed, at first well marked, then less so, and afterwards could be moved slightly. This also is satisfactorily accounted for. There was extravasation of blood from the artery, which, instead of collecting into a pool, gradually diffused itself, so that the brain gradually accommodated itself. At the onset, when the paralysis was well marked, I predicted a wound of the meningeal artery, and stated that I should trephine if symptoms of compression set in, and I paid this man frequent visits in order to seize a favourable opportunity for so doing, but the man never had confirmed symptoms of compression; on the contrary, he gradually became relieved from those threatening evidences. The extreme irritation, restlessness, and moving of the left arm and leg, indicated brain mischief, which turned out to be the case. The escape of blood into the cellular tissue of the orbit and eyelids assisted the diagnosis as to which part of the base had been involved, so that this symptom, with the bleeding from the nose and mouth, the absence of any bleeding or discharge from the ears, and the cerebral complication, confirmed us in pronouncing the case to have been one of fractured base in the anterior fossa of the skull. It seems to me, on reflecting over the injury, that the iron girder tore open the scalp, and that the violent fall upon the ground produced the fracture, that the whole weight of the body was thrown upon the side of the head below the temporal ridge of the frontal bone, probably upon some projecting substance, and thus caused the severe fracture, driving in the bone in a horizontal direction. From this extended two lines of fracture, one backwards along the lower part of the parietal bone towards the wound, and the other transversely across the anterior part of the base towards the middle fossa, so that the injury was at the apex of an acute angle, thus: ∠. This seems a more satisfactory explanation than to suppose the fracture commenced at the wound and took the circuitous course along the base to the opposite side.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 237.)

Parades as a Cause of Sickness — Meals — Amusements — Schools — Libraries — Moral Condition of the Soldier — Soldiers' Families.

As already observed,(a) every consideration was, as a rule, shown to the comfort and well-being of the soldier; yet there exists evidence that not only as regards his uniform, but in the manner of conducting his duties, there were some exceptions. No harm can now arise from mentioning two of those exceptions. Probably there is not now alive a soldier or an officer who then belonged to either of the regiments in question; and, if there be, it is only necessary for me to mention that my present remarks have no other object than simply to trace the conditions of the soldier as they were, and to indicate not only the progressive improvement in these which has been effected, but also to endeavour, as far as is in my power, to win back for the authors of those improvements—namely, the Medical officers of the army—the amount of credit to which they are justly entitled.

Having said this much, I would refer to the reports for the year 1828.(b) In them it is related that the 38th Regiment, then quartered at Ghazepore, suffered severely from fever and cholera. The Inspector-General directed his attention to the circumstances that may have combined to induce these two diseases, and among them was stated to be "a system of drilling the men early in the morning, when the grass was wet," a circumstance against which the Surgeon of the regiment protested in August of that year. With the knowledge we now have of India, we stand aghast at a "system of drilling the men" in the middle of the rainy season having ever been thought of by a commanding officer who had the slightest interest in or care for the health of his men.

The second instance to which I would refer is that of the 13th Foot. This regiment was, in 1835, quartered at Agra, a station well known as among the hottest in India, and at which, during the month of May, the hot winds prevail with great intensity throughout the daytime, the mornings being alone moderately cool. It would appear that the custom was to have

(a) *Medical Times and Gazette*, page 237.

(b) Page 53, Inspector-General's Report.

parade in the evening—that is, after the men had been exhausted by the long dreary hot day, and when the temperature out of doors was very high. We learn that the Surgeon suggested to his commanding officer the advisability of substituting a morning parade for that in the evening—the mornings being comparatively cool—and, at the same time, told Colonel Sale that he should be apprehensive of the consequences of his continuing the evening parade all through the season, as he said he intended to do. The Surgeon, at the same time, expressed his opinion that to continue the evening parade must, sooner or later, have the effect of diminishing the efficiency of the corps.

What follows in regard to this correspondence is now, to men acquainted with regimental routine, extremely interesting, as showing the specious reasoning by which a system that cannot but be well known by military officers to be acting prejudicially upon their men is, nevertheless, advocated by them. We are informed (c) that "Colonel Sale remarked that the object of the evening parade was to prevent disorderly conduct and drunkenness," and that, for these purposes, "a morning parade as a substitute would be useless." He added, however, that he "had no objection to have the parade at a later hour in the evening," and the parade hour was made later accordingly. Whether this compromise was satisfactory to himself or to the wellbeing of the men we are not informed. It is not difficult to conjecture, however, that it could have been so to neither.

As is well known by all Medical officers who have done much regimental duty, the time as well as frequency and duration of parades is ever a source of solicitude to them, and they will therefore be the better able to appreciate the following remarks, made a considerable number of years ago by Dr. Sandham. "That some regiments," he observes, "occasionally are kept on parade too late in the morning, and out too soon in the evening, as regards health, is unquestionable, sometimes leading to a remonstrance by the Surgeon which is not always well received or attended to." (d) I would also transcribe some valuable remarks which this able regimental Surgeon made in the same report, while discussing the subject of drills and duties. "The drills generally," he then stated, "are short, and should be so." On the subject of occupation he went on to say, "We are well aware that idleness has led some into another extreme in a climate like this, where, with a wish of giving employment, they have overpowered their men." Then, in regard to the proper duration of parades and drills, he thus expressed himself:—"It has often been said by the oldest and some of the best officers that the most brilliant reviews have been of short duration;" and he adds, "The reason most likely is that they were short of wearying the men and horses, which while at work did so with pleasure."

Adverting to the few other subjects bearing upon regimental economy, which I propose to notice in these remarks, I would mention that then, as now, it was customary for the commanding officer, accompanied by all the officers of the regiment, to visit the barracks once a week and personally see to the accommodation of the troops. The usual Medical inspections of the men took place on Saturdays; the barrack rooms were once a week thoroughly cleaned out; and in regard to their meals care was taken to see that they were properly served up as well as properly cooked. We are specifically informed, indeed, that "at breakfast and dinner hours the men were paraded near the mess tables, properly dressed in thin white clothing, and were inspected by the captain and subaltern of the day, as were also at those times their messes, the cleanliness of their barracks, the arrangements of their packs, arms, accoutrements, etc." (e) We moreover learn that it was the custom to have the barrack rooms carefully cleaned out after each meal, which was doubtless very desirable; but we may, I think, be pardoned if we express a doubt whether, with all the "inspections" above enumerated, there was not really a little too much of a good thing, and whether there be not so still.

On the subject of amusements, we learn from the Report for 1830(f) that the men play cricket when the weather permits, being then, as it would appear, for the first time, supplied by the canteen fund with bats and balls. We are further informed that among their other amusements were the games of football and that of long bowls, both of which they played almost every day.

(c) Report, 1835, page 280.
(d) Report, 1842.
(e) Report, 1830, page 315.
(f) Report, page 315.

The next occasion in which a direct reference to this subject has been met with is in the Report for 1839, in which we read that "in the cold season, and even in the mornings and evenings of the hot, the men are to be seen playing at long bowls, rackets, quoits, and sometimes cricket," the means of indulging in these sports being provided from the canteen fund of each regiment.

One more extract on this subject must suffice for my present purpose. In 1840 the chief amusements of the soldiers are described as "including long bowls; at those stations where there are courts, *fives* is a favourite game, nine pins, skittles, quoits, and sometimes cricket At some stations there is a theatre; and in private performances the men are much encouraged in some regiments. At the chief stations, and in most regiments, they have very respectable libraries, newspapers, etc."

The value of regimental schools and libraries as means of weaning the soldier from his vices and improving the young had early received attention from various officers. In the Reports for 1830, these are described as well conducted, and that in the former "not only have most of the young men made great progress in writing, but many have qualified themselves for promotion by their attention and industry." (g) In the course of the reports from which I quote, allusions are on various occasions made to the successful working of both these institutions—thus, for example, Dr. Burke mentions in his Report for 1833 that "there are good and well-selected libraries generally in the regiments" (in India), and also reading rooms, these being kept up partly by the soldiers themselves, and partly by donations given out of the canteen fund. Of schools, he at the same time mentions that they "are well regulated and attended by the children, and that a certain number of the men of each corps also attend them," the daily average of those so doing being put down as seventy. The following year he reverts to the same subject, and states that "both the regimental school and the library"—he was specially alluding to the economy of the 13th Foot—"were well conducted, the former in accordance with the rules of the service, and the latter managed by a committee of officers." And in 1835(h) he writes as follows when alluding to the condition of the 16th Regiment:—"The men improve themselves during the hot season by attending the regimental school. They have also an excellent library, from which they obtain books."

It seems to me that such a summary of the conditions of the soldier as I have endeavoured to give has in a great measure been rendered necessary in consequence of an impression having been disseminated that the commencement of improvements now in progress in his condition dates no further back than a very few years. That the conditions as here described are in many respects to be condemned and deplored is not to be questioned. I think, however, I shall be able to render it apparent that all that was bad in them arose from the operation of causes over which the representatives of a mercantile company possessed, but failed to exercise, the power of removal, and that whatever was good in them had been attained by the exertions of the army Medical officers.

With reference to their moral condition, the question, at the time of which I now write, had attracted the attention of men interested in the welfare of the soldier, and, as we shall presently see, the notice of the military authorities in England. Some of the most important measures taken to improve the social state of the soldier will be alluded to more in detail as we proceed, but it seems to me that a short notice may here be made to those of a general nature. On this subject, then, we find Dr. McLeod, in 1836, expressing himself. "A succession of causes," he observed, "and in particular the system of volunteering, has rooted evil habits in the Indian army more perhaps than in any other;" yet he was not without hope that, by the employment of appropriate means, those evils, deeply as he saw that they had taken root, were not without remedy. "They were," he observed, "till very lately considered as a part of the condition of the soldier abroad," and in many instances the measures taken to check the soldier in his reckless career were described as altogether inappropriate, being often "too coercive, or so ill directed as to have little effect." "Now, however," he adds, "that the extent" of the moral evils by which the soldier was affected, "is seen, more rational and better-directed measures will be taken to remedy it."

The measures to which he referred were not alone of a coercive nature. They included endeavours such as are being now made to subject the soldier to moral training and eleva-

(g) Report, 1830, page 316.
(h) Report, page 434.

tion. He adverted to the circumstance that recruits on joining their regiments were less disposed to adopt the prevailing vices than were the older soldiers who, as volunteers, came from other corps. These were ready not only to adopt whatever they found in existence, but to ingraft upon those among whom they had come whatever may not have prevailed of vices existing in their previous regiments; and he expressed a hope that, by exertion on the part of officers, recruits might be prevented from falling into them. He further recorded his anticipations of the good results that were likely to arise from the checks upon bad conduct, and the premiums upon good behaviour, that had shortly before been issued by the Horse Guards and War Office. Adverting to them, he observed that they were calculated to have a more beneficial effect upon the men than had the coercive measures just alluded to; but in order that they might fully effect their beneficial purpose, Dr. Macleod added, "officers of regiments must aid in furthering the execution of such orders, and use their utmost exertions to raise the situation of the soldier as a moral agent"—a recommendation which I would even now again submit for their adoption.

There are unfortunately very few particulars available with reference to the condition of the soldiers' wives and children at the time to which these remarks refer. It appears, however, that in 1826 the strength of our forces serving in Bengal was 7976, among whom there were 1158 married women and 1598 children. As appears elsewhere, there is every reason to believe that a system of concubinage prevailed to a considerable extent in some regiments; the above figures, however, only refer to legitimate wives and children, although it is impossible to gather how many of the wives were British, how many Indian. According to them, there were fourteen soldiers married in every hundred, and to every two married families there were on an average about three children—the actual proportion being a little under one child and a third to each married couple.

To enable us to compare these statements with the statistics of matrimony in very recent times, let me quote from the returns for 1862. According to them, our force amounted to an average of 39,401 men. Of these, there were married 2249—no more than a very small proportion, certainly not exceeding 5 per cent., being Indian. All the others were British; and to these numbers there were 3178 children. In other words, there were in 1862 only 5 men per 100 women, instead of 14 in 1826, while the proportion of children remained as at the earlier period—a fraction less than one and a half per couple.

It is true that the local government granted a monthly sum to each woman and child, but in other respects little, if anything, seems to have been done for them. From the casual notices met with on the subject in our Reports, it is apparent that no special arrangements were made for their accommodation or comfort in any way; and it is even recorded that the wives of soldiers not only themselves lived in a state of drunkenness and riot, but were instrumental in procuring means for the men to do so too.

Now, considering what has of late years been written on the subject of marriage in the army, these particulars are somewhat remarkable. They show us that at the very period when mortality among our soldiers is believed to have been at its highest the proportion of marriages among them was also greatest. We must, indeed, endeavour to avoid too rapid generalisation from this fact; yet I think it becomes evident, from its recital, that marriage among soldiers is not necessarily and of itself an unmixed means of preserving their efficiency, but that it may, on the contrary, be rendered a source of positive evil, unless measures are taken to bring the every-day life of such as are married under proper surveillance, and not only the men, but their wives even more especially. This reflection is a sad one, and yet I fear it is just.

(To be continued.)

Birmingham Medical Benevolent Society.—The following appointments were made at the annual general meeting of the Society held on Friday, August 28:—*President:* Dr. Evans, of Birmingham. *Vice-Presidents*: Robert Blaikie, Esq., of Oswestry; Robert H. Blake, Esq., of Leamington; W. H. Sproston, Esq., of Birmingham; Dr. C. Warden, of Birmingham. P. H. Chavasse, Esq., of Birmingham, one of the trustees of the Society, in place of Dr. Fayrer, of Henley-in-Arden, deceased. Dr. S. H. Agar, Corresponding Member for Henley-in-Arden.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

BLOW ON THE HEAD—LACERATED SCALP—FISSURE FRACTURE OF SKULL—INFLAMMATION OF BONE—HEMIPLEGIA—PYÆMIA—DEATH, ON THE TWENTY-FOURTH DAY—AUTOPSY.

(Under the care of Mr. ADAMS.)

For this communication we feel much indebted to Mr. Edwin Ditchett, late House-Surgeon to the Hospital.

On September 18, 1867, Richard R., a gasfitter by trade, 43 years of age, was admitted into the Hospital under the care of Mr. Adams, suffering from a lacerated wound of the scalp. The history of the accident was, that in assisting to hoist a pump on board ship, the hook to which the tackle was fixed broke, and a large block falling from a considerable height struck him on the head. The wound was on the right side of the head, in the occipito-parietal region, about two inches in length. The scalp was quite divided, and there was a fissure fracture of the skull, but without any depression, and not attended with any symptoms of pressure on the brain. He was suffering from slight concussion, from which he recovered in a few hours. Ice was kept constantly applied to the head, and the bowels were gently acted upon. He continued progressing favourably until the 22nd, when he was seized with repeated rigors, followed by erysipelas over the forehead. This was treated by painting the part with the etherial solution of nitrate of silver, and a poultice was substituted for the ice. On the 25th he seemed pretty well, but complained of pain in the nape of the neck, extending partly up the back of the head. From this time he continued with slight occasional attacks of shivering until October 5, when he had three or four severe rigors.

On October 6 he had the symptoms of febrile disturbance, rapid pulse, and dry skin, etc. Mist. salin. anodyn. ℥j. quartâ quaq. horâ, is ordered.

7th.—Patient is about the same, but there is greater pain in the head.

8th.—Febrile symptoms and pain much increased. Mr. Adams orders unguent. hydrarg. fortior. to be rubbed into the insides of the thighs three times a day, and ice to be applied to the head.

9th.—Is worse. Temperature 104°; pulse 120; skin hot and dry; tongue dry; answers questions rationally; complains of great pain in the head. 8 o'clock p.m.: Answers questions very slowly, and at a considerable interval after they have been put to him. Passes his motions involuntarily. There is partial paralysis of the left side.

10th.—Temperature 103·5°; pulse 115; skin and conjunctiva of a yellow colour. Patient is aroused with difficulty. He answers questions, but not always rationally. Conjunctivæ somewhat insensible. Cannot shut the left eye entirely. As the patient lost the right eye some years ago, there is no opportunity of comparing the state of the pupils. Complete loss of sensation and motion on the left side. He has perfect sensation on the right side of his chest, complete anæsthesia on the left, and imperfect sensation towards the middle line. 8 p.m.: Temperature 102·4°; pulse 115; hurried respiration; other symptoms unchanged.

11th.—Temperature 104·8°; pulse 120; eye glazed and pupil contracted; conjunctiva insensible; entire paralysis of limbs and loss of sensation. Respiration very hurried, with mucous râles. Patient is sinking rapidly. He died about 3 p.m.

Autopsy, performed Eighteen Hours after Death.—On the right side of the head was a scalp wound, as described in the notes of the case. Beneath this laceration was found a linear fissure in the calvaria about an inch and a quarter in length. The portion of bone crossed by this fissure was of a greenish colour, and was marked off, probably for exfoliation, by a shallow circular groove, indicating the line of demarcation from the surrounding healthy bone. On removing the calvaria a layer of pus and lymph was found on the dura mater immediately beneath the fissure fracture. There was also a much larger collection on the arachnoid after removal of the dura mater. This layer extended over nearly the whole of the posterior part of the right hemispheres, and dipped

under the falx cerebri to the opposite side, which was involved to a slight extent. The deeper portions of the brain were not affected. On slitting up the longitudinal sinus, a large clot was found in its cavity, extending also into a large vein leading into it. For the most part this clot was firm, and adhered to the walls of the sinus, but a portion of it had degenerated into pus. In the lungs numerous abscesses were found, but there were none in any of the abdominal viscera.

Mr. Adams made the following clinical remarks on this case. The remarks are much condensed :—

"The case, gentlemen, is one of no extraordinary variety, but it is one of great interest. The man was brought into the Hospital with a compound fracture or fissure of the skull, and with symptoms of concussion of the brain. These passed away in a few hours, and, in the absence of any signs of compression, nothing whatever was done to the bone, and the case was treated in the usual manner—*i.e.*, ice was applied to his head, and strict quiet was enjoined. After a few days rigors set in with great severity, indicative of the supervention of some mischief, though it was impossible to say what was about to happen; but you may be sure that rigors are the harbinger of fever of some kind or another. In this case erysipelas attacked the scalp, and was relieved by the use of an etherial solution of nitrate of silver painted over the entire inflamed surface. After this he appeared convalescent, but he still complained of pain in his head; the wound looked healthy, but it was clear that a portion of bone was dead. Still there were no symptoms of pressure on the brain, and the case was carefully watched. Rigors again supervened, and I made the remark that this probably indicated either another attack of erysipelas or pyæmia. I again inquired whether any stupor or paralysis of the opposite side existed: nothing of the sort was perceptible. I made the inquiry, having made up my mind to trephine the bone if such complication existed. I also inquired into the state of the lungs, but could not ascertain that there was anything to justify a suspicion that any purulent deposit had occurred in these organs. On a subsequent visit I found the patient quiet, but he was not absolutely comatose, and he said on inquiry that he felt himself better. I came to the conclusion that low inflammation had attacked the dura mater and the arachnoid membrane. I therefore ordered mercurial ointment to be freely rubbed into his thighs. No mercurial effect was produced, and the patient sank, having two days preceding his death paralysis developed in his left side. He was seen in my absence by two Surgeons as well as by Mr. Ditchett, the House-Surgeon, who all concurred in the opinion that no operation was desirable. You have heard the description of the appearances after death. The conclusion we came to as to the nature of the case is that originally the case was one of concussion of the brain and of lacerated scalp with a fissure of the skull, and that this was succeeded by necrosis of a small piece of both tables of the skull; that inflammation attacked first the dura mater, as shown by the deposit of lymph and pus on the surface of this membrane; that the inflammation extended to the arachnoid cavity, as shown by the injected state of the vessels of the arachnoid membrane, and the secretion of pus in its interior; that phlebitis and pyæmia existed, as shown by a deposit of pus in the superior longitudinal sinus, and purulent deposits in the lungs; that probably this phlebitis commenced in the veins of the diploe; and, lastly, that no operative procedure would have been of the slightest utility, although symptoms of pressure on the brain occurred towards the termination of the patient's life."

WESTMINSTER HOSPITAL.

STRANGULATED INGUINAL HERNIA—OPERATION—SAC OPENED—RECOVERY—REMARKS.

(Under the care of Mr. FRANCIS MASON.)

F. T., aged 22, a timber porter, was admitted under Mr. Mason's care, with symptoms of strangulated hernia, on December 18, 1867. He had had an inguinal hernia on the right side for six years, for which he had worn a truss. Two days before admission the rupture had descended suddenly whilst he was straining at stool. On examination, a considerable swelling was found in the right scrotal region. It was tender to the touch, very dull on percussion, and could not be reduced. The act of coughing caused great pain in the part. The man complained of a dragging sensation around the umbilicus, his countenance was anxious, and he was bathed in profuse perspiration. Bowels had not acted for three days; pulse 96. He vomited, but not stercoraceously, three times in the first hour after admission. Mr. McDonald, the House-Surgeon, ordered liq. opii sedativi ♏ xxv. to be taken, and applied ice to the affected part. Mr. Mason saw him at 5.30 p.m., and, as the hernia could not be returned, decided to give chloroform and operate if necessary. The taxis being ineffectual, the usual incisions were made, and after some little delay (caused by the attempt to keep the sac entire) the sac was opened. This contained a piece of omentum nearly as large as an orange, and a very small knuckle of intestine at the abdominal ring. The neck having been divided, the intestine was readily returned. The omentum was then transfixed with a double ligature, and the part included removed with scissors. The stump was placed in the abdominal opening with the hope that it would act as a plug, and thus probably effect a radical cure. The patient took no other medicine than a few doses of liq. opii sedativus, and left the Hospital quite well on Jan. 21, 1868.

Mr. Mason, in addressing the class, dwelt on the importance of not delaying to operate in such cases. The operation itself was a very simple one, and the patient incurred but little risk in having it performed, whereas delay was attended with the utmost danger. Mr. Mason had attempted to return the intestine without opening the sac, but was at last obliged to resort to this proceeding. He thought the supposed risk attending opening the sac was much overrated; nay, in many cases it had some advantages, inasmuch as the Surgeon is enabled to see the condition of the bowel, and free it from any source of constriction. Mr. Mason further remarked on the plan of removing the piece of omentum, and allowing the stump to form a kind of plug in the inguinal canal. He had adopted this plan in two other cases, in both of which a radical cure had been effected. The patients, when seen about a year after the operation, were not wearing trusses.

CLOSURE OF HARD PALATE—REMARKS.

(Under the care of Mr. FRANCIS MASON.)

This patient was a girl aged 20, upon whom Mr. Mason had operated four years ago. He then closed the soft palate, adopting Sir William Fergusson's method, and the parts united perfectly. About two years back he attempted to close the hard palate, but the soft tissues sloughed. The fissure was now about the size of a large pea.

On April 28, 1868, Mr. Mason performed the following operation:—A strong instrument, known as "Langenbeck's raspatory," was introduced through the soft tissue near the alveoli on each side. The soft parts were readily separated from the vault of the palate in a direction towards the aperture. The edges were then pared and brought together with two silk sutures. There was not the slightest tension on the parts. The case did perfectly well. Mr. Mason explained that at the previous operation he had adopted a rather different mode of proceeding. He had then used a rectangular knife, and had separated the soft structures from the hard palate in a direction from the fissure towards the alveoli, and had completed the operation by incising the flap on each side. He thought that the operation he had just performed was more easily accomplished, and a much more substantial flap was obtained than on the previous occasion.

NOTTINGHAM GENERAL HOSPITAL.

DOUBLE ANEURISM OF ABDOMINAL AORTA—OCCLUSION OF ONE SAC—RUPTURE OF SECOND—DEATH—AUTOPSY—REMARKS.

(Under the care of Dr. STORER.)

[Communicated by Mr. ARTHUR GEORGE MICKLEY, House-Surgeon.]

PERHAPS no class of cases which come under the care of the Physician are attended by greater difficulties in the way of diagnosis than pulsating abdominal tumours. Of course, the point of paramount importance to settle in any given case is whether the tumour is an aneurism or not, and I think most Medical men, even those of great experience, will hesitate for some time before giving a decided opinion on any case of this nature which they are called upon to treat. The case which I now send was no exception to the rule, and as there were one or two points in it which made it, if anything, rather more difficult than usual to diagnose, I thought it advisable to write a short account of it for publication.

William D., aged 26, a labourer, was admitted into the

General Hospital, Nottingham, on January 28, under the care of Dr. Storer. He describes his general health as having always been good and his habits temperate. Was obliged to give up his work on November 10, 1867, having for some time previously noticed a swelling in his abdomen, which pulsated, and gave him a good deal of uneasiness. He thought little of it at the time, but it gradually got worse, and caused him to seek admission into the Hospital. He attributes its origin to overlifting himself whilst at work.

On examination, he was found to have a tumour about as large as a "hen's egg," situated partly in right hypochondriac and partly in epigastric region. It was moderately firm, rose to the surface, and became pushed slightly upwards and to the right, with every beat of the heat; but, with all care and accurate observation in manipulation, no one who examined it was able to obtain any evidence of "lateral expansion" of the tumour. Only a very slight bruit was heard with the stethoscope, such as would be accounted for by the pressure of any growth on the aorta. Heart sounds perfectly normal; lungs healthy; urine natural in quantity and composition; appetite bad, with occasional sickness; countenance anxious and expressive of "wearing pain."

I may here state that the diagnosis made by two gentlemen, who saw him previous to admission, was "aneurism of aorta," whilst Dr. Storer and others, myself included, rather inclined to the opinion that it was some tumour exercising pressure on the chief blood-vessel, the nature of which, however, we were uncertain about. Judging from the character of the swelling and the symptoms alone, I was inclined to set it down as "induration of the pancreas."

He was ordered a mixture containing tinct. ferri mur., tinct. digitalis, and inf. quassiæ, and an occasional dose of ordinary house mixture. This, combined with absolute rest in bed and a liberal diet as soon as his appetite improved, caused a marked amelioration of his symptoms. His face soon lost its expression of pain; the tumour could be manipulated without causing him any inconvenience; he gained flesh fast, was soon able to get about again, and was made an out-patient on Feb. 22, 1868. For some time he went on well, but pain in back and side gradually returned, and ultimately became so bad as to prevent his attending at the Hospital every week; in consequence of which he was again admitted on April 25. His condition on the morning after admission was much the same as when he was in before. The tumour, however, had altered in character, inasmuch as it now consisted of two parts—one in seat of original swelling, quite firm, and of same size as when he left the Hospital, and having none of the signs of aneurism when examined either with the hand or by means of the stethoscope; the other below and to the left of this, of softer consistence, and larger. When the stethoscope was applied to this, a double bruit was heard, and the amount of pressure exerted on the abdominal walls at each systole of the heart was so great that the head of the listener was lifted with considerable force. In spite of this, however, I was never able to get any evidence of lateral expansion of the tumour, although the number of times he was examined was by no means small. Several times I made him rest on his hands and knees, so as to remove the pressure of abdominal walls and intestines from the tumour, and at these times the pulsation was reduced to a minimum, in fact could scarcely be made out at all. No bruit could be heard in the femoral artery below Poupart's ligament.

The treatment was precisely the same as on former occasion, under which his appetite improved and remained good for about ten days, during which time he was much better. He always noticed that the pain abated as long as the stomach contained food, but, as soon as digestion was accomplished, it returned as bad as ever. His bowels were never opened, except by the aid of castor oil and injections. Opium was given at night, and occasionally anodyne injections to relieve the suffering; also linseed poultices were applied to the left hypochondriac region, this being the seat of the most severe pain. From his inability to take food he soon became very weak and emaciated, and the pain was so severe and continuous that it was evident he was sinking under it. Once or twice he had an attack of epistaxis, for which, on one occasion, it was found necessary to plug his nares. On June 2 I was called up to him at 8.30 p.m., and found him quite collapsed, face perfectly colourless, pulse almost imperceptible, and gasping respiration; this had come on quite suddenly, and was ushered in by the passage of a large quantity of blood per rectum quite unmixed with any intestinal contents. I ordered him a small quantity of brandy and beef-tea if he should rally sufficiently to be able to swallow it, not the least thinking he would require it, but to my surprise he gradually came round again and lived till June 5, when he had another attack precisely similar to the one above described, and died at 2.30 a.m.

Post-mortem Examination.—Body very much emaciated; rigor mortis well marked. No tumour to be felt in abdomen. Resonance well marked over whole surface. Head not examined. Chest: Right lung adherent to chest wall at apex and over anterior surface. Adhesions very old, and so tough as to cause the lung tissue to give in removal. No evidence obtained of this during life. Structure of both lungs healthy. One or two bronchial glands in a calcareous state, seated on larger branches of bronchi, though not sufficiently large to cause any diminution in the calibre of the tube. Pericardium and heart healthy; not a single atheromatous patch in aorta; valves quite healthy. Abdomen: On opening the cavity of the abdomen, an immense clot was seen beneath the peritoneum, occupying the whole of left side from diaphragm to pelvis. No peritonitis. Intestines discoloured from contact with the blood. Stomach and intestines removed, and, when examined, found healthy throughout. A hardened mass was felt in epigastric region, which was thought to be pancreas, but which proved to be the sac of the aneurism filled with fibrin, arranged in a "laminated" manner. This spontaneous cure was so thoroughly accomplished that there was no space through which the smallest appreciable quantity of blood could pass. Below this another sac was found, much softer, the clot it contained being ordinary "blood clot," and of recent formation, and easily separable from wall of sac. The aneurism sprang from the aorta, just above that portion of the vessel which is crossed by left renal vein. That part below the aneurism was very much diminished in size, the diameter at its bifurcation being about the same as the common iliac artery. An atheromatous patch was found "here and there" in the neighbourhood of the aneurism. Spleen and liver healthy. Kidneys: Right of normal size, and healthy. The left was entirely surrounded by clot in abdomen, and when enucleated was found to be about one-third less in size than right. Structure healthy.

Remarks.—The circumstance most worthy of note in this case is, I certainly think, the absence of "lateral expansion." It was so very marked that, on reviewing the case, I attribute our being led to an incorrect diagnosis simply to this one feature, especially as the history of the commencement of the disease pointed very distinctly in the opposite and, as it turned out, the right direction. This "lateral expansion" of a pulsating tumour is laid down in all works on the subject as the one leading diagnostic sign between aneurism and other growths exerting pressure on an artery; but in this case it was so markedly "conspicuous by its absence" that the importance I have hitherto attached to it will be materially lessened for the future. The fact of the "double bruit" being heard over the tumour does not stand for much, as Dr. Addison says, in one of the very excellent papers lately published by the Sydenham Society, that "auscultation cannot distinguish the murmur of an aneurismal or otherwise diseased artery from the murmur occasioned by some source of pressure upon the same vessel." ("Difficulties and Fallacies attending Physical Diagnosis in Diseases of the Chest," proposition 41.) The fact of one sac of the aneurism being found quite occluded is, I think, not without its lesson, inasmuch as it shows that Nature is quite able to undertake the treatment of these cases, if only aided by rightly directed and judicious measures on the part of the Physician. These latter appear to me to be best accomplished by keeping the patient continually in the horizontal posture, improving his appetite, quieting the action of the heart, and allowing him a very liberal diet (especially meat), excluding all stimulants. By this means the blood is well supplied with azotised materials, and thus the better able to deposit successive layers of fibrin on the walls of the sac in its passage through it, this being the only way in which this class of cases can be brought to a satisfactory termination. I am well aware that some very eminent Medical men recommend the use of bleeding and other depletory measures in cases of aneurism; but as far as my own experience goes I should certainly not feel justified in resorting to them.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 5, 1868.

PROMOTIONS FOR DISTINGUISHED SERVICE IN THE ARMY MEDICAL DEPARTMENT.

In recording in our number of the 22nd ult. the recent promotions in the Army Medical Department for services in Abyssinia, we mentioned our suspicion that the problem of how to reward services so as to satisfy the recipients without causing discontent among their less fortunate brethren had not made much progress towards solution in the instance under notice. It appears, on the other hand, that its difficulties increase and become more complicated with the progress of time, and will continue to do so as long as the present system is allowed to go on. That junior Medical officers, by the mere chance of having accompanied their regiments during an expedition in which it has so happened that their qualities *as* Medical officers were in no way put to a severe test, should be promoted into a position which confers upon them immediate superiority in the executive, and ~~probably ultimate superiority~~ in the administrative, ranks over their seniors in the service, many of whom have in former campaigns performed duties with distinguished efficiency, and passed through hardships much more trying than any encountered in the Abyssinian expedition, can hardly fail to be a grievance and source of bitterness.

Even in the cases of the three fortunate officers promoted to the rank of Surgeons-Major, the inequality of the amount of reward is such a striking anomaly that it must be obvious to the officers themselves. One of them, in the natural course of events, would have been a Surgeon-Major on December 1 next. He has been promoted over the heads of six seniors, and will gain the advantage of increased pay for three months and a half. The next would have been a Surgeon-Major on August 5, 1873, has been promoted over ninety-two seniors, and will draw the higher rate of pay for five years. The third would have reached Surgeon-Major's rank on December 14, 1874, has been promoted over 223 seniors, and will draw the higher rate of pay for nearly six years and a half.

Now, it is evident that No. 1 has been inadequately rewarded, if Nos. 2 and 3 have only received their deserts; or else that the services of the latter have so transcendently excelled those of No. 1 that their reward should be proportionally greater. If such be the case, it is only fair to the gentlemen themselves, to their brother officers, and last, not least, to the tax-paying public, that the fullest information as to the nature and extent of their several merits should be accorded. This has not been done, although in the case of the junior officer of those promoted his name appeared in her Majesty's General Order above those of the other two, so that, if the same relative position had been maintained in the Horse Guards' Gazette, he should have been senior to them in his new rank!

The fact is that, so far as we can judge, the system of promotion by selection for field service in the Army Medical Departments has at last been put so decidedly to the test of a "*reductio ad absurdum*," and has come out of it so unsatisfactorily, that it must before long undergo thorough revision and alteration.

The cases of the three officers whose promotions we have been considering contain within themselves what appear to us to be very suggestive elements of which to construct a new system of reward for service in the Army Medical Department. In the first place, the inequality of that granted in the present instance suggests that length of previous service should be taken into consideration, and the degree of advancement be proportioned accordingly, and that the reward ought rather to take the form of time counted for ultimate retirement with good service pension than present increase of rank—say that, for every three years of service, one year additional should be allowed to count towards retirement; and, meanwhile, as a distinction, let the officer have titular rank, retaining his original position in the list of Medical officers. In the second place, it appears to us that departmental promotion, entailing as it does the possibility of subsequent priority in promotion to the senior or administrative ranks, ought only to be given for Professional services, as in a severe epidemic, or in field or general Hospitals, etc., and, in the case of very junior officers, ought to be regulated in somewhat the same way, and ought not to depend upon the chance of being under the eye of a general or other commanding officer at some fortunate moment, when possibly, as in the Abyssinian campaign, there may have been no opportunity for the display of marked Professional attainments. In the third place, it will be seen that, in such a system of promotion, the selection could only be made by the head of the Department, and ought to extend through all the Medical officers who may have contributed by their abilities and zeal to the well-being of the force engaged, whether in the front or in the rear, whether in the actual treatment of the sick and wounded in the field and general Hospitals, or by hygienic skill in camps and quarters.

We need hardly say that such changes cannot take place until other very extensive modifications are made in the Army Medical Department—in fact, until it becomes unified, or self-governing, the head of the Department being responsible to the Minister at War and to Parliament only, being endowed with more definite powers and a more independent position.

If such a system had been in force, we venture to say that able and deserving Medical officers, who took their share in the late Abyssinian expedition, and who must now feel themselves placed in the cold shade of unacknowledged and unrequited services, would have received such a proportion of reward as would have been gratifying to themselves and have formed an inducement to others on future occasions to emulate their good services. Let us hope on their behalf that there may be some truth hidden in the Irishman's paradox of "bad luck being better than no luck at all," and that at some future time, before the grasshopper becomes a burden to them, they may feel that the neglect which at present has thrown its shade over them has ultimately led to a new system, in which luck will not be the guiding principle, but in which every man will have his share according to his abilities and exertions.

In conclusion, we should like to know why no promotions have been made among the Medical officers of the Indian service engaged in Abyssinia. Two have obtained the C.B., one being in the military and the other in the civil grade of the order, but that is the sum total of rewards accorded to them.

THE OXFORD ADDRESSES.

(*Continued from page* 244.)

We now proceed to notice the address of Professor Rolleston, which treats, first, of "the bearing of certain portions of the very extensive range of subjects comprised under

the titles of Anatomy and Physiology upon certain points and problems which come before the attention of the Medical Practitioner in the course of his actual duties;" and secondly, of "the illustration which some of the conclusions recently come to in biological science cast upon the validity of certain principles which are ordinarily looked upon as authoritative canons for the regulation of the reason in Medical investigations." Taking Niemeyer's *Lehrbuch der speciellen Pathologie und pathologischen Anatomie* (of which a seventh edition has just appeared) as his text, he selects from it various illustrations of the connexion and interdependence of Medicine and Physiology. The intimacy of the alliance between the experimentalist and the Practitioner, as shown in these illustrations, is in no degree diminished by the fact that Niemeyer's explanation of them may possibly not be the correct one. In describing a peculiar and very intense form of neuralgia, he remarks that Dubois-Reymond and others refer its origin to a distorted and dilated state of the carotid artery within the cranium, due to the action of the cervical sympathetic. Again, by a reference to certain facts in the arrangement of blood-vessels which he supposes to become distended, Henle (quoted by Niemeyer) accounts for certain neuralgias. He explains the neuralgia which is apt to haunt the sixth, seventh, and eighth intercostal spaces of the left side as dependent on the arrangement of the left azygos vein in that region; and he refers the greater relative frequency of neuralgia of the first than of the second or third divisions of the fifth nerve to the greater quantity of dilatable veins with which it is beset in its passage from the inner to the outer surface of the sphenoid. That these facts must admit of a true explanation is obvious; but whether the above explanation, or that suggested by Dr. Rolleston, be the correct one, we do not venture to decide.

On the whole, we incline to the view of the Oxford Professor, which may be thus expressed. He believes that, by laying the physiology of the cervical sympathetic alongside of the natural history of an attack of neuralgia, we can see that there are stages in the one corresponding to stages in the other, but that it is a stage of spasm(a) (not of relaxation and congestion) in the one which corresponds to the stage of pain in the other. Stimulation of the upper cervical sympathetic produces contraction of the vessels of the head, dilatation of the pupil, and diminution of the temperature, and finally occasions "decrease of the vital properties." After a while the reverse takes place, and the vessels dilate, and whether this change results from exhaustion of the sympathetic or not is a point of no consequence. Similar alternations of change in the calibre of vessels is known to take place spontaneously in the arteries of the rabbit's ear, in the veins of the bat's wing, and in the arteries of the frog's foot, and, as Professor Rolleston observes, "the occurrence of these latter alternations makes the occurrence of the former more intelligible. Now, a similar alternation from a stage of contraction of blood-vessels, of coldness of skin, of shivering, of total absence of heat, redness, swelling, or tenderness, to one of increased circulation, swelling, heat, and tenderness, constitutes two stages in an attack of neuralgia, homologous with the two described as occurring in irritation of the sympathetic." It is rare, he adds, for pain as opposed to tenderness to persist in the tissues after congestion, and he concludes "that the congestive stage of the physiological experiment is not the homologue of the painful one of the morbid history."

Dr. Rolleston next proceeds to give an account of a physiological experiment worked out for us occasionally in nature, which throws new light on the question of the influence of perverted innervation in causing inflammatory or other changes. Stags, after injury to the testis, have corresponding changes wrought out in the corresponding horns—the horn on the injured side never thenceforth losing its "velvet," but remaining vascular and spongy within, and covered with a hairy skin externally, and thus altogether losing its properties as a weapon of offence. The unilateral correspondence of malnutrition, such as we have here, is, as Dr. Rolleston observes, "as good an instance and exemplification of Pflüger's first law of reflex action, the law of unilateral transmission of stimulus, as any unilateral or homolateral twitching of any muscle can be in response to any one-sided stimulus. Only the reflex action shows itself in the way of nutrition—a sort of reversed hemiplegic nutrition, it is true—and not in that of movement nor in that of secretion." As a parallel to this physiological experiment, he gives two pathological cases taken from Budge's *Lehrbuch der Physiologie des Menschen*, pp. 794-8. We select the following as the shorter of the two cases:—"After a great abscess under the right gluteus muscle, and an immense loss of pus, the right hand and the entire right arm became smaller than the left."(b) Such cases as these are decisive as to the action of the nervous system in nutrition, but they do not throw any light upon the way in which this nervous influence comes to act on the tissues, whether mediately through the blood-vessels or immediately on the tissues themselves. In spite of various arguments to the contrary, Dr. Rolleston believes in the direct action of nerves on cells, and even if our highest microscopic powers fail to sustain the view that the nerve-tissues are continuous with other tissues, such intervals as may be demonstrated will be infinitesimal, "and nerve-force may well be sufficient to act across such gaps as these;" and he mainly bases this belief on Professor Lister's celebrated experiment, described in his paper on the "Cutaneous Pigmentary System in the Frog" (*Phil. Trans.*, 1858), in which the nervous system is shown to exercise a certain amount of control over the molecular movements of concentration and diffusion of pigment, quite independently of the vascular system. After passing a well-deserved eulogium on Professor Lister's researches, he refers to the discussions that have taken place as to the existence of an "ideo-muscular" as opposed to a "neuro-muscular" contractility, and he adduces certain arguments (for which we must refer our readers to the address) in favour of the "neuro-muscular" explanation of those movements which take place in muscles separated from all connexion with central nerve organs.

After a passing allusion to the relations of histology to Medicine and Surgery, Dr. Rolleston touches on the importance of a knowledge of microscopic zoology to the diagnosis, therapeutics, and prophylaxis of diseases, and on one point of considerable importance he gives some interesting details. He was led to suspect that the triple-phosphatic condition of the urine was due to the presence of some of those microscopic organisms which Pasteur has proved to be the real causative agents of fermentations and putrefactions. The presence of vibrios in the urine within the bladder, and the idea that the alkalescence of the urine depended on them, which was suspected by Dr. Rolleston, has been confirmed during the last year by Niemeyer, who discovered that it was not vesical mucus, as formerly supposed, but lower organisms which probably get into the bladder by means of the introduction of badly cleaned catheters, that excite the alkaline fermentation of the urine. We believe that Dr. Rolleston's prophylactic suggestion that carbolic acid should be added to the oil with which catheters are lubricated has been indirectly anticipated by an eminent London Surgeon, who has frequently injected a dilute solution of carbolic acid into the bladder, with the effect of destroying vibrios, and otherwise improving the character of the urine.

(a) The Professor entered more fully into this subject in a paper which he read, "On the Physiology of Pain."

(b) Dr. Rolleston omits to add that Budge states that the whole of the right side became considerably more sensitive than the left. We may take this opportunity of stating that the portion of Budge's *Physiology* which treats of the nervous system gives an admirable sketch of the state of our knowledge at the period (1862) when the last edition (the eighth) appeared.

In his brief remarks on the histology of modern days, the Professor especially refers to Dr. Beale's revelations regarding the all but infinite divisibility of "germinal matter," and hints at its possible bearing on the phenomena of reproduction and hereditary transmission. He also shows, by a very forcible example, how the improvement of the microscope and its more general use have been accompanied by a more thorough and accurate working out of human dissections, instead, as many have urged, of leading to the neglect of so-called naked-eyed anatomy. In Monro's *Anatomy of the Human Bones and Nerves*, published in 1810, and for many years a text-book in the University of Edinburgh, there is, as he shows, positively no reference to the connexion of the second and third cervical sympathetic ganglia (which give off the heart-nerves) with the arm-nerves, which explains, according to many physiologists, the pain down the inside of the arm in heart-disease; to the subclavian nerve and its connexion with the phrenic (supposed to connect liver-disease and pain in the shoulder); or to the anterior thoracic nerves supplying the pectoral muscles.

No portion of this address is of more interest than that which treats of "the connexion which comparative anatomy has with Medicine and Surgery, and the bearing which a cultivation of this department of biology has upon the interests of the Profession." Any study which, like that of comparative anatomy, forces its disciples into "the knowledge of when a thing is proved and when it is not, is, *ipso facto*, an ally of real Medicine and a deadly enemy of quackery." From Dr. Rolleston's remark that a sort of proof of the value of comparative anatomy is furnished us by the fact that in Germany a dissertation on some subject in this department of science is often accepted as the thesis of a candidate for the degree of Doctor of Medicine, we may infer that he is ignorant that a similar liberty is allowed to candidates for degrees at the University of Edinburgh. We have a distinct recollection of an admirable prose thesis, by Dr. McIntosh (now Superintendent of the Perth County Lunatic Asylum), the subject of which was "Observations and Experiments on the *Carcinus Mœnas*," 1861; (c) and this is by no means the only instance in which one of the three gold medals annually awarded to the authors of the three best theses has been given to an essay on some department of comparative anatomy or scientific zoology. We may incidentally remark that the influence and example of John Goodsir (whose loss to the University of Edinburgh, and, indeed, to the science of biology in the fullest sense of the word, is irreparable) did much for many years in popularising amongst his large anatomical classes a love of comparative anatomy and physiology. But to pass from this brief digression, Dr. Rolleston goes on to show, by various illustrations, the use of comparative anatomy in answering what are riddles in human anatomy and physiology. We cannot follow the author of the address through his happily selected illustrations, in the course of which—when treating of the power of animals to repair injuries—he takes occasion to attack, and we think successfully, the view held by Paget and Darwin that this happy power stands in an inverse ratio to the amount of metamorphic changes through which an animal has gone, his own explanation being that this power depends mainly "upon the peacefulness and quiet with which the various processes of life are carried on ordinarily and after the mutilation." To those of our readers who take an interest in natural history pursuits, we would recommend the further investigation of this still open subject. As an example of the bearing of comparative anatomy on Medicine, we may mention that during the last few years Dr. Kehrer, of Giessen (in his *Comparative Physiology of Human and Mammalian Parturition*), and others have published various facts concerning the structural and functional arrangements of animals that illustrate various points of uterine pathology and therapeutics in our own species. Dr. Rolleston gives two extracts of considerable length from Kehrer's work, the latter of which distinctly teaches that in the ruminants, if the placenta is adherent, the hand should never be introduced into the uterus after delivery, and the separation should be left to natural forces. The whole of this portion of the address on the "applications of comparative anatomy" is worthy of careful study, but much of it is so condensed that further condensation is impossible.

In the concluding portion of his address he considers the value of two great rules for the conduct of the understanding, each of which has a legitimate sphere of application. The first of these rules is given by Newton at the beginning of the third book of the *Principia*, but was recognised in the days of the schoolmen. It is known as *the law of parsimony or of economy*, and in reality amounts to this—*a phenomenon cannot have more than one cause*. Almost an equal array of great names hold opposite views regarding this so-called law, Bacon and Mill being amongst its opponents. The following question serves to illustrate the applicability of this law. Can a fever which we know to spread from infection also originate spontaneously? We regret that we cannot follow Dr. Rolleston in his admirable remarks on the three distinct lines of operation in which Nature binds herself to the observance of a law of parsimony, and would strongly advise our readers to study this part of the address. The second great canon on which he insists is known as the seventh rule of Descartes, and directs us, in considering a complex phenomenon, to be most careful that we omit none of the circumstances which can have a bearing on the case.

As examples of the utility of carrying out this recommendation, we may refer to Dr. Anstie's application of a chemical process to the urine to decide whether wine should be given or withheld, and to Pettenkofer's investigations into the nature of the subsoil of areas in which cholera was raging.

After a few words on the change of meaning which the word *science* has undergone during the last twenty years at Oxford, before which time it denoted only logic, metaphysics, and ethics, the Professor concludes his able address with a truly eloquent peroration on the aspirations and consciousness of responsibility of man.

(c) From a footnote on accounts of experiments as to regeneration of lost parts, it is obvious that Dr. Rolleston is acquainted with Dr. McIntosh's researches, although apparently not aware that they appeared in the form of a thesis.

MEDICAL EDUCATION IN GERMANY.—IV.

Before proceeding to give an account of the examinations which terminate the career of the Medical student, it will be convenient to make a few remarks on the status of the Medical officers in Continental Hospitals. It is a well-known fact that no private Hospitals exist in Germany under the same conditions as they do in this country. Hospitals "supported by voluntary contributions" are unknown, all such institutions being established by the Government or by the parochial authorities.

As a general rule, the Medical staff is invested with the chief control and authority in all matters concerning the internal arrangements. In the larger Hospitals, however—as, for instance, the Charité at Berlin—the entire management is vested in two directors, one Medical and the other administrative, who are responsible only to the Minister of State, by whom they are appointed. These two functionaries are co-equals, and their unanimity is required in carrying out any important arrangement, any question on which they do not agree being referred to the Minister. They likewise appoint all officials, with the exception of the Medical staff, who are appointed by the Minister on the recommendation of the directors. As a rule, these two officers do their best to secure for the Hospital work, as well as for the school, the services of those men who have already achieved a scientific reputation.

These remarks will sufficiently show that canvassing or other election manœuvres, which are often both degrading and injurious to the candidate, cannot take place under this system; and in fact it not unfrequently occurs that Medical men are elected to important offices without even applying for them, their repute alone having prompted their selection. At the smaller Hospitals and Medical schools, the chief management is vested in the directors of the Medical and Surgical cliniques, who are the principal members of the staff. All officials are under their direction; they select their own assistants and such a staff as they may consider necessary. The system of advancement by seniority does not exist here, as a distinguished man may be called from one Hospital to fill the highest posts in any other, and may take precedence of men much senior to him in years and length of service.

To return, however, to our original task. It may be necessary to remind our readers that the admission to the State examination presupposes the possession of the degree of M.D., acquired by examination at a university. Compared with the State examination (Staats Examen), of which we shall have shortly to treat, that for the M.D. is easy, being accomplished in three days, one of which is occupied with written questions given by the Dean of the Faculty, the second with *viva voce* examinations on Anatomy, Physiology, Materia Medica, general and special Pathology and Therapeutics, Surgery, Midwifery, and Forensic Medicine. On the third day the candidate publicly defends a dissertation and a series of theses. The possession of the M.D. does not entitle its holder to practise, having merely the same relation to the final or State examination as the certificate of maturity has to the admission to the university.

It may be here mentioned that the candidate need not necessarily have studied at the university at which he desires to take his degree, so long as he can show that he has pursued his studies at one of the recognised universities. We wish here, also, to correct an error which is very widely spread concerning the honorary degrees obtained at some of the smaller German universities. No university of any renown has ever degraded itself by selling degrees of any kind, which have only been conferred after examination, or upon distinguished men, *honoris causa*. But even the very few which have been influenced by mercenary motives have seldom if ever granted the degree of M.D. *in absentia;* what they granted was the Ph.D., so that gentlemen in possession of this title could prefix Doctor to their names, but not place M.D. after them—a difference of which the public, however, seldom take note.

The examination which entitles a M.D. to practise is indeed a severe test of a man's knowledge, the shortest time in which it can possibly be passed being about three months. It is conducted on the same plan throughout the country by examining boards annually chosen by the Government, which hold their sittings in each university town. The members of these boards are partly selected from amongst the teachers of the university and partly from Practitioners of renown in the neighbourhood.

The examination is divided into five different parts—"Stationen"—viz.,

1. The anatomico-physiological station.
2. The internal or Medical.
3. The external or Surgical.
4. The obstetrical.
5. The final.

The anatomico-physiological station commences with the candidate drawing from an urn before him a question upon some anatomical, physiological, and microscopical subject, and then treating at large upon the same, and showing all he knows about it. After this he is submitted to a *viva-voce* examination by the Professor. The question may be upon any of the following subjects, which may be treated either with especial reference to the physiology, anatomy, or histological structure:—The tissues of the human body, their physiological and microscopical properties; the physiology of the organs of circulation, respiration, and digestion; of absorption and secretion; the nervous system and the experimental physiology of nerves and muscles; of movements; of voice and speech; of the senses; and of embryology, etc. The candidate is alternately examined by different members of the board, these being generally the Professors teaching anatomy, physiology, and comparative anatomy. In the course of the examination it may be required of the candidate to make microscopical sections and to demonstrate them under the microscope. When the examiners are satisfied, the candidate is taken to the dissecting-room, where a separate compartment is reserved for this purpose. He has here to perform a dissection, the subject of which he again draws by lot, and remains locked up in the room until he has completed it. His final task is to demonstrate the dissection to the examiner and to answer any question which may arise in connexion with the subject. If the candidate fail to pass, he has to wait until the next session; if, however, he be successful, he is permitted to enter the internal station. Here the examination is likewise conducted by two examiners on two different days, by each of whom the candidate is examined practically upon patients in a ward set apart for the purpose, and he is subsequently required to write a detailed account of these cases from a scientific and practical point of view—a task which he has to perform in a separate apartment, without reference to books or notes. After this he meets one of the examiners every day in the ward, and is required to examine different patients, to make the diagnosis, and to continue the treatment of those cases which he has previously examined. If any chance to die, he has to make the post-mortem, and to demonstrate the pathological changes. He is at the same time examined in Materia Medica, including the therapeutical value of different spas and climates. This lasts for a fortnight, and at its close the candidate enters the external or Surgical station. Here the examination is conducted in a similar manner, but, in addition, ~~on one~~ day the candidate is examined on Surgical instruments, appliances, and dressing, and on another day upon fractures and dislocations, whilst the last day is devoted to the performance of operations on the dead body.

The obstetrical station is next entered. It is necessary that he should, during his studentship, have conducted at least three labours under the immediate superintendence of the professor or his assistant. The examination in this station commences by the candidate conducting a labour in the presence of the examiner, and attending to the case as long as may be necessary. He likewise meets the examiner in the wards, and is practically examined in diseases of women and children. One day is again especially devoted to the determination of the stage of pregnancy amongst a number of pregnant women; whilst upon another day most of the important obstetrical operations are performed upon a dummy. In the last or final examination, questions on Medicine and Surgery are again put, if considered necessary; but there are likewise questions on State Medicine, hygiene, and those branches of natural philosophy which have an immediate bearing upon Medicine.

Having succeeded in passing through this prolonged and searching ordeal, the candidate is admitted into the ranks of the Profession. The fee for the whole examination required by the State is about ten guineas.

THE WEEK.

TOPICS OF THE DAY.

London Doctors cannot look with equanimity at the prospect of a general cab strike. For a considerable section of our Profession the luxury of a chariot or even of a modest brougham is a pleasure of hope; and their older and more

fortunate brethren who recline on well-stuffed cushions behind high-steppers during the day must frequently during the night be under obligation to Jarvie. After a tolerably wide experience, we can speak well of the London cabmen. There are a large proportion of honest, hardworking men amongst them, and considering the expenses entailed by their business, it is a badly paid calling. A married cabman with a moderate family can barely live on his earnings, and, as a rule, can never save. In the present dispute with the railway companies the cab trade have a right to complain that the companies yearly take a large sum out of their pockets as the price of a privilege which ought to be common property. It is useless for the railway companies to assert that they only admit certain cabmen, for whose character they have a guarantee, within their stations, and that thereby the public are gainers. The fact is, that the police securities for a cabman's conduct are quite as valid against overcharging and extortion as the right to stand within a railway station, for which the cabman has paid a sum which he, of course, thinks himself justified in recovering with interest from his fares. The railway companies have no right to tax the cab trade or to erect a cab monopoly. On the other hand, to endeavour to coerce the companies through the public by a general cab strike is a lamentable folly which can only do the cabman's cause harm. We think he has a grievance, but redress will not be obtained in that way. Meanwhile, this miserable dispute may put the public to the greatest inconvenience, and amongst those who are most injured and annoyed will be Medical men.

The inquest on the Abergele accident will not, we fear, be productive of much good. The facts brought out show a concurrence of circumstances and accidents which set at defiance all doctrines of chance and probability. The great lesson taught, which the nation must sooner or later insist upon the railway corporations carrying into effect, is that separate rails must be laid down for goods trains and for trains carrying passengers. Nine-tenths of railway accidents and collisions result from the men and merchandise being carried in different trains, but on the same rails. Of course to lay down fresh rails on all the lines, and to alter existing roads and tunnels, would entail an enormous outlay; but, looking at the enormous improbabilities which at Abergele have become history, who can feel secure in travelling on any line which allows passenger and goods trains on the same rails?

An outbreak of very fatal cattle disease has taken place in the United States, and Professor John Gamgee, who, during our own epizootic, was treated "as a prophet in his own country," is employed by some of the American authorities to investigate it. The disease is known as the Spanish or Texan fever, and is believed to have been imported by Texan cattle. Mr. Gamgee says that the disease is similar to that known as the "darn" in Aberdeenshire, and that it has been described as occurring in various parts of Europe. He thinks that the flesh and milk of the diseased cattle may be used with impunity as human food. The disease appears to be characterised by arrest of the secretion of milk, dyspnœa, uneasiness in the head as shown by the animal pressing the head against any cold or hard substance, quickened circulation, and debility. The disease usually terminates fatally on the third day.

No change has taken place in the position of the candidates for the representation of the Universities of Edinburgh and St. Andrews. We believe that the Medical candidate, Dr. Richardson, has received promises of large support from the Medical part of the constituency; but, until the registration is completed, speculation as to the result of the election, or even as to the chances of the candidates, is premature. In the sister Universities of Glasgow and Aberdeen the contest has become purely a political one. Both candidates are lawyers, and neither has any special claim on members of our Profession.

A new Children's Hospital has been founded at Brighton. The Consulting Physician and Surgeon are Dr. Addison and Mr. Burrows; the acting Medical officers are Dr. Barker, Mr. Moore, and Dr. Taaffe. The rules of the new institution are chiefly based upon those of the Children's Hospital, Birmingham. Amongst them is one which provides that at present no cases of contagious disease are to be received into the institution. We should gladly see introduced in the out-patients' departments of Children's Hospitals some plan by which children suffering from contagious disease shall be kept apart from others. It would involve, of course, the extra work of Medical selection, but virtually a large portion of the good which these institutions do is counterbalanced by the spread of contagious disease through the machinery of the out-patient department. We think that some plan might be adopted in a new Hospital such as that just started at Brighton by which this acknowledged evil may be avoided.

Professor Huxley has dealt a blow at all ethnological systems in which the shape of the skull is erected into the principal standard by which the position and affinities of a race are to be judged. In a speech he delivered at the Prehistoric Congress at Norwich, he lays it down that the skull is by no means the best test of distinction. Take, for instance, he says, a peasant from Sweden and another from the Black Forest—both handsome stalwart men, and both manifestly members of the same race—and you will find their skulls as distinct as possible, one long and the other broad. The characteristics on which he relies are complexion, hair, and eyes.

"Guided by these, mankind may be divided into—1. The Australoid type, of which the complexion varies from dark to chocolate, the eyes are black, and the hair long and wavy. 2. The Negroid type, in which the complexion runs down to absolute blackness, the eyes are dark, and the hair crisp and woolly. 3. The Mongoloid, in which the skin is yellowish or olive, the eyes black, and the hair straight and lanky. 4. The Xanthochroid or Blonde, which has fair skin, showing through it the pink tinge of the blood, yellow hair, and blue eyes. In the two latter of these types the skull is variable, in the two former it is invariably long. The Mongoloid and the Xanthochroid races present no special difficulties in their geographical distribution. The former have spread from Northern Asia all over the two Americas; the Xanthrochroid have emerged from the Himalaya and the Caucasus to cover large continuous tracts of Asia and Europe. But the other two types present singular geographical anomalies. The Australoid type is found only in the mainland of Australia, far away in Central India in some tribes of the Deccan, and again in the ancient Egyptians, as depicted on their monuments. The Negroid type, whose home is Africa—but only Africa south of the Sahara—is only found again at a vast distance in Malacca, in the Andaman islands, and in a line running round Australia, and including Papua, the Fiji islands, and Tasmania. Whence this singular distribution? Does it not point to a vastly remote time, when these distant localities, between which there now rolls a vast ocean, were parts of one tropical continent? And if so, does it not throw back the appearance of man upon the globe to an era immeasurably more remote than has ever yet been assigned to it by the boldest speculators."

Dr. Samuel Fenwick, a Physician who has already distinguished himself by his researches on the pathology of the stomach, especially in connexion with scarlatina, has been appointed Assistant-Physician to the London Hospital; and Mr. James E. Adams, a Demonstrator of Anatomy and Lecturer on Comparative Anatomy in the School, has been appointed Assistant-Surgeon to the same Hospital.

THE LATE TRIAL FOR MALPRAXIS.—SPEAR *v.* DOIDGE.

We are glad to learn that Mr. Doidge has obtained a rule for a new trial of this cause, and that the leading article in the *Medical Times and Gazette* of August 1, together with Mr. Poland's letter in the number for August 15, contributed mainly to this result. Meanwhile we may beg our Professional brethren to remember that Mr. Doidge's expenses have already amounted to nearly £500, and that it will be a politic

act to subscribe towards indemnifying him from a form of persecution which may befall any one of us. The new trial, we believe, will be held in London.

CHOLERA AMONG BRITISH TROOPS IN INDIA.

We are happy to learn from a correspondent that during the period from June 19—the date of our former information—till July 17 cholera has not made any serious progress among the troops in Bengal. Only nineteen cases of, and thirteen deaths from, cholera or choleraic diarrhœa, have occurred among all classes. Seven of the cases and five of the deaths occurred in the depot at Chinsurah between June 19 and July 3. There have been no fresh cases since. There were two admissions and one death amongst the artillery at Barrackpore between July 3 and July 10. The disease was still lingering at Jubbulpore, both in cantonments and in camp, and had caused nine admissions and six deaths between June 19 and July 10. One death had occurred at Dinapore, in the 105th Regiment, between June 19 and 26; and one case in the 2nd Battalion of the 25th Regiment at Berhampore, between July 10 and 17. Since the first appearance of the disease on March 3, there have been altogether seventy-two admissions and forty-nine deaths. We trust that the steady decrease in the number of cases and deaths during each of the four weeks over which our correspondent's communication extends may be taken as indicative of the disease not being likely to assume more serious proportions before the close of the hot season and the subsequent rains.

"A FORTNIGHT IN A LONDON HOSPITAL"

Under the above title our contemporary, *The Public Health*, publishes a somewhat sensational article professing to give the writer's experience of the domestic economy of a London Hospital—a picture which, if not greatly overdrawn, is far from a pleasant subject for contemplation. The writer states how he came to apply to the nameless Hospital for relief, and describes his reception there as being anything but agreeable; he reflects on the behaviour of the officials on his reception, both in the Hospital and in the ward, in anything but complimentary terms. The warm bath he was forced to submit to he describes as repulsive from a dirty greasy covering over the paint of the bath itself; the bedclothes were insufficient, so that he trembled all night and could get no sleep. Nor are these the worst features of the case: the rapacious and insolent conduct of the nurse was almost unbearable; the writer says he did not know that it was necessary to fee the nurse, and that consequently he fell into her bad graces, that she was constantly worrying and quarrelling with him, and that she gave him more than his proper share of work to do. All this is sufficiently unpleasant if it be true; and were not the editor certain of his facts he would scarcely be willing to run the risk involved in placing such an article the first in the periodical. One thing will at once strike the reader—no date is given beyond a vague "some time ago;" but surely, were the facts narrated in this article true, they ought to be made known with greater circumstantiality and exactness. There is no Hospital in London which would shrink from probing such an affair to the bottom rather than retain so foul a stain on its honour, but in the face of so much vagueness it is impossible to do anything. There is further, we think, certain internal evidence which would show that all this occurred, if it did so at all, not "some time ago," but many years ago, which we think ought to be distinctly set forth. Many important changes have of late years taken place in the nursing of our London Hospitals, and matters are greatly altered for the better. Thoroughly educated nurses are no doubt more expensive than those ordinarily employed, but their introduction also does away with the possibility of such reports as those to which we have referred being bruited abroad.

CERTIFICATES OF DEATH.

On Tuesday Mr. Humphreys held inquests on the bodies of two babies which, it was said, had been suffocated in bed, and the jury, who found an open verdict, passed a censure on the conduct of a Surgeon who had given a certificate of death from suffocation without having seen the body after death. No doubt this censure may have an injurious effect on the gentleman it affects, and it is as well, therefore, to put Surgeons on their guard against placing themselves in like positions. The present system of death certification is most objectionable, and it is the scheme, and not the Surgeons, that is to blame for its faulty working. Why should a Medical man be compelled to visit and examine a body when no pecuniary return is offered for his services? It seems as if both the Government and the public had resolved to extort more from our Profession than any other, under the pretended guise of a belief in the charity of Medical men. Why should the Doctor, any more than the lawyer and parson, be forced to exercise charity, to the detriment of his own interests? The thing is preposterous, and the Medical body should rebel against it. A Medical attendant, through sheer compassion—as in the case before us—signs a document, on the evidence of the bearer, and for the purpose of giving some unhappy person the right to bury a deceased relation. He acts unwisely, but in kindness, and with what result?—to receive the censure of a number of petty grocers and bakers, whose sanded sugar and light loaves are the daily expression of their philanthropy. Let our brethren take care in future, and refuse to sign death certificates in cases where they have not examined the body of the deceased; though, as post-mortems are rarely permitted, we should like to know how mere visual examination of the body can lead to a correct conclusion as to the cause of death.

FROM ABROAD.—MONOPOLY IN MEDICAL ADVERTISING—M. ROGER ON LAENNEC.

By an editorial note in the *New York Journal* we learn with great surprise that a journal which occupies so deservedly a high position and enjoys so large a circulation as the *American Journal of Medical Science* steadily refuses the insertion of any advertisement relating to books written by authors however eminent, if these are published by any other house, however respectable, than that of its own proprietors, Messrs. Lea, of Philadelphia. The writer well observes—

"All members of the Profession are entitled to expect that each Medical journal shall consent to advertise Medical works written by proper men and published by houses of respectability other than that responsible for the journal in question. The refusal of such advertisements, and their exclusion from a Medical journal aiming to represent American Medical literature, must show a spirit at variance with that exalted purpose which should give the tone to all Medical journals, and even impair confidence in the fairness of reviews of publications of rival houses."

Well, we certainly in this matter exhibit a more liberal spirit than our American cousins. Nowhere can the competition of Medical and literary journals be more keen than it is in London, but certain it is that no publisher who might be proprietor of any of them would ever dream of depriving a rival of his legitimate publicity. With regard to the American journal in question the case is especially hard, as it is almost the only one that circulates everywhere, all over the Union and in Europe. For ourselves we have often felt the want of complete lists of new American books similar to those with which we are so abundantly furnished of our own productions.

We may extract a few passages from the address delivered at the unveiling of the statue of Laennec at Quimper by M. Roger, representing the Academy of Medicine:—

"That auscultation was known to the ancients, and that traces of it may be met with in Hippocrates and other old authors, was not concealed by Laennec—the French Hippocrates, in fact, referring his discovery in part to the Father of

Medicine. But these mere traces of the application of the ear to the study of the respiratory murmurs, exhumed from forgotten books, and doubtless unknown to Laennec himself at first, what were they but vague and uncertain indications which would have continued valueless, germs for ever sterile, had they not been fertilised by genius? The thread of tradition had been broken, and it was Laennec who reunited it twenty-two ages later. Moreover, we must not credit Laennec himself, when, with an abnegation rare in inventors, he attributes his discovery in part to chance. When we call to mind that he was profoundly versed in pathological anatomy, that he constantly sought after death, in the physical lesions, the explanation of the morbid phenomena observed during life, always endeavouring to transform those phenomena into signs alike physical, and to employ them in combating disease; when we know that he occupied three years in the composition of the book in which auscultation is expounded, demonstrated, and taught with such excellence, that his admirable work, effacing all predecessors, has not yet been surpassed; when we remark that the invention issued so great and complete from the brain of Laennec that scarcely have some additional traits had to be added—surely we must conclude that auscultation was but the deduction and corollary of the labours of a whole life, and cannot concede to this too modest discoverer that 'the secrets of nature are more often betrayed by accidental circumstances than torn from her by our scientific efforts.' Such accidents never occur but to men of genius, who alone are able to realise the highest conceptions; and Laennec, discovering auscultation, had far more right to exclaim εὕρηκα than had Azelli, repeating the enthusiastic exclamation of Archimedes, when he first saw in the abdomen of the dog the lymphatic vessels he was not in search of.

"Without diagnosis Medicine can only be conjectural; and without diagnosis disease must continue an enigma, and the art of healing cannot be said to exist. What a service, then, does auscultation render in diseases of the chest, so common as these are—carrying off more than a third of the human race! Truly, at the present time, when we are enabled to inspect internal lesions as easily as those which are Surgical and external—when, thanks to the indications furnished by the ear, this second eye of the Physician, the power of judgment is as certain as it is easy for the practised observer, we can scarcely comprehend the difficulties which surrounded our predecessors in the recognition of these diseases. Laennec, with his imperishable *Traité de l'Auscultation Médiate* and his stethoscope in his hand, might well reply with an exclamation of triumph to the cry of despair uttered by Baglivi a century since."

INDIAN MEDICAL SERVICE.

The Military Secretary, India Office, presents his compliments to the editor of the *Medical Times and Gazette*, and begs to enclose a list of the candidates for her Majesty's Indian Medical service who were successful at the competitive examination at Chelsea in February, 1868, and who have undergone a course of instruction at the Army Medical School, together with the total number of marks obtained at the examinations at Chelsea and at Netley.

	Name.	Studied at	Max. 6000. Total No. of marks.
1.	D. D. Cunningham	Edinburgh	5945(a)
2.	H. Whitwell	Edinburgh	5550
3.	A. Cameron	Glasgow	4790
4.	B. Evers	Edinburgh	4245
5.	J. C. G. Carmichael	Aberdeen	4240
6.	W. Harvey	London	3975
7.	A. G. Grant	Aberdeen	3925
8.	G. W. R. Ilay	Edinburgh	3925
9.	W. Jackson	Edinburgh	3915
10.	G. G. MacLaren	Edinburgh	3890
11.	J. J. Monteath	Edinburgh and Ireland	3698
12.	A. Roche	Ireland	3676
13.	R. H. Stevens	Edinburgh and London	3667
14.	P. R. Martin	Ireland	3430
15.	P. J. MacDermott	Ireland	3425
16.	A. E. Dalgairns	Edinburgh	3367
17.	P. N. Mookerjee	Edinburgh	3355
18.	A. M'Arthur	Aberdeen	3230
19.	J. F. Fitzpatrick	Ireland	3174
20.	H. M. D. Archdall	Edinburgh and Ireland	3125

(a) Obtained the Herbert Prize.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(*From our Special Correspondent.*)

(*Concluded from page* 250.)

Professor Hughes Bennett, F.R.S.E., *On the Action of Mercury as a Cholagogue.*

Dr. Bennett's communication was a report drawn up at the request of the Association. It recited a laborious and determinate series of experimental researches performed by the author, Dr. Gamgee, and Dr. Rutherford. A set of tables in a printed form accompanied the report, which was received with unqualified praise. The chief point set forth, as a fact proved, was that in dogs the action of mercury does not increase the quantity of bile secreted, but rather the contrary. The inference drawn was that the same rule extends to the human subject, and that the notion of mercury as a cholagogue—a notion prevalent in Medicine for many centuries—is an entire delusion. The experiments supported also the modern view that the diversion of the bile through a fistulous opening out of the body does not materially interfere with the intestinal functions, but leads to exhaustion of the body altogether. A brisk discussion, in which Dr. Crisp, Dr. Richardson, Dr. Inman, Dr. Gamgee, and others, took part, followed the reading of the report. Dr. Richardson, accepting all the facts of the report, and the report itself, as a model of scientific work, urged still that mercury did exert a beneficial effect, and that experience confirmed its value. Was it possible, he asked, that mercury acted on the pancreatic gland as it did on the salivary glands, and that it caused an increase of pancreatic secretion? Dr. Gamgee, in an excellent speech, defended the report from some attacks that had been made upon it. He affirmed his belief that the dog was the best subject for the experiments, and that the inferences drawn from such experiments were as correct as they could be by the method of experimental investigation which had been followed. Dr. Bennett, in reply, said it was quite possible the pancreatic function was modified under the action of mercury, for, as one of the tables indicated, the pancreas in five cases was reported as very vascular. To answer the question, however, that had been put by Dr. Richardson, an entire series of new experiments would be required.

Dr. Anstie, F.R.C.P., *On Certain Effects of Alcohol on the Pulse.*

Dr. Anstie described the variations of the pulse curve, as traced by Marey's sphygmograph, modified on Sanderson's principle of *exactly graduated pressure*, which alcohol produces in health and especially in febrile disease, and suggested certain physiological explanations. The main characteristic of the febrile pulse-curve, as Wolff first clearly stated, was its pronounced *dicrotous* character. The normal pulse-curve is faintly *tricrotous—i.e.*, the line of descent from the apex of one pulsation to the commencement of a new one is marked by two slight secondary elevations. In the febrile pulse the first of these minor elevations disappears, and the gap thus left between the main apex and the third wave gives the pulse the character known as *bis feriens*, sometimes sensible to the finger, always betrayed by the sphygmograph. This condition of things depends upon the lowered arterial tension present in true pyrexia with elevation of temperature. The remarkable fact which the author had observed was this—that alcohol, when acting favourably in pyrexial disease (*i.e.*, when diminishing fever, calming delirium, etc.), invariably raises the arterial tension, *diminishing* the dicrotism (while it increases the *absolute* power of the heart, as shown by the effects of altering the spring pressure); while, if alcohol so acts as to *increase* the feverishness and malaise, it affects the pulse in just the opposite manner, increasing the depth of the notch which divides the main curve into two waves, without increasing the absolute heart power. The point of physiological inquiry suggested by these curious facts was whether the action was exerted on the sympathetic system, on the spinal cardiac nerves, or on the vagus, or whether the therapeutic action might not possibly be produced through one system of nerves, the toxic in another. Dr. Anstie gave various reasons for thinking that the principal effects throughout (and decidedly the *earliest* ones) were produced on the sympathetic, though doubtless the heart was also involved.

Dr. Bôhier, Profes-or of Clinical Medicine in the Faculty

of Paris, said that he inclined, on the whole, to give a different version of these interesting pulse changes, which he had been able to verify with the sphygmograph as modified by himself, so as to meet, with additional exactness, the object of exact graduation of spring pressure. He leaned to the opinion that the effects of alcohol on the circulation were, upon the whole, chiefly exerted through the vagus, acting on the heart. The question was, however, very complex, and prolonged physiological experiment, as well as clinical observation, would be necessary. Dr. Béhier spoke most strongly of the great advantages of alcohol in acute pyrexia. Mr. Flower, Dr. M. Foster, and Dr. Bateman also took part in the discussion. The author, in his reply, perfectly admitted that the physiological explanation of the circulation changes required further explanation, although he himself adhered, at present, to the views above expressed. Fortunately, there was less uncertainty about the therapeutic and prognostic indications of these sphygmographic curves—they were much more certain. From the examination of several hundred cases of pyrexial disease he had great confidence in the constancy and practical value of these signs.

Professor Rolleston, F.R.S.,

On the Pectorales Muscles.

The purpose of this paper was to prove that the subclavius of human anatomy was the representative of the pectoralis secundus or levator humeri of birds. He (the writer) employed three lines of argument:—1st, that from innervation; 2nd, that from development; 3rd, that from relations and gradation.

Mr. Bridgeman,

On Electrolysis in the Mouth.

The purport of this paper was to afford a corroboration of the electrolytic theory of dental caries. The prize essay, which some six years ago gained the Tomes gold medal of the Odontological Society, was founded on the destruction of the tooth substance by electricity. In awarding the medal, the President observed that "some of the points, being of novel application, they were hardly up to;" and this feeling being apparently universal in the Profession led to its remaining unnoticed. It was doubted whether results similar to those shown in the experiments, which were performed upon what were deemed to be dead substances, would be obtained *in situ;* consequently, in order to set aside this objection, it became essential to produce some natural phenomenon of a corresponding character, occurring in the mouth, which should be a confirmation of it. This proof was found in the occurrence now brought under notice. A ligature of silk twist, on being removed from some front teeth, was found to have produced a deep groove in the enamel along its entire course; at the same time the fibres of the silk had become matted together with an incrustation of crystals of lime, indicating a clear case of electrolytic transfer, in which the lime-salts of the enamel had been dissolved out and recrystallised upon the silk. In this electrolytic theory of decay, particles of charcoal arising from eremacausis, which, like the silk, are electro-negative, were stated to play the same part with the enamel and dentine of the tooth as the silk had done in this instance. But pressure, rendering the tooth-substance non-homogeneous, was equally capable of producing a negative centre from which local galvanic action would arise. The characters peculiar to decayed dentine are its entire decalcification and the almost total absence of any lime solution, but having in its stead an abundance of free acid—two features which all other theories are incapable of accounting for. If a piece of dentine be placed for a few days in water under the electrodes of a small battery, the spot beneath and around the positive pole will be found to have become softened, decalcified, and strongly acid, just as occurs in natural decay. In addition to this, the lime will be transferred to the negative, in the same manner as with the silk. It also affords the only intelligible explanation of the formation of tartar yet offered. Tartar is an electro-deposit from the saliva, and is repelled by the electro-positive state of the crown, but adheres to the electro-negative root at the neck. This polar condition of the tooth, illustrated in the different modes of growth in the crown and the root, is pointed out as a very important character, and one to be well considered; for, wherever treatment of any kind may be required, this, to be successful, must be in harmony with such an arrangement.

Dr. Richardson, F.R.S.,

On Transmission of Light through Animal Structures.

Dr. Richardson exhibited a lamp which he had constructed for transmitting light through the structures of the animal body. He believed the first idea that such transmission could be effected was given in Priestley's work on electricity. That great experimentalist, the Shakespeare of physical science, had observed, on passing a discharge of a Leyden battery through his finger, that the structure seemed to be luminous, but the operation was extremely painful. Dr. Richardson had repeated this experiment with similar results. Of late years research had been made with the microscope in the transparent web of the foot of the frog, and last year Dr. McIntosh had shown that young trout could be used experimentally, they being sufficiently transparent for the investigation of the action of various poisonous substances. The suggestion of Dr. McIntosh had been acted upon by the author, and the motion of the heart and of the respiration had been observed by direct ocular demonstration while those organs were under the influences of various bodies belonging to the ethyl and methyl series. This research had led Dr. Richardson to extend the principle further, and he had now advanced so far that he was enabled to transmit light through various tissues of the bodies of large animals. He had thought it was best to begin by testing each tissue separately, and this investigation had been carried out on nearly all the structures of the body which admit of being individually examined. The structures the most diaphanous were skin and thin membrane, after that, and singularly enough, bone; then thick membranes; next, thin superficial muscles, lung tissue, fat, and the dense tissues of the liver and the kidney. For all practical purposes the magnesium light was the best; it was the most convenient to use, and the light had the advantage of penetrating deeply. In the lantern which Dr. Richardson exhibited, the light was also unattended with heat at the point of observation, so that the hand could be put in at the brightest illuminating point. The lamp was made by Solomon, of Red Lion-square. The additions consisted in a tubular arrangement and a sliding groove. The structure to be examined was placed in the groove enclosed between two discs of perforated wood, and the object was surveyed from the further end of the tube. A thick piece of bone, the flat rib of an ox, was placed in the lantern, and light was distinctly transmitted through it, by way of illustration. It was, said the author, important to speak with care as to the extent to which this lantern could be used practically. He did not consider it perfect, but thought it promised results of the greatest interest and value. In the first place, it might be used for a variety of physiological purposes. Small animals whose tissues were very thin, could be placed in the lantern, and the condition of their circulation and respiration could be carefully studied under the action of various agents. In the human subject, especially in the young, with fragile tissues, the thinner parts of the body could be distinctly rendered diaphanous; and, in a child, the bones, with a somewhat subdued light, could be seen in the hand, arm, and wrist. A fracture in a bone could in fact have been easily made out, or growth from bone in these parts. In a very thin, young subject, the movements and outline of the heart could also be faintly seen in the chest, but the light he had as yet employed had not been sufficiently powerful to render this demonstration satisfactory. It would be possible, lastly, to see through some diseased structures so as to ascertain whether, within a cavity, there was a fluid or a solid body. Dr. Richardson concluded by stating that his object had been rather to mark the origin of a new and progressive step than to explain a perfect instrument, or an extended series of successful results.

Professor Rolleston, F.R.S.,

On Sixteen Eskimo Skulls.

The writer laid down a number of general propositions relating to the entire series of crania which had come through his hands. Some of these were referable to the special habits of this singular people, and others to their tribal or ethnological peculiarities.

Dr. Richardson, F.R.S.

Report on the Physiological Action of the Methyl Series.

This was a special report including a long experimental research. We shall hope to publish it at length in a future number.

Dr. Crum Brown, F.R.S.E.,

On the Connexion between Chemical Constitution and Chemical Activity.

Dr. Crum Brown, in his communication, related the investigation that had been conducted by Dr. Fraser and himself on the changes produced by direct chemical addition on the physiological action of certain poisons. The authors in this inquiry have sought to discover the relation which must exist between the chemical constitution and the physiological action of a substance. They had two kinds of operation open to them in altering the constitution of a substance by a definite chemical operation—viz., replacement and addition. Dr. Brown reported chiefly on the process of addition, relating the beautiful experiments by which he and his learned colleague had proved the neutralisation of the physiological action of strychnia by adding to the alkaloid iodide of methyl and forming a new compound, iodide of methyl strychnium.

Discussion.

Dr. Brown's paper was read directly upon Dr. Richardson's report, and the discussion followed on the two papers. Dr. Richardson had tried to make iodide of ethyl an antidote to strychnia and nicotine by injecting it into the bodies of animals under the influence of those poisons; he found, however, that within the body the same changes of chemical constitution did not seem to occur as occurred when the iodide was added to the alkaloid *out* of the body. Dr. Brown's experiments also seemed to favour this view. The discussion was well sustained, and a general wish was expressed that the authors, in their respective ways, should continue their labours under the auspices of the Association.

Dr. Hughlings Jackson, F.R.C.P.,

On the Physiology of Language.

Dr. Jackson treated his subject under the following heads:—

Two Kinds of Language.

Healthy language is of two inseparable yet distinct forms:—

I. Intellectual—*i.e.*, the power to convey propositions.

II. Emotional—*i.e.*, the ability to exhibit states of feeling.

The two are separated by disease. It is intellectual language alone which suffers in most of the cases to be described. Emotional language usually escapes altogether.

Intellectual language suffers *throughout*—not only in its most striking manifestation in (*a*) words, but in (*b*) writing, and (*c*) sign-making.

It is the power of intellectual expression by "movements" of any kind which is impaired—those most special, as of speech, suffering most; those of simple sign-making least, or not at all.

Emotional language is conserved *throughout*, not only in its most striking manifestation by (*a*) variations of voice, but in (*b*) smiles, etc., and in its most simple manifestation by (*c*) gesticulation.

Although thus circumscribed by the term Defects of Intellectual Language, there are within this limit many varieties of defects produced by disease near the corpus striatum. The author never uses the terms aphasia, aphemia, etc.

It is easiest to say what they are *not*.

(1) *They are not defects of voice.*

(2) *They are not defects due to mere paralysis of the tongue and other articulatory muscles.*

(3) *They are not owing to any fault in the outward organs of reception.*

The Special Nature of the Defects of Intellectual Language.

The author arranges the cases he has to mention, for convenience of exposition, in two classes. In the first class the author supposes that the sensori-motor processes for Speech are more or less *destroyed*; in the second that they are *unstable* from under-nutrition (see *Medical Times and Gazette*, June 23, 1866, and August 15, 1868, p. 178).

Class I.—Severe cases *in which the patient is speechless or nearly so, or in which speech is very much damaged.* In the worst of these cases the patient can only utter some one unvarying word or two words, or some jargon.

Class II.—Cases in which there are plentiful movements, but wrong movements, or *plenty of words, but mistakes in words.*

Under Class II. he points out that taking the phenomena of many cases we find evidences of damage to sensori-motor processes, higher or lower in evolution, according to

(*a*) Complexity of movements.

(*b*) Width of interrelation.

(*c*) Number of associations

from ataxy of the grosser movements of articulation to an "ataxy" of movements embodying ideas.

He then considers very generally, and with regard to all varieties of cases, the defects in complementary modes of intercommunication which accompany defects of speech, and takes the opportunity of considering a question asked, "*What is the degree of intelligence these patients have?*" He expressly guards himself against any implication that language and thought exist separately. The question is not How is general mind damaged? but What aspect of mind is damaged?

He considers the mental condition of patients Classes I. and II. as regards—

(*a*) *Sign-making* is least affected, sometimes seeming to escape altogether. He urges that we should distinguish in degree betwixt power to make simple signs which idiots can make, and the elaborate signs—saying nothing of finger language—which people make who are healthy, except for congenital deafness, and that we should observe if the patients can make signs to signify abstract quality as "blackness."

(*b*) *Writing.* This suffers more or less in nearly every case of defect of speech from disease of the hemisphere, but varies as much as the defect of speech itself does.

Indeed, writing, and we may add reading, is the same defect in another form. For in each we have to reproduce the motor symbols of the words. Written or printed symbols are "symbols of symbols."

The patient who cannot write can usually *copy* writing correctly.

Patients can often sign their own names without copy when they cannot or will not write anything else.

(*c*) Do the patients know what is said to them?

It is usually held that "aphasic persons" do. The author thinks they usually do when they are speechless except for some unvarying jargon, *i.e.*, cases in Class I., but that when—cases in Class II.—they have free but disorderly utterance so high as mistakes in words they often do not understand, *i.e.* quickly understand words said to them.

(*d*) Can the patients repeat words said to them?

They cannot in Class I.; in Class II. they can, with or without blunders.

The author supposes the reason in (*c*) and (*d*) to be:

That in Class I., the sensori-motor arrangements for speech are *destroyed* in their *lowest* processes by *limited* disease near to, and involving, the corpus-striatum. The sensory aspect of the sensori-motor processes of mind is not reached. It is the "way out" which is broken up.

That in Class II., the sensori-motor processes are impaired but not destroyed, and that the change is not limited to the region of the corpus-striatum, but reaches deeper in brain.

(*e*) They cannot read, but they can—often at least—understand what is read to them.

(*f*) and (*g*) These points are very cursorily considered.

Educated Movements.

The movements of Speech are educated movements, and thus differ widely from those movements which may be said to be nearly perfect at birth, such as those for respiration, smiling, swallowing, etc. All the muscles represented in the corpus-striatum unilaterally(a) require a long education, and the most special of these are those engaged in the movements of speech, and next those of the arm. The muscles always acting bilaterally, and chiefly represented bilaterally in the corpora striata, are born with their centres for movements nearly perfect. Thus, then, the term "Intellectual Language" merges in the larger term "Special movements acquired by the Individual," and the term "Emotional Language" in the term "Inherited Movements" (common to the Race). There is a still more fundamental distinction.

The Most General Nature of the Defects.

The author first considers Class I. Here the words previously used give way to terms larger still. In its highest or worst form it is a loss of *Voluntary* power with conservation of Involuntary capability.

(*a*) The author first illustrates by the case of gross movements—*e.g.*, a speechless patient may be unable to put his tongue out, although it moves well in reflex, etc., processes (see *Lond. Hosp. Rep.*, vol. i. 1864, p. 400, and *Medical Times and Gazette*, June 23, 1866).

(a) It is true that the tongue acts bilaterally, and that it is represented on both sides of the brain. But still it differs from other muscles acting bilaterally in that each of its sides has a distinct representation in its corresponding (opposite) side of the brain.—See Broadbent's paper, *Med Chir. Rev.*, April, 1866, p. 479.

He next shows that there is a corresponding difference even in quasi-mental movements. "Speechless" patients sometimes ejaculate involuntarily.

(*b*) It will be found that some of those patients who cannot talk voluntarily can swear. They utter other ejaculations which are of the same category—meaningless for the expression of ideas about things, although useful as vehicles for the exhibition of feeling. They swear or ejaculate when excited, *and cannot repeat the words of the interjectional utterances when they try.*

(*c*) Next he instances ejaculations more appropriate to the circumstances under which they are uttered, and which are a step higher in speciality.

(*d*) Next, and highest, a man usually utterly speechless may get out an actual proposition.

Here, again, taking into consideration the phenomena of many cases, it will be seen that there is, so to speak, an ascent in "compound degree" from utterances, like the common explosive oath, most *generally* related to *general* external circumstances, to actual propositions *specially* related to *special* external circumstances—*i.e.*, until the difference betwixt voluntary and involuntary utterance is lost.

The above-mentioned series of phenomena show, the author thinks, *that that there are in "speechless" patients sensori-motor processes for words somewhere, though usually the "will" cannot get at them.*

This somewhere can scarcely be on the *left* side of the brain, for damage of this side has made the man speechless. These involuntary utterances are, the author supposes, the result of action of the *right* side. In other words, he thinks that the left is the leading side, and the right the automatic.

The Will.

He then tries to show the relation of the so-called "will" to the rest of sensori-motor processes, and this time takes his illustrations from the stock words or phrases which the patients always use. First, he points out that it is probable that the stock phrase was the leading sensori-motor process when the brain was suddenly damaged, and speaks of two cases in illustration. A man becomes speechless after hard work at *making a catalogue*, and can afterwards say only, "List complete." (Recorded by Dr. Russell, of Birmingham.) Another man receives a wound in the left hemisphere *in a brawl*, and can only say, "I want protection."

He then speaks of Spencer's views on the "will," and, as he believes in accordance with those views, calls the "will" the *leading* sensori-motor process of the moment—there being no such separation as Will *and* Mind.

The Left Side of the Brain the Leading Side, the Right the Automatic.

The author does not think, as Dr. Moxon does (see *Med.-Chir. Rev.*, April, 1866), that the left side of the brain only is educated, but that both are educated. It is certain that damage to the right side of the brain produces no defect of speech in most cases, and equally certain, the author thinks, that the *disease of the left side only cannot prevent the patient getting out words when a forcible circumstance outside himself is in very special relation with the processes for those words.* For he points out that although there is in cases of involuntary ejaculation no prompting by the "will of the patient," so to speak, the occasional utterances are developed with more or less appropriateness to then external circumstances.

Although the cerebral hemispheres are Twins, the left may, if we accept Gratiolet's(b) statement, be said to be the First born. It is born with the lead, and thus a patient who has damage to the left side of his brain cannot *initiate* movements in the undamaged right side, either objectively as in talking, or subjectively as in reading.

The author has recorded a case of loss of intellectual language in a patient who was *left-handed*, but states that in other cases this explanation will not apply, and he admits that there are cases of defect of intellectual expression with *left* hemiplegia which cannot be explained. Some of the patients, however, have been previously paralysed of the right side, although perhaps without any accompanying defect of speech. Still he has never seen a case of disease of the right hemisphere, only as proved *post mortem*, with defect of speech of any kind, but has recorded three cases in which this side of the brain (including Broca's convolution) was diseased without defect of speech. And all are agreed that when hemiplegia occurs with loss of speech, the hemiplegia is *nearly always* of the right side. He has, however, received reports of two cases—one recorded by Dr. Long Fox, of Bristol, and one by Dr. Pye Smith—in which the Broca's region (on the left) was diseased without loss of speech.

(b) See *Medical Times and Gazette*, June 23, 1866, August 15, 1868, and August 22, 1868, and the reference given at the last-named date.

Localisation.

The author's views on *Localisation* have been already so fully given by himself in this Journal that it is needless to repeat them. (See December 14 and 21, 1867; August 15 and 22, 1868; and also *Lancet*, November 26, 1864.) In the last (the fourth) volume of the *London Hospital Reports* the author has reported several autopsies on patients who died aphasic.

PROFESSOR PAUL BROCA,

On the Seat of the Faculty of Articulate Language.

Professor Broca advocated the views he long ago put forward:—(1) That damage to the *left* side of the brain produces loss of speech; and (2) that the part damaged is the third frontal convolution. He, however, admitted freely that there were exceptions to both these rules, and particularly drew attention to cases of aphemia from disease of the Island of Reil with integrity of what we may call Broca's convolution. In these cases, however, the "convolution of articulate language" is cut off from the corpus striatum, and thus is practically destroyed so far as utterance of words goes. We have used the word aphemia above. This was the term M. Broca first introduced; then Trousseau gave us aphasia. Next M. Broca introduced the term aphrasia, and, finally, at the Norwich meeting, he presents us with a bran-new term—*alogia.*

MR. R. DUNN,

On the Power of Utterance in respect to its Cerebral Bearings and Causes.

Viewing the faculty of speech as an instrument of thought and language, as the minister and interpreter of the thoughts, feelings, and emotions of the mind, Mr. Dunn maintained that, in all cases of loss of speech which are of *cerebral origin*, there is involved either structural change or functional derangement in the nervous apparatus of the intellectual consciousness. He briefly narrated two illustrative cases out of a number which had come under his observation, one of structural change, and the other of functional derangement, both of striking significance. But the point which he wished especially to impress upon every physiological psychologist was this—viz., that the power of giving utterance to our thoughts and ideas in appropriate language depends upon the due relation being maintained in its integrity between the centres of intellectual action and the encephalic motor centres, through which the volitional power is exercised in articulate speech—in other words, between the cerebral hemispheres and the corpora striata. For thoughts and ideas might be moulded for expression in the seat of intellectual action, but the agency of the will or volitional power to give them utterance requires the integrity of the motor centres, through which the volitional impulses operate on speech. Mr. Dunn said a special cerebral organ had been assigned to the faculty of speech, and that the illustrious Gall was the first to locate it in the anterior lobes of the brain. Since his time the subject had undergone much discussion in France, and conflicting evidence had been adduced. He adverted to the hypothesis of Dr. Dax, that the left hemisphere of the brain was *its exclusive seat*, but to which he could not subscribe. The brain is a double organ; the functions of both hemispheres are identical, in harmonious accordance with the doubleness of the organs of sense, as double inlets to knowledge. Professor Broca, who claimed the honour of being the first to discover that the third convolution was the seat of the faculty of articulate speech, was constrained to admit that the function was not *exclusively* exercised on the left side of the brain, although disease there, with hemiplegia of the right side, was almost universally characterised by aphasia. Mr. Dunn, in proof that the right hemisphere exercised the same function in regard to articulate speech as the left, adduced a case in which there was extensive disease in the left hemisphere, on the very site of Broca's organ, and yet during life the faculty of speech was not impaired. In reply to remarks made on his paper, Mr. Dunn wished to correct Dr. Hughes Bennett. The will, as an attribute of mind, had its seat in the cerebral hemispheres, and not in the corpora striata. The latter were the encephalic motor centres, through which the impulses of the will were propagated, the *connecting links of thought with articulate speech.* In reply to Dr. Humphry's opinion as to

unity of action of the brain and uniformity of structure in all the convolutions, he believed that the vast sheet of vesicular matter which crowns the convolutions, subserved different mental actions, and begged to remind him that the microscopic examination of its ultimate structure demonstrated that the anterior was more complicated than either the middle or posterior lobes.

Discussion on Aphasia.

A most interesting and animated discussion on aphasia took place after the reading of the three elaborate papers by Dr. Hughlings Jackson, Mr. Dunn, and Professor Broca.

Dr. Bennett, of Edinburgh, opened the debate. Referring to the statement of Gratiolet, that in the fœtus the convolutions of the left hemisphere were in advance of the right, he urged that this statement had not been confirmed by subsequent observers. He was of opinion that the left side of the brain received more blood than the right, and on this account probably took precedence in regard to the function of speech. Professor Bennett also drew attention to the question whether the vocal organs themselves—the laryngeal organs—were not affected in aphasia.

Professor Humphry, of Cambridge, objected to the attributing special functions to particular regions of the brain, on the ground that there is not sufficient difference in the structure of the different parts to lead us to suppose that they have special functions; the removal of successive portions of the hemispheres in animals does not lead to the loss first of one function and then of another, but to a weakening of the whole animal, which increases in proportion to the damage done, and finally amounts to general paralysis. In reference to the speaking voice, we can scarcely observe the gradually increasing use of it in the child, and note how clearly it is associated with growing thought and increasing imitative power, without feeling that so complicated a faculty as that of speech can scarcely be dependent upon any limited portion of the brain. Moreover, each one of the nervous centres of voice derives its supply of nerves from the two sides of the cerebrum, which are in this respect double organs, comparable with the two hands or the two feet; and we can almost as readily suppose that the two upper or the two lower limbs are under the dominion of a part of one hemisphere as that the centres of voice are so. The inability to use certain words, or the substitution of one word for another, seemed to him (Dr. Humphry) to be sometimes, at any rate, dependent rather upon weakness of the whole brain, or a shock to which it had been subjected, than upon a damage to a special organ. He also observed that the occasional ejaculation, under emotion, of words or of a sentence, which the sufferer was usually unable to express, corresponded with the performance under emotion, in our healthy condition, of many things which we are ordinarily unable to do. Dr. Humphry illustrated his meaning by referring to the fact that the excitement caused by a bird rising will sometimes enable the hand instantly to direct the gun so as to kill without taking aim or bringing the gun to the shoulder.

Dr. Bateman, of Norwich, said that the great pressure upon the Section would prohibit him from trespassing upon the time of the meeting but in the briefest manner possible; but as he had for some time employed much of his leisure in investigating the subject now under discussion, it would not, he trusted, be deemed presumptuous on his part to say a few words, and he would confine his remarks solely to the question of localisation. It was universally admitted that the brain was the organ of thought and of intelligence, but opinions were divided as to whether we were to consider it as a single organ, or as consisting of a series of different organs each endowed with a special and independent function, and out of this last theory has arisen the doctrine of the localisation of the cerebral faculties. Time would not permit him to discuss the theory of Bouillaud, who placed the seat of speech in the anterior lobes, or that of Dax, who placed it exclusively in the left hemisphere, or that of Schrœder van der Kolk and Jaccoud, who placed it in the olivary bodies, but he should confine himself to throwing a lance at his friend and guest, Professor Broca, who locates the seat of speech *in the posterior part of the third frontal convolution of the left side!* Now he (Dr. Bateman) considered that this question could never be settled by mere theoretical speculation, or even by clinical observations, unless these latter were completed by that inexorable scrutiniser of facts—microscopic investigation. Since the publication of his papers in the *Journal of Mental Science*, he had made an analysis of the cases there recorded, and of others which had since come under his notice, with the view of seeing how far they tend to substantiate or invalidate Professor Broca's theory. Of these seventy-six cases thirty-five were completed by a post-mortem examination. From these thirty-five cases must be eliminated all those where, together with lesion of the third left frontal convolution, there was at the same time extensive lesion of the anterior lobe itself, as also all those cases where the description was not sufficiently accurate to assist in deciding the point in question. By this process he eliminated eight cases, leaving twenty-seven *bonâ-fide* cases with autopsies. Of these twenty-seven cases the following was the analysis:—Thirteen where the lesion was elsewhere than in the anterior lobes; seven with lesion of some part of the anterior lobes, Broca's region, however, being sound; two with no appreciable disease of the brain at all; five with lesions limited to the left frontal convolution of the left side or the immediate neighbourhood. He (Dr. Bateman) regretted that the papers had treated solely of the faculty of articulate language, and that nothing had been said about the general faculty of language. In illustration of the language by signs or by mimicry, he stated that during a recent visit to La Salpétrière, Dr. Voisin had directed his attention to the case of a woman, aged 57, who was aphasic and paralytic on the right side, but who presented the remarkable peculiarity of mimicking everything that was done, and of repeating everything that was said, although she was wholly unable to articulate a single word spontaneously. He must congratulate the Association that this subject had been brought before them by those gentlemen from the two great metropolitan centres who had, by their writings, done so much to elucidate this most complex question of cerebral pathology.

Professor Carl Vogt brought comparative anatomy to bear upon the question, and stated that in the anthropoid apes and in the microcephalæ Broca's region did not exist. His remarks tended to confirm Professor Broca's theory.

Dr. Crisp said that those who had heard the papers upon this subject must come to the conclusion that the matter yet remained *sub judice*, and that a larger amount of evidence was required before satisfactory conclusions could be arrived at regarding the seat of the faculty of language. Professor Vogt had, very satisfactorily to himself, told us that the anthropoid apes did not speak because a certain portion of the brain was defective. But how did he explain the fact that, whilst no quadruped had articulate sounds or could imitate the human voice, many birds could pronounce words distinctly and correctly, although possessing a brain much inferior in organisation to that of the anthropoid apes? As was well known, the voice of a bird was seated in the interior of the chest, and depended, in the singing and talking birds, on the arrangement of five pairs of muscles about the lower larynx; whereas birds that could neither talk nor sing had only two pairs of muscles. As regards the statement made by Professor Broca that all birds stood on the right leg, this peculiarity was chiefly confined to the grallæ, and he (Dr. Crisp) believed that it was a question of equilibrium, and that the bird was compelled to take this position from the greater weight of the liver on the right side.

Sir Duncan Gibb thought it worthy of mention in the present inquiry that in a large number of cases of functional aphonia he had found the left side of the larynx at fault, probably, to the best of his recollection, to the extent of 75 per cent. In aphasia the larynx is not necessarily paralysed, for in all cases vocal sounds can be produced, and in those he had an opportunity of examining the action of the vocal cords was not only not impaired, but it was uniform on both sides. The cause of the inability of expression, therefore, was clearly in the brain, and he differed from Professor Bennett in his view that the organs of speech were affected, for they were certainly not, although the faculty of language was in abeyance.

Dr. Crisp,

On the Intestinal Canal and other Viscera of the Gorilla.

Dr. Crisp in this paper compared the visceral anatomy of the gorilla, chimpanzee, and orang with that of man. The paper was illustrated by numerous drawings and a model of the viscera of the gorilla. Two of these apes (gorillas), a young one and an adult, the author had examined. The subjoined were some of his conclusions:—That the thoracic and abdominal viscera of the gorilla generally differ considerably more from those of man than the same parts in the chimpanzee and orang, and looking to many other brutal characters

in this animal, the line of demarcation between it and man is so wide and definite that we may disclaim all relationship with him and his four-handed colleagues.

On the Relative Weight and Form of the Eye and Colour of the Iris in Vertebrate Animals.

The paper on the relative weight, form, and colour of the eye in the vertebrata was illustrated by drawings and casts of the eye of more than 1000 animals. The eyes of 600 animals, quadrupeds, birds, reptiles, and fishes, filled with plaster of Paris and coloured after nature, were also exhibited, with wax casts of the eye and muscles of the elephant, lion, giraffe, walrus, and whale. According to the author, brown was the prevailing colour of the eye in all mammals, birds, and reptiles, whilst in fishes yellow, yellow-brown, and whitish-yellow were the most frequent hues. Fishes have, proportionately, the largest eyes among the vertebrata, and among the land quadrupeds the giraffe, horse, eland, elk, and bison have the visual organ of the greatest size.

On some Points Relating to the Visceral Anatomy of the Thylacinus.

Dr. Crisp, in this paper on the intestinal tube of the thylacinus (Tasmanian wolf), said he was the first to notice it, in 1854. A male and female sent over in spirits had been recently dissected, and in the stomach of the male a marsupial, weighing about two pounds, was found, with the skin nearly entire and many of the bones. This animal has the most remarkable alimentary canal, according to Dr. Crisp, of any quadruped in existence. It barely exceeds twice the length of the body, and is covered with villi, so as to extend the absorbing surface—a beautiful and wise provision in an animal that travels long distances for its food.

Dr. Thompson Dickson,

On Vitality as a Mode of Motion.

The author treated on the molecular or cell-life, rather than on the somatic. Somatic life, or the life of a complex organism, appeared to him to be merely the sum of the vitality of the countless myriads of cells which together make up the organism; but since, in the organic body, the cells are collected into special masses destined to perform various and special functions, so the various vital attributes which in a simple elementary cell are diffused, become in the organised body separate and specially centralised in the collection of cells destined for the performance of organic functions. The author defended the use of the term Vitality, regarding it as a mode of motion. He advanced three propositions to show—1. That vital potential energy is force; 2. That the force is something more than *vis inertiæ*; 3. That the force is convertible into, and is correlative with, the other forces.

Dr. Macalister,

On the Comparative Anatomy and Homologies of the Atlas and Axis.

The points considered in this paper refer to the following parts of these bones:—Their bodies, whose development is traced by the author in Balænoptera and in the human subject. In the former there are six points of ossification in the body and odontoid process of the axis, and in man occasionally five to seven, and evidence in favour of Rathke's theory that the body of the atlas is modified into the odontoid process. Having decided the affinities of the odontoid process, the author considers the various theories which have been devised to explain the nature of the anterior half arch of the atlas, and shows that it is peculiar on the following grounds:—1. Its being placed on the level of the intercentrum. 2. Its having separate centres of ossification. 3. Its being fibro-cartilage in its early stage. 4. Its being late in ossification. 5. Its being connected to the base of the costiform epiphyses. These points show that it is not the surface laminæ of the atlas as Blandin supposed, nor a special hypo-apophysis from the body, nor an inward prolongation of the pedicle, still less a hæmal arch. The structure to which the author thinks it allied is the anterior costo-vertebral ligament, and he believes it to be the antithesis of the ligamentum conjugale. The nature of this ligament in marsupials where the anterior arch is fibrous and not bony, he regards as a confirmation of this theory. The transverse and the check ligaments the author considers modified slips of the ligamentum conjugale. The spur occasionally developed behind the groove for the vertebral artery and suboccipital nerve, the author believes, is an oblique process, and it is often confluent with the hinder part of the articular surface, a part frequently severed from the fore part; this latter part he believes to be of the same nature. The transverse processes he believes to be compound, the anterior part corresponding to the neck of a true rib, and the posterior to a true transverse process. The articular processes he considers to be serially homologous with the small cervical joints of Luschka or the costo-vertebral articulations.

Professor Cleland,

On the Eustachian Tube Opened or Shut in Swallowing.

The writer, having referred to the prevailing belief, originating with Mr. Toynbee, that the orifice of the Eustachian tube is usually shut, and is momentarily closed in the act of swallowing, proceeded to point out that, notwithstanding the truth of the statements on which that opinion is founded, the real state of matters is precisely the reverse. This first came under the writer's notice in a patient who had an ulcerated aperture in the palate, which brought into view the left Eustachian orifice. The orifice was seen to be open in ordinary circumstances, but when the patient was made to swallow with his mouth open, the floor of the orifice, formed by a fold of membrane covering the levator palati muscle, was spasmodically jerked upwards towards the immovable cartilaginous roof. The author then went on to explain the anatomical disposition of parts, and to account for the phenomena on which Mr. Toynbee's theory was built.

Professor Heynsius,

On the Albuminoid Substances of the Blood-corpuscles.

With regard to the chemical composition of the red blood-corpuscles, we know only that hæmoglobin is a constant constituent, and that a fatty substance containing phosphorus exists in them. Other constituents of the stroma are generally not mentioned. On account of the energetic fibrino-plastic properties of the red blood-corpuscles only, some admitted, according to Schmidt's hypothesis on the coagulation of fibrinogenetic fluids, that it should contain a large quantity of globulin. Nevertheless, Denis had even in 1842, and afterwards, repeatedly mentioned that in some sorts of blood an albuminous constituent can be easily separated from the stroma of the blood-corpuscles. He recommends for this purpose to mix defibrinated human blood with an equal volume of "*eau salée au tiers*" (a mixture of one part of a concentrated solution of ClNa and two parts of water). The fluid soon becomes glutinous, and being then introduced in a large quantity of water, the hæmoglobin is dissolved, but another part of the stroma is separated in solid, but fragile, threads. With the blood of birds the experiment is still more successful. Each drop immediately coagulates in the water and sinks to the bottom, or forms a bag. If the fluid is brought with a pipette on the bottom of the vessel, then it rises in the distilled water in the form of a staff, and quickly becomes colourless. Not only by treatment with a concentrated solution of salt, but also by introducing the blood into distilled water, this albuminous constituent of the stroma is isolated, at least in the chicken. If chicken blood be beaten from five to ten minutes and then mixed with a large quantity of water, glutinous flakes are separated, which rise to the surface, and there form a viscous, slightly coloured layer. This substance is evidently the same as that isolated by salt. It has the same properties. Immediately after its precipitation it is soluble in a solution of salt of 5 to 10 per cent. Dropped in muriatic acid of $\frac{1}{1000}$th, the glutinous mass coagulates at first, but gradually resolves. In diluted potash it is soluble, and by the introduction of carbonic acid it is precipitated. Moreover, it possesses all the properties of albuminous substances. Mucosin, which the viscous appearance suggests, is at least not mixed with it in great quantity, since acetic acid does not produce a similar decomposition in the blood. It approaches myosin in many respects, but differs as being less soluble. Its character does not agree with vitelline, since it is completely insoluble in water. It most resembles fibrine. On the hyperoxide of hydrogen it has the same effect as fibrine.

SECTION C.—GEOLOGY.

Dr. Crisp,

On a Fossil Whale.

A fourth paper on a fossil whale, which Dr. Crisp had recently exhumed in the eastern part of Suffolk, was read in the Geological Section. The author said it was the first nearly perfect skeleton of a whale, thirty-one feet in length (*Balæna*), found in England, and on comparing the bones with those of the skeletons of living species of whales in the Hunterian and British Museums, he concluded that it was a distinct species not hitherto described.

SECTION F.—ECONOMIC SCIENCE AND STATISTICS.

DR. CRISP,

On the Statistics of Pulmonary Consumption in 623 Districts of England and Wales.

The subject, the author said, was one of great importance as regarded the health, happiness, and longevity of the human race, for, notwithstanding the sanitary measures adopted in this and other countries, he had reason to believe that consumption was on the increase. It appeared to follow the march of civilisation, and its prevalence had a direct connexion with population, and the artificial habits and the vitiated atmosphere in which they lived. He took his returns as to the mortality of England and Wales from phthisis from the Registrar-General's report from 1857 to 1861, dividing the population by the number of deaths, so that the highest numbers indicated the greatest exemption from disease. At Chelsea, the number was 28; whilst at Hampstead it was 61—so that, while 1 person in 28 died at Chelsea from phthisis, only 1 in 61 died from the same disease at Hampstead. With regard to pulmonary consumption, the returns showed that the death-rate corresponded with the density of the population; that the general mortality in England and Wales was at the rate of 24·47 per thousand; that in the healthy and more thinly populated districts the rate was only 17·53 per thousand; while in the large towns it was 28·01. In the agricultural part of Surrey it was 18 per thousand, in Westmoreland 18, in Sussex 19, in Lincolnshire 19, and in Dorsetshire 19, while in the metropolitan part of Surrey it was 25, in London 24, Staffordshire 25, Lancashire 27, Yorkshire 23, West Riding 24, and North Riding 19. At Bromley in Kent, at East Hampstead in Berkshire, and Duberton in Somerset, the rate was only 16; at Tenbury in Worcester, King's Norton near Birmingham, Hampstead, Pershore in Worcester, Haltwhistle, Bedford, Longtown, and Bootle, the rate was from 14 to 17; at Bellingham in Northumberland it was only 14, and at Glendale and Rothbury it was 15. In Wales, the least mortality was at Knighton, where it was 16; in England, the lowest rate was at Bellingham. The total deaths in the ten years were 4,210,715, of which 508,923 were from phthisis, the deaths of females exceeding those of males by 30,313. In the twelve districts of England and Wales, the proportion of cases to population was—North West, 31; Monmouthshire and Wales, 32; London, 34; Eastern Counties, 37; Yorkshire, 37; North Midland, 39; South Eastern, 39; South Midland, 40; South Western, 41; West Midland, 42; Northern Counties, 42; so that the West Midland and the Northern Counties were the most exempt, and in the North Western Counties and Wales the disease was most prevalent. During the six years before 1866, the mortality of Norwich from consumption was in the ratio of one death to 12·11 deaths from all causes. Among sailors, the most fatal stations as regarded phthisis were the western coast of Africa and the Mediterranean. A dry atmosphere, cold or not, was most frequent in districts where phthisis was comparatively rare. The causes of phthisis included soil, climate, amount of population, nature of occupation, hereditary predisposition, and the communicability of the disease.

M. NELATON AND M. MONTALEMBERT.—The other day the great ultramontanist met with a severe accident in Switzerland through his carriage being overturned. M. Nelaton, Senator and Surgeon, was immediately sent for, and was soon in attendance. His report of M. Montalembert's health is most favourable.

BRAZILIAN MEDICAL KNIGHTHOOD.—The following paragraph is from the *Anglo-Brazilian Times* of July 8 last:—"By Imperial letter of July 1, Dr. George Thornton Mockett was made a Knight of the Order of the Rose, for services rendered to Brazil." Dr. Mockett, to whom it refers, formerly practised as a Surgeon at Wolverhampton.

THE first conviction under the new Vaccination Act took place last week, when the Registrar of Births for the Mitcham district summoned a man for neglecting to cause his child to be vaccinated within three months after birth. The defendant, who was fined 10s. and 10s. costs, alleged as an objection to vaccination that he had seen several children break out after they had been vaccinated. The magistrate's reply to this was at least a forcible one. "Children," he said, "would break out, but that was no proof that vaccination was not beneficial."

REVIEWS.

RECENT WORKS ON CHEMISTRY.

A Dictionary of Chemistry and the Allied Sciences. By HENRY WATTS, B.A., F.C.S., etc. Assisted by eminent contributors. Five vols. London: Longmans, Green, and Co. Vol. I., A—Con, pp. 1137; Vol. II., Con—Gyt, pp. 985; Vol. III., Hæm—Mys, pp. 1096; Vol. IV., Nac—Pyz, pp. 806; Vol. V., Qua—Zym, pp. 1118.

Elements of Chemistry. By WILLIAM ALLEN MILLER, M.D., LL.D., Treasurer and Vice-President of the Royal Society, Professor of Chemistry in King's College, London, etc., etc. Part II., Inorganic Chemistry. Fourth edition. London: Longmans, Green, and Co. Pp. 884.

A Manual of Inorganic Chemistry: Arranged to facilitate the Experimental Demonstration of the Facts and Principles of the Science. By C. W. ELIOT, Professor of Analytical Chemistry and Metallurgy; and F. H. STORER, Professor of General and Industrial Chemistry in the Massachusetts Institute of Technology. Second edition, revised. London: Van Voorst. Pp. 605.

An Introduction to Pharmaceutical Chemistry. By JOHN ATTFIELD, Ph.D., F.C.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. London: J. Van Voorst. Pp. 447.

The First Step in Chemistry. By ROBERT GALLOWAY, F.C.S., Professor of Applied Chemistry, Royal College of Science for Ireland, etc. Fourth edition, enlarged. London: John Churchill and Sons. Pp. 477.

The First Principles of Modern Chemistry: A Manual of Inorganic Chemistry for Students and for Use in Schools and Science Classes. By U. J. SHUTTLEWORTH. London: John Churchill and Sons. Pp. 214.

Chemical Notes for the Lecture-room. By THOMAS WOOD, Ph.D., F.C.S. Second edition. London: Longmans, Green, and Co. Pp. 116.

IN no subject bearing directly or indirectly on Medicine has there of late years been a greater revolution than in chemistry. No doubt the substitution of the pathology of Virchow for that of Rokitansky is a mighty step, but we question if it has had such an all-pervading influence as have the advances we have made in chemistry. Many years ago now, Gerhardt saw that by altering the numerical values of the combining proportions of certain simple substances, greater order and symmetry might be introduced into chemical notation, especially when dealing with organic bodies; but he was ahead of his time, and did not live long enough to bring into general use the system he had so clearly shadowed forth. By some men his doctrines were accepted and acted upon, but the system may be said to have lain in abeyance, and to have been looked upon as a kind of chemical curiosity, for many years. Still, all chemists were not satisfied with the position of affairs. There were earnest workers in all countries who were not altogether well pleased with Berzelius's notation—who disbelieved in the corporate existence of caustic potash and sulphuric acid, as such, in the compound substance whose formula was represented as $KOSO_3$. So also the actual neutrality of pure crystalline SO_3 had to be explained in accordance with these theories, and could not well be so. Among those who have done most for the advancement of science in this way we might mention Kekulé, Wurtz, Hofmann, and our own distinguished chemists, Frankland, Odling, and Williamson. Indeed, as long ago as 1861 Dr. Odling published the first portion of a Manual of Chemistry, whose formulæ were written in a notation then little known; and, as the time was not yet ripe for its appearance, this notation had, we suspect, an adverse influence on the success of an admirable book. But matters gradually came to a crisis; first one teacher, then another, adopted a new system; but the *coup de grâce* to the old forms, in this country at least, was undoubtedly the appearance of Watts's Dictionary of Chemistry. This most admirable work, of which its conductor and contributors may be so justly proud, was intended in the first instance to be an amplification and rehabilitation of Dr. Ure's well-known Dictionary; but it was soon seen that its limits must greatly exceed those originally laid down for the contents, so much new matter and so much old material in a new form had to be introduced, that the three volumes originally intended have increased to five. Nor can we pass from this portion of our subject without saying a word

in praise of the spirited publishers who have brought this national work to a successful conclusion; they have spared neither pains nor money to make the work a good one, and we cannot do less than wish them a just reward. It was soon seen that this great work must become the basis of our national teaching of chemistry; it is the natural work of reference to which a man turns when he desires further information than that ordinarily obtainable on any topic which comes within its sphere, and to have a form of notation universally used in it, but unknown in our schools and colleges, was out of the question. Hence the revolution which has taken place; for the only important work now published in the old notation is Professor Bloxam's Text-book, that gentleman alleging as his reason for adhering to the old formulæ that no new system has as yet been so generally adopted as to justify its employment in his manual. Although in this respect we do not altogether agree with Professor Bloxam, still the opinion of one so well known as a sound and successful teacher should not be passed by unheeded. The work of Brande and Taylor appeared at too early a period to come within the scope of this article; but we have understood that the latter gentleman still employs the old system in his lectures at Guy's Hospital. Unanimity is a great thing in education as in other matters, could we only secure it; but from what has been said it will be perceived that we are still some distance from obtaining it in the teaching of chemistry. To this end, however, the example of such a man as Professor Miller is at least likely to tend, for in the present edition of his most admirable "Elements" he has finally thrown off the trammels of the old system by discontinuing the use of the barred symbols, which, in the last edition, were used to designate the elements whose combining numbers had been doubled. This cannot fail to make the system adopted by him more popular, for at the present day there is no work so much in request by those who desire to acquire more than a smattering of the science as Dr. Miller's valuable production. It would be folly to enter into a discussion of the contents of Watts's Dictionary or of Miller's "Elements." The former was noticed and commented on step by step as its parts appeared, and Professor Miller's book is now so generally in the hands of the public that we need only remark on the present edition having been most carefully revised and on some rather important additions having been made to its contents. What, indeed, with one or other of his three volumes, Professor Miller's hands must be kept tolerably full of work with them alone, for we are glad to see such a demand for them that no sooner has one edition issued from the press than another is required.

In the little work by Mr. Shuttleworth we have a representative of still another form of notation, one which we have heard described by an ardent disciple of Dr. Frankland as being as far ahead of Hofmann's as that gentleman's was of the one in general use a few years ago. Without venturing on such praise, we are bound in justice to say that Professor Frankland's system has much to recommend it, especially in combination with Crum-Brown's graphic formulæ, as a means of elucidating the mysteries of chemistry to a class, but that in writing its cumbrous character goes far to negative the positive value which, when employed and illustrated orally, it really possesses. In a practical exposition of these two systems lies the chief merit of Mr. Shuttleworth's little volume.

The works of Eliot and Storer and of Dr. Attfield are totally distinct in their characters from any of those we have hitherto noticed. That of Dr. Attfield fulfils a double purpose: it is at once an introduction to the study of chemistry generally, and to those operations and facts connected with the science of most interest to the pharmaceutist. Dr. Attfield's position naturally affords him special opportunities of knowing exactly the wants of pharmaceutical students, and these, we think, he has supplied to a nicety. The pupil is gradually led on, step by step, as it were, feeling his way, by experiment after experiment, synthetical as well as analytical, until a sufficient knowledge of the science is gained to enable him to look, as it were, more widely abroad over its surface. It was no easy matter to prepare a book which should contain everything a pharmaceutical student should know, without entering into unnecessary details, and without giving to the work a bulk which would have practically rendered it valueless for the purpose for which it was intended. But Dr. Attfield has fairly succeeded in his task. In one respect the work by the American authors is not unlike that of Dr. Attfield, inasmuch as the student is led on in the same way, by experiment after experiment; but as the end to be attained is not exactly the same, the systems are not perfectly analogous. Dr. Attfield looks at chemistry from the standpoint of the pharmaceutist; Messrs. Eliot and Storer rather as scientific applied chemists. In both the arrangement is somewhat different from that ordinarily encountered, as Dr. Attfield deals first with the substances most important to the pharmaceutist, Messrs. Eliot and Storer with those ordinarily first studied, with the exception of phosphorus, arsenic, antimony, and bismuth, which are placed before carbon on the grounds, we suppose, of the trivalence of the former group and the quadrivalence of the latter; but the old line of demarcation between metals and metalloids is thereby done away with in both. Neither deals with questions relating solely to physics, whereby more space is left at the authors' disposal for discussing more purely chemical subjects.

In the useful little treatise by Professor Galloway, on the other hand, physics occupy a most important position, constituting, in fact, the greater part of the work. This book is also arranged on peculiar principles, the author's aim being to make chemistry a means of mental culture, as well as to teach it for the sake of the truths it conveys—to constitute the attainment of chemical knowledge a means as well as an end. He desires to teach first the symbols of certain of the more frequently occurring elements, this being a kind of alphabet of the science; next, to show that these may combine with each other, and that the compounds so formed, as in the case of letters, are capable of still further union. To render the book more perfect, Professor Galloway has devoted much time and attention to this edition; he has added materially to certain portions—especially on electricity and galvanism—has greatly increased the number of exercises, and has introduced both the old and the new notation, the latter in a portion of the volume only included in the present edition.

Although the present edition of Dr. Wood's book is a considerable improvement on the last, it is not one of which we are enamoured; it is essentially a book for cramming, not intended to give a man wisdom, but to enable him to pass an examination. In as far as such books are to be commended Dr. Wood's is a tolerably fair sample of its class; the information is at least fairly accurate. But we would not advise any one to trust to it, even for passing an examination, or he may find that he has leant on a broken reed. Dr. Wood says that it is intended to do away with the necessity of note-taking in the chemical class; but it contains precisely the kind of facts we would recommend a man to leave out of his note-book, which, we hold, is not for recording facts to be found in every text-book, but the special information which each teacher is in a position to impart.

PROVINCIAL CORRESPONDENCE.

BIRMINGHAM.

August, 1868.

Our Professional neighbours at Oldbury have caused the club question—*i.e.*, of remuneration—to crop up again under anything but a pleasant aspect. They have issued a circular to the members of the Profession around them calling upon them to discountenance the proceeding of a certain gentleman who has migrated to their town, and has had the audacity to accept clubs at a lower rate of remuneration than that fixed by the *élite* of the black country. The circular has been responded to by one of our Physicians, and the result has been a pretty hot newspaper battle, which is still being waged with equal vigour on both sides. Who will come off victorious remains to be seen—the name of one of the combatants, which is celebrated in the annals of history, would augur well for his ultimate success. In our town, from the apparently noiseless manner in which the club combat is conducted, it would strike one as if it were being brought to a close, but I am emphatically told that such is not the case, and that it is still uppermost in the minds of its active and determined originators, and that it would be woe to him who, after having signed the compact, should dare to violate his pledge; the *fulmen* of Jupiter would be as nothing compared with the punishment which would fall upon the luckless wight. I must confess that this threat smacks somewhat of "trades-union terrorism."

The excellent character which Birmingham has for so long a period borne for its healthiness has been in some degree tarnished during the past few weeks by the high death-rate which has marked its mortuary lists. This

has been chiefly produced by the epidemics of diarrhœa and scarlatina which have raged in the town, and which have been attended by a proportionate mortality. Amongst the poorer classes of the population scarlatina has appeared in its most pernicious form, presenting all the worst characters of the disease, commingled with typhoid fever. Many of the cases which I have seen have been complicated with phagedænic ulceration of the throat, in which the application of glycerine of tannin has proved eminently successful. I am glad to remark that the public seem to have learned a lesson from the high death-rate which has disfigured their sanitary escutcheons, and that they have ventilated, through the press, the advisability of appointing an officer of health, the need of whom has been long and sadly felt. 'Tis passing strange that a town like Oldbury, of comparative insignificance, should see the necessity and wisdom of having its health looked after by a sanitary officer, and that Birmingham with its teeming population should be satisfied with its borough analyst and lay sanitary inspectors only, to look after its vital interests. Unhappily, so it is. There is one consolation, however, left us in the old adage, "that when things are at their worst they begin to mend;" we may, therefore, with hope look forward ere long to the installation of an officer of health for the parish of Birmingham. The public is discussing the subject, earnestly backed up by the powerful support of the press; and if the Town Council, in whom the power of election resides, continue to remain apathetic in the matter, the town at large will take the question up, and bring it to a proper and satisfactory issue.

The *honorarium* dispute at the General Dispensary has been for the time settled by the line of conduct adopted by the Committee of Governors, which has resulted in the resignation of the whole of the honorary Medical officers, with one notable exception. One of the number, to the entire exclusion of his *confrères*, has thought it consistent with his dignity to be appointed consultant to the charity at an annual premium of £100. Here, then, is another glorious instance of the instability of Doctors' coalitions for the good of the Medical commonwealth. We may justly ask, when will such virtues as unanimity and faggot-like tenacity of purpose be conspicuous amongst Medical men? Have we no rules of honour and Professional morality to guide us in our relations with our brethren, and to prevent us being guilty of actions which expose us to contumely and disrespect?

The Poor-law Medical Officers of Birmingham hail with lively satisfaction the extension of the operations of the Poor-law Medical Officers' Association of London into the provinces. Nearly all the Medical officers of this parish have become members of it. I am told that it is no sinecure to hold a parish appointment in Birmingham. The appointments are not permanent, but annual; consequently you must behave yourself as becomes a good boy, else you will not have any more of the parish pudding. Again, by this method of election the Medical officers are always subject to the caprice and dictation—nay, it may be the malice—of the guardians. No drugs are found by the parish, and the Doctors have to do their own dispensing; all this work is exacted for the small sum of £150 a year—such an amount is a mere bagatelle when the nature of the work is taken into consideration. Each officer, I am informed, attends to, on an average, 130 patients weekly. Surely such labour of brain and expenditure in drugs well deserve double the amount of remuneration. After this revelation, is there any ground for the Club Surgeons' lamentation at their underpaid service? The Medical Association has for its objects—

(1.) To obtain life appointments for all Poor-law Medical Officers, and entire, instead of partial, payment of salaries from the Consolidated Fund; and thus to secure, at once, due recognition of their position as public servants, and greater freedom and independence of action.

(2.) To provide a basis for consultation and united action in all cases of difficulty arising out of the nature and in the discharge of their duties.

(3.) To obtain adequate remuneration for Medical officers, if possible, upon a uniform basis.

(4.) To obtain the same payment for operations in the workhouses as in districts, and an extension of the list of operations for which extra fees are paid.

(5.) To obtain an authoritative decision upon questions relating to duties and extra Medical fees.

(6.) To obtain for Medical officers the responsible control of all midwifery cases.

(7.) To obtain from the local authorities the provision of all medicines and appliances prescribed for the sick poor, and the employment and payment by the same of qualified dispensers, where practicable.

(8.) Generally, to raise the status of Medical officers, and thus increase their influence and power for usefulness, and to provide a channel through which all defects in the Poor-law Medical Service may be brought to light and discussed with a view to their removal or amelioration.

Active preparations are being made for the meeting of the Social Science Congress. From the number of subscribers to the fund which is being raised to defray the expenses of the intellectual feast, and the lively interest which its approach has created in the minds of persons of all ranks, we may predict for it a brilliant success.

Medical news here is scarce. *The* topic of conversation—and it absorbs every other subject—is who is to be returned to Parliament at the forthcoming election; and as it does not belong to my province to descant upon other than Medical politics, I shall, with your permission, Mr. Editor, leave you to expatiate upon the other kind of politics, for the benefit and edification of your legion of readers, knowing very well that the aspirant to parliamentary honours who will look after the interest of the Medical Profession will also find that his claim for your support will meet with due and proper consideration.

GENERAL CORRESPONDENCE.

ON URETHRAL FEVER AND ITS MALARIOUS ALLIANCES.

LETTER FROM MR. BARNARD HOLT.

[To the Editor of the Medical Times and Gazette.]

SIR,—Dr. Fayrer, in his very interesting paper "On Urethral Fever and its Malarious Alliances," alludes with great clearness and precision to the frequent supervention of rigor after the passage of a catheter, more particularly in cases of long-existing stricture, and suggests an inquiry how far a lurking and unsuspected malarious infection may predispose the patient to rigor, and place his life in serious jeopardy; and he refers to the opinion of Sedillot, who supposed "that the morbid changes found in cases of urethral fever were due to septic absorption, and that they only occurred when the mucous membrane of the urethra had been lacerated in the operation." Such, however, is not Dr. Fayrer's opinion, and certainly it does not accord with my experience in the treatment of urethral complications.

The occurrence of rigor after laceration of the mucous lining of the urethra is certainly rare. In the treatment of severe forms of stricture it constantly happens that the attempt to introduce a catheter is followed by more or less severe bleeding, showing that the mucous lining has been injured; but if it has not been overstretched, rigor, as a rule, will not follow. In lithotomy where a small lithotrite is used, and also in other operations (cutting) on the urethra, rigor is very rare; in the operation of splitting the submucous deposit in the treatment of stricture, rigor is the exception; but if the stricture, either by the treatment I advocate, or by the introduction of a catheter or bougie of a larger size than the stricture will fairly admit, be overstretched, then, in the large majority of cases, rigor will follow, but only after the patient has passed water. If the urine, by the retention of an accurately fitting catheter, can be prevented for the first few hours from coming in contact with the overstretched urethra, rigor need not be feared, but if the urine is passed over the bruised or stretched membrane, then rigor is almost certain. Dr. Fayrer attributes this condition "to reflex action through the nervous system." Dr. George Johnson attributes it to "anæmia of the spinal cord," the result of reflex nervous influence; and certainly my experience would lead me to the same conclusions, for, as Dr. Fayrer truly observes, rigor too rapidly follows the passage of a bougie to suppose it could depend upon septic absorption. How far the climate of India may predispose persons to rigor, I cannot say, but I have great doubt whether, in this country, rigor following catheterism can be attributed to any other cause than over-distension of the urethra. In highly nervous and irritable patients rigor may supervene upon any urethral examination, however delicately such examination may have been conducted; but neither in these cases nor in the instances of overstretching, is the rigor of importance, provided the patient is otherwise free from disease. I have never seen a case of

rigor terminate fatally where the patient has been free from organic disease or toxæmia; and in the latter rigor occurs without any manipulation of the urethra.

In his concluding remarks, Dr. Fayrer insists on the avoidance of all violence where it is desired to enlarge the stricture by ordinary dilatation. I quite endorse his opinion. The Surgeon, if he prefers this method of treatment, should never increase his sizes too rapidly. No solicitation of the patient should induce him to attempt the passage of a larger bougie than his judgment tells him will enter the stricture with moderate ease; but while these rules should always be observed in the treatment by gradual dilatation, the opposite should be the rule in the treatment by rupture. Here the submucoid deposit should be split, the operation thus resembling, in a mitigated form, those other operations by incision which are occasionally had recourse to for the treatment of stricture, and where rigor is the exception. And this practical fact, being now thoroughly established, justifies me in stating that, where the stricture is fairly split, the patient has seldom any complication whatever; but, where it is simply overstretched, rigor will ensue. That unsuspected malarious infection would materially predispose a patient to rigor is undoubted; in this country, however, I am of opinion that rigor is more attributable to over-distension of the urethra than to unsuspected or lurking malaria.

August. I am, &c. Barnard Holt.

SPEAR *v.* DOIDGE.

Letter from Mr. John Whipple.

[To the Editor of the Medical Times and Gazette.]

Sir,—A letter signed "Alfred Poland" appeared in your paper of the 15th ult., commenting on the above case. As one of the Surgeons to whom it refers, I feel called upon to make one or two observations.

Mr. Poland is pleased to offer "certain facts for the information of those gentlemen who gave evidence for the plaintiff." I am sorry that his "facts" have so little weight with me that I still contend the proper treatment was the reduction of the dislocated radius and the flexion of the arm, etc. Mr. Poland says that "in some instances this may be done," thus making reduction the exception, and not the rule. I have been Surgeon to the Plymouth Hospital for nearly thirty years, and neither there nor in my private practice can I call to mind a single case of unreduced dislocation of the radius. The mode of reduction must therefore have something to do with it. If Mr. Poland will afford us an opportunity of reading his peculiarly unsuccessful treatment, we will carefully avoid it. Again, Mr. Poland says "no Surgeon of any practical knowledge of this accident would ever excise the head of the bone, knowing as he does that the parts will accommodate themselves to a very great extent," and then proceeds to argue, because this did happen in the case of a child aged 7, it will necessarily be the same in a man aged 50. This is too absurd a proposition to be even contradicted, as every one knows that the joints of children will accommodate themselves in a wonderful manner. In this particular case, when asked "Can nothing be done for the relief of the arm?" I said that the head of the bone could be removed, and I believed with safety, as it was outside the joint; this being done, flexion was possible.

"The case of a man aged 50" might have been fracture with dislocation, the shaft of the bone shortened, and thus motion would be possible. If such freedom of motion takes place, which I have not yet seen, reduction would be a matter of perfect indifference.

When I said that excision of the head of the radius was possible, I imagined I was the first to suggest such a proceeding, as thirty years since I was the first to advocate division of tendons in talipes; but I find that Mr. Poland must include Sir W. Fergusson in his list of non-practical Surgeons. I thank him for placing me on the same shelf with such unskilful men as he (Sir W. Fergusson) is!

I am, &c.

John Whipple,
Surgeon, South Devon and East Cornwall Hospital.

Letter from Mr. Francis Fox.

[To the Editor of the Medical Times and Gazette.

Sir,—As you have made a direct allusion to me in your editorial remarks on the late trial of Spear *v.* Doidge, I trust you will afford me space for a few observations in reply, since I cannot but think that had you been present in court instead of being dependent on the very meagre and imperfect report of a provincial newspaper, you would have arrived at a somewhat different conclusion. I must here say that I was a most unwilling witness. Nothing could be more distasteful to me than to be called upon to give any evidence which might, by any possibility, be used to injure the reputation of a Professional brother. My opinion was extracted from me without my having the least suspicion of the object for which it was obtained; and when subsequently served with a subpœna, I had, I believe, no alternative but to obey it. And, further than this, I hope you will agree with me in thinking that the answers I gave to the only two direct questions put to me by the court were the simple truth, and could only have been so answered, by whichever side I had been called. A careful perusal of the trial will show that it mainly turned on other than the Professional evidence. The question was this—"Did the defendant, when first called in, detect a dislocation of the radius, and reduce it, or did he not?" Four or five witnesses were called, who swore—and the very clear and straightforward way in which their evidence was given was the subject of general remark in court—that the defendant said to the plaintiff, after his examination of the injured limb, "I am happy to be able to tell you that the *joint is uninjured.* The only mischief is a fracture of the ulna, three inches below it" (this was confirmed by others to whom he subsequently made the same statement out of the house); that he then bound the arm on a straight splint, and placed it on a pillow by the patient's side, and that it was retained there during the whole treatment. It was also sworn by plaintiff that three weeks after this, in the presence of his brother, he drew the attention of defendant to "a hard substance projecting into the hollow of the arm," at the same time adding his opinion "that it was some bone out of place;" that the defendant then placed his finger on it, and replied that it was no such thing, but that it was "only the cords of the arm drawn up as hard as iron," or words to that effect; and it was further sworn that it was not until at a much later period that the defendant would admit the existence of a dislocation at all. To rebut this evidence, the defendant swore that he did detect a dislocation; that he did reduce it, and that he placed the limb across the chest, with the elbow at a right angle, and in a sling; and that it was removed to the pillow in a straight position by the plaintiff himself. A young lad, his cousin and apprentice, was called, who swore to the same effect. It will therefore be seen that the case resolved itself into one of what amount of credence was to be given to the non-professional witnesses swearing to facts occurring under their own personal observation. When placed in the witness-box, I was simply asked whether I had heard and agreed in the evidence given by Mr. Whipple, and at once dismissed. On the second day of the trial I was asked by the court whether I had any reason to suspect fracture of the radius to have existed. I replied in the negative. I was then asked whether I thought it possible for the defendant, when first called to the case, to have placed the limb at a right angle across the chest, the head of the radius being still unreduced. My reply was, No. Mr. Greenway was then called for the defence. On the same question being put to him by Mr. Coleridge, the defendant's counsel, he replied that he thought it could, the ulna being fractured. Mr. De la Garde, the very able and experienced Surgeon of the Devon and Exeter Hospital, was next examined for the defence, and, on the same question being put to him, replied, as I had, in the negative. The only point, then, on which my evidence bore on the case was in assisting to confirm the evidence of the non-Professional witnesses that the dislocation was not originally reduced. And in this opinion I was supported by Mr. De la Garde in his reply to the above question. Both Mr. Greenway and Mr. De la Garde were asked by Mr. Coleridge whether they had heard and agreed with Mr. Whipple's evidence, and both replied that in the main they did; and it is a very significant fact that Mr. Coleridge did not think it necessary to ask on what points they differed from that gentleman. A special jury, having heard the evidence on both sides, gave their verdict for the plaintiff; and I am at a loss to see how they could have done otherwise, and I am borne out in this conclusion by the frequent, though vain, attempts of Mr. Coleridge to induce the defendant to compromise the matter by accepting the plaintiff's offer in the early part of the trial.

I should here have ended my remarks in reply to your article, but a letter from Mr. Poland in your issue of the 15th ult. induces me to ask your kind permission to encroach on your valuable space a little further. I confess that I do not clearly see the bearing of that letter on the case before us. That it is difficult to reduce some dislocations of head of radius, and to retain them when reduced, is a fact that no Surgeon would attempt to deny; but, Sir, this question was not touched on by counsel on either side at the trial, and therefore it seems to me that it would be a waste of my time and your space to discuss it further. As an opinion of Mr. Poland on the treatment of dislocation of the head of the radius, no doubt it is very valuable, and as such I am prepared to receive it; but Mr. Poland goes further than this—he states, and I quote his own words, "No Surgeon of any practical knowledge of this accident would ever excise the head of the bone." Now, I will not presume to set my opinion against so great an authority, but will venture, in all humility, to suggest that Mr. Poland should extend his reading from *Guy's Hospital Reports* to the 4th edition of Sir W. Fergusson's work on Surgery, where at page 233, line 5, he will find the following passage:—"In either instance, if the head of the radius seemed to be much in the way, I believe that it might be easily removed without much danger, and with great advantage. In so far as I know, such an operation has never been performed, but it is one to which I have adverted for many years in my Surgical lectures;" and I will then ask Mr. Poland whether he still retains his own opinion, or whether Sir W. Fergusson does or does not come up to his idea of a "practical Surgeon." In conclusion, the case may be summed up in a few words. A man in perfect health meets with an accident, resulting in a dislocation of head of radius forward, with fracture of ulna three inches from elbow-joint. Twelve months after, this is that man's condition—an unreduced dislocation, and a perfectly straight and useless arm; the first may have been quite unavoidable, but surely the second was not. Now, I would simply ask you, or any other Surgeon, to say whether he would care to exhibit a case in this condition as a specimen of his success in the treatment of this injury.

I am, &c. Francis Fox,
Surgeon to South Devon and East Cornwall Hospital, Plymouth.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 23, 1868.

Henry Lee, Esq., F.R.C.S., Vice-President, in the Chair.

Dr. George Harley related a

FATAL CASE OF ACUTE PROGRESSIVE PARALYSIS

from softening and disintegration of spinal cord, especially in the anterior columns; with loss of movement, without corresponding loss of sensation. This case is not only an important one, as being a marked example of a rare form of disease, but also has the additional, though melancholy, interest attached to it of having occurred in a member of the family of one of our own Profession. The patient, a well-developed strongly built youth of seventeen years of age, had been perfectly well until a month previously, when he felt a slight aching in the limbs, and stiffness of the neck, which he attributed to cold. So trifling were these symptoms that he went to his office as usual, and it was not until within four days of his death that he experienced difficulty in walking, although he dragged his legs slightly. He was still able to walk to his office, but during the course of the day, while sitting on a high office-stool, he began to feel as if his legs were paralysed, and accordingly was taken home in a cab. On his arrival at home, although he could not walk upstairs, he was yet able to stand, undress himself, and go to bed, and it was not until the next day, only two before the disease proved fatal, that it was considered necessary to have Medical advice. Mr. Jakins, of Osnaburgh-street, was then asked to see him, and found the pulse 66, the pupils dilated, and the tongue furred. The patient complained of no pain, but only that his legs were paralysed; also that his tongue felt tired after much speaking. His swallowing was perfect; the bowels were sluggish, but he made water naturally. He was ordered one-thirtieth of a grain of strychnia every four hours. No improvement took place on the Friday, and the strychnine was discontinued in the evening after the twelfth dose. Next morning, the day upon which the patient died, the paralytic symptoms having increased, and the pulse risen to 90, Mr. Jakins sought the co-operation of Mr. Newton, of Wimpole-street; and in the course of the same afternoon, the symptoms assuming a more serious aspect, Professor Harley was asked to join these gentlemen in consultation. On arriving at the house, at about 4 o'clock in the afternoon, Dr. Harley found the patient lying on his left side, with the lower extremities completely paralysed, the upper partially so; he could still move his arms, but had not strength sufficient to squeeze the hand. The patient's intelligence was perfect, and he said he felt no pain. The spinal motor nerves were alone paralysed; the sensory appeared all right, for he felt the slightest touch throughout every part of the paralysed tract. There was great difficulty in breathing, the respiration being slow and laboured, each inspiration being made with evident effort. The pulse was 120; the tongue furred; the temperature felt natural to the hand; there was no fever. The patient said he had that morning, for the first time, had difficulty in voiding fæces, but none in making water. The difficulty of breathing was gradually increasing, and the power of swallowing had been lost within a few hours; the sense of taste, however, still remained acute. A few leading questions, and one or two physiological tests, at once revealed the nature of the case, and although Dr. Harley had never before witnessed a human being dying under similar conditions, the experiments which he had witnessed on lower animals left no doubt of the cause of the symptoms nor of the prognosis. For he had often watched the course and termination of the same series of phenomena artificially induced in animals—complete paralysis of the spinal motor nerves, with their corresponding sensory branches unaffected; the perfect intelligence, and yet the unconscious dying, as it were, by inches; therefore, notwithstanding the cheerfulness of the patient, he knew that life could not be prolonged beyond two or three hours at most. This opinion was based upon a rapid calculation he had made of the progressive march upwards of the disease since the morning. The prognosis was indeed but too soon verified, for the poor patient died exactly in the manner predicted—namely, asphyxiated, just two hours after the consultation, the intelligence remaining perfect until the end. The post-mortem was made on the following day; but Dr. Harley was unable to be present. Fortunately, however, he secured the services of Mr. Lockhart Clarke, who gives the following account of the post-mortem appearances:—

Post-mortem Examination, by Mr. Lockhart Clarke.—The pia mater of the cord was very much congested. The anterior columns, from the lower part of the eighth dorsal to the first lumbar nerves, were considerably softened; the posterior white columns being only slightly softened. Various portions of the grey substance were damaged by granular or fluid disintegration, including the anterior commissure. These lesions were greatest at the ninth and twelfth dorsal nerves. At the tenth dorsal they consisted chiefly of softening of the anterior columns at the entrance of the anterior roots. The conus medullaris below the lumbar enlargement, as well as the two upper thirds of the cord, were not much affected. The cervical enlargement was much congested, particularly the anterior columns, where a granular exudation, in some places, enveloped the roots of the nerves. At the upper third of this region there were areas of granular and fluid exudation, which continued upwards, with some increase, as high as the second cervical nerves. For about the same length of the cord, also, the deep portions of the posterior white columns between the horns were softened to a considerable degree, and the anterior roots of the nerves were, in some places, still enveloped in exudation from the surface of the pia mater. From the first cervical nerves upwards nothing remarkable was observed. The whole of the medulla oblongata and fourth ventricle appeared to be perfectly healthy.

Dr. Elliot narrated

THREE CASES OF CYANOSIS.

The case of J. C. most nearly approximates to the seventeenth in Dr. Peacock's elaborate work, second edition, p. 148; and to the fourth published by Dr. Cockle in the *Med. Chir. Trans.* vol. xlvi. p. 200, quoted from Mr. King in vol. iv. of the *Monthly Journal of Medical Sciences*. The peculiarities of J. C.'s case consist in the combination of transposition of the

great vessels, smallness of the aorta, and large size of the pulmonary artery; total absence of ventricular septum; all but total freedom from pericardial adhesion; equally healthy and efficient lungs; the attainment of the age of nineteen years and eight months; and, lastly, amiability and good humour. Cyanotic signs were first observed at three months of age, and gradually increased as he grew older. The livid complexion, the clubbed finger-ends, the sensibility to cold, the inaptitude for bodily exertion, the stuffy breathing, the high intelligence, were such as are usual in cyanosis. Short and slight in figure, his chest small and projecting, with trifling movement. The heart's action was nervous and thumping, with a whizzing bruit occasionally accompanying the systolic sound; there was no other indication of valvular defect, nor any sign of pericardiac disease. His health was wonderfully good, and very uniform, and best in sunny weather. In his last and only important illness, extending over three weeks, his pulse was small and rapid; præcordial pain and oppression great; his breathing laborious. He was obliged constantly to sit up; he had drowsiness gradually deepening; extremities slightly œdematous, very cold and livid, his face still more livid, and his tongue and mouth most so. A day or two before his decease, his mouth became aphthous; he died calmly, and as if through gradual exhaustion, on May 19, 1867. An autopsy was made two and a half days afterwards. The body was livid, especially so the extremities, and more so still the neck and face, and most so inside the mouth, as in life. The brain was not inspected. The lungs were quite healthy in structure, and both equally normal. Slight effusion in each pleural sac; no adhesions. The pericardium externally was normal; internally, slight effusion; and but a single trifling adhesion, old and elongated. After two months' immersion in spirit, the heart measured around its widest part eleven and a quarter inches, and in length four and a half inches. This bulk was chiefly due to the right or pulmonic heart; it was distended with grumous blood. The aorta measured only one inch in circumference; it arose from the right side of the heart, and in front of the pulmonary artery, with the auricular appendages on each side of it. From its arch sprang normally the innominata and the left carotid and subclavian, all small and in proportion with the aorta. The pulmonary artery arose behind the aorta, and measured three inches and a half in circumference—three times and a half that of the aorta. The ductus arteriosus was closed. The two venæ cavæ joined the right auricle as usual, and the four pulmonary veins the left auricle. The auricle and appendix were much larger on the right than on the left side of the heart. There was but one ventricular cavity, without a vestige of a septum; in the right portion the columnæ carneæ are fewer and simpler than towards the left. There is but little difference between the musculi papillares and the ventricular wall on the two sides. The arterial orifices were reversed, and that of the pulmonary artery had double the diameter of that of the aorta, admitting two fingers, curiously, however, contrasting with the much wider calibre of the pulmonary trunk above. The valves were strong and thickened at their borders, especially the anterior and the right posterior; the left segment was smaller and thinner; all efficient, and not adapted for any bruit. Beneath the right posterior segment was an abnormal fold of membrane, like a pouch, convex and bulging towards the pulmonary orifice, with short chordæ tendineæ at its free border, at the top of where the absent septum should have been, and between the right posterior segment and the top of the left segment of the tricuspid valve, and which pouch may have aided that segment in obstructing the current from the tricuspid to the pulmonary orifice, and may thus itself have been carried to the left to obstruct the latter opening; and thus the peculiar whizzing sound occasionally heard with the stethoscope may reasonably be explained. The tricuspid and mitral valves, although united and having a papillary muscle along a portion of their union, are otherwise normal. The vestige of the Eustachian valve is distinct, and the valve of the coronary vein is perforated. The fossa ovalis has an oblique opening admitting of a goose quill. In none of the recorded cases of transposition of the great vessels, with the aorta relatively small and the pulmonary artery large, and with a free communication between the two sides of the heart, does life seem to have ever reached three years; whereas J. C. nearly attained his twentieth year, and was actually preparing himself to pass as a missionary to India! Of the other two cases, each presenting remarkable features, the one has been obtained from Dr. Embleton, and the other, conjointly with him, from a former pupil of my class, Mr. Leonard Armstrong, and his partner, Mr. Wallis, of South Shields on Tyne. In Dr. Embleton's own case, the facts were these:—The girl died at the age of fifteen years. When two years old she was unduly chastised, her terror was extreme, cyanosis set in, and, at the autopsy, Dr. Embleton found that the "undefended spot" in the ventricular septum had manifestly been ruptured. The aorta was very large, and the pulmonary artery was remarkably small, being about one-third only of its normal size. These vessels were not transposed. The ductus arteriosus was closed. The right heart was very large in all its parts, and gorged with grumous blood. The ventricular septum had an opening that admitted a thumb, and its edges showed cicatrisation. The auricular septum had two small oblique openings, the larger of which barely admitted the small end of a dissecting-case blowpipe. The child became dropsical, and died calmly, and by exhaustion, on April, 26, 1862. Dr. Embleton concludes his narrative with the following remarkable passage:—"It is curious that tho temperature of the body during life, 99° to 102° F., should have been so very different from that usually observed in cyanotics—viz., 77° F.—and that the child, so far from not being able to bear cold, was always anxious to avoid heat, at very great inconvenience to her attendants." In the yet more remarkable case of Mr. Wallis and Mr. Armstrong, in February, 1850, the girl, aged 15 years, had, at 6 years of age, fallen over head into a deep pond, and immediately cyanosis commenced. At the autopsy it was found that the right or pulmonic heart was diminished throughout. The ventricular septum was perfect. The auricular septum was nearly absent—the two auricles formed, as it were, only one chamber. The great vessels were not transposed. The aorta was normal. The ductus arteriosus was closed, and Dr. Embleton, to whose careful scrutiny, as an accomplished anatomical teacher, the parts were submitted, tells us that "the pulmonary artery being also closed, there seems no route left by which blood could have passed during life from the heart to the lungs, unless, the foramen ovale being so unusually open, we suppose that it was conveyed in an imperfect manner along some of the trunks of the pulmonary veins to the lungs, and returned again by others. It may be remarked that the obliteration of the cavity of the ductus arteriosus and the occlusion of the pulmonary artery had the appearance of long standing." Such is the theory doubtingly offered by Dr. Embleton to explain the pulmonary circulation, not to speak of oxygenation, of the blood in this most singular, perhaps, of all the recorded cases of cyanosis. The girl died at midnight on February 28, 1850, comatose, and occasionally convulsed. Dr. Embleton's observations were not made until April 9, or six weeks afterwards, so that all chance of further inspection was at an end. A discrepancy naturally forces itself upon one's mind as between the anatomical description and the previous history of the patient, who is described as having been altogether robust before she fell into the pond; whereas the septum between the auricles was found to be practically absent, and not merely ruptured, however extensively. Dr. Embleton found that "the two auricles form, as it were, only one chamber." The heart was practically a trilocular heart, with one auricle and two ventricles—substantially the same, in effect, as a heart with two auricles and one ventricle—and, for that very reason, the submersion in the pond was less likely to vitally injure her than if her heart had been normal. And to suppose the heart, in her case, to have been normal up to the date of the accident, how came the septum to be not merely ruptured, but virtually cleared away? And if even so completely removed, or absorbed, as the result of submersion, what remains to be said respecting the imperforate pulmonary artery? Are we not rather constrained to believe that the pulmonary artery had long before, and always, been occluded, and that the seriously defective circulation had, throughout her life, been carried on by abnormal means not detected, because not looked for, nor thought of at the post-mortem inspection of the body shortly after death. Seldom have cyanotic signs been noticed until two or three months after birth, and ignorant persons might vastly extend the time, even to years.

OBITUARY.

DR. ROGAN.

At the Derry County Lunatic Asylum, on Sunday morning, August 30, died Doctor Rogan, the Resident Physician of that institution. Son of one of the most respected local Medical

men, and nephew of another whose Professional eminence was national, he was trained for the same calling. To a rare amount of natural talent was added an education as perfect as industry and perseverance in the best schools and under the best masters could make it. At college he distinguished himself as a first-class prizeman in more than one branch of natural science, and his love of learning was such as to make him an earnest student to the end of his life. His knowledge and attainments as a Physician were held in high estimation by his brethren, who often asked for his assistance in cases requiring more than ordinary acumen. We have further heard it said by competent critics that his judgment and skill as a Surgeon were such as would have placed him in the front ranks of metropolitan practice. His tastes, however, were different, and his ambition soared no higher than the office he held. He gave up a growing practice and confident hopes of eminent and lucrative position to hold the unobtrusive appointment of Resident Physician of the County Derry Asylum. Here his energies were chiefly devoted to the study of mental disease, and to the treatment of his unfortunate patients, duties for which he was, in all respects, eminently qualified. His unexpected removal was caused by disease of the heart. We learn that his Professional brethren have asked permission to attend the funeral as mourners; and that a similar tribute of respect is intended by the members of the Society of Freemasons, of which he was a distinguished Brother and a bright ornament.

MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 27, 1868:—

Bridges, William Percy, Cirencester.
Clarke, John Chaundy, Gildersome, near Leeds.
Lightburne, Joseph, Geashill, King's County, Ireland.
Martin, William Young, Little Hulton, near Manchester.
Raine, George Rolph, Billericay, Essex.
Robertson, Frederick, Peckham.
Wade, Charles, Cross, Weston-super-Mare.

The following gentlemen also, on the same day, passed their First Examination:—

Allen, Thomas, King's College Hospital.
Box, William Henry, Westminster Hospital.
Eager, Wilson, Guy's Hospital.
Matthews, James Forrester, Middlesex Hospital.
Parkinson, Charles Henry Watts, Guy's Hospital.
Slaughter, William Budd, St. Thomas's Hospital.
Stone, Vincent, St. Bartholomew's Hospital.

At the recent competitive examination for the prizes in botany annually given by the Society of Apothecaries, the successful candidates were—

1st. Francis James Carey, Guy's Hospital. A gold medal.
2nd. Thomas Calcott Fox, University College. A silver medal and a book.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

MOORE, J. DANIEL, M.D., F.L.S.—Deputy Coroner for the County Palatine of Lancaster.

NAVAL AND MILITARY APPOINTMENTS.

MEDICAL DEPARTMENT.—Assistant-Surgeon Andrew Knox Rickards, from the Royal Artillery, to be Staff Surgeon, *vice* Thomas M'Sheehy, M.D., deceased—Assistant-Surgeon Samuel Handy Halahan, M.D., from the Royal Artillery, to be Staff Surgeon, *vice* Staff Surgeon-Major Patrick Sinclair Laing, who retires upon half-pay—Staff Assistant-Surgeon Albert Augustus Gore, M.D., to be Staff-Surgeon—Surgeon Charles William Woodroffe, from the 87th Foot, to be Staff-Surgeon, *vice* Andrew Knox Rickards, who exchanges.

ROYAL ARTILLERY.—Staff Assistant-Surgeon Richard John William Orton to be Assistant-Surgeon, *vice* Andrew Knox Rickards, promoted on the Staff—Staff Assistant-Surgeon Charles Stratherne Close to be Assistant-Surgeon, *vice* Samuel Handy Halahan, M.D., promoted on the Staff.

15TH FOOT.—Staff Assistant-Surgeon Frederick Ferguson, M.D., to be Assistant Surgeon, *vice* John Denis Healy, deceased.

87TH FOOT.—Staff Surgeon Andrew Knox Rickards to be Surgeon, *vice* Charles William Woodroffe, who exchanges.

BREVET.—Staff Surgeon Major Patrick Sinclair Laing, who retires upon half-pay to have the honorary rank of Deputy Inspector-General of Hospitals, September 2.

BIRTHS.

FRANCIS.—On August 25, the wife of Dr. William Francis, of Red Lion-court, Fleet-street, and Richmond, Surrey, of a daughter.

JEPSON.—On August 27, at Stone, near Dartford, the wife of Octavius Jepson, M.D., of a daughter.

KIRK.—On July 19, at Zanzibar, the wife of John Kirk, M.D., H.M.V. Consul, of a daughter.

SHONE.—On August 25, at Great Marlow, Bucks, the wife of W. J. Shone, Surgeon, of a son.

MARRIAGES.

BROWNING—CORNER.—On September 1, at Arley Chapel, by the Rev. Samuel Hebditch, Herbert, fourth son of Charles Browning, Esq., M.D., of Maida-hill, London, to Emily, only daughter of George Corner, Esq., of Elton-terrace, Bristol. No cards.

MILLER—BULLOCK.—On August 25, at St. John's, Isleworth, James Armit Miller, Staff Surgeon, Royal Navy, to Anne Maurice Bullock, younger daughter of the late Rev. Thomas Bullock, rector of Castle Eaton and vicar of Chisledon, Wilts. No cards.

WELLS—ROWLANDS.—At St. Peter's Church, Carmarthen, Charles Hugh Wells, Esq., only son of Captain Wells, of Penally and Tenby, Pembrokeshire, to Nanno, second daughter of James Rowlands, F.R.C.S., of Carmarthen.

DEATHS.

DOYLE, JAMES T. J., M.D., F.R.C.S.I., Assistant-Surgeon in H.M.'s Madras Army, at Madras, on July 17, aged 37.

HYDE, GEORGE COCKBURN, M.R.C.S., eldest son of the late James Cockburn, Hyde, R.N., at 2, Upper Belmont-place, Wandsworth-road, on August 27, in his 52nd year.

ROBERTS, HENRY, M.D., at the Royal Hospital for Incurables, on August 21.

WILSON, JAMES WILLIAM, Esq, M.D., at 18, Regency-square, Brighton, on August 25, aged 75.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Axbridge Union.—Mr. John Hardwick has resigned the Second District; area 5130; population 1800; salary £30 per annum.

Blackburn Union.—Mr. Henry A. Grime has resigned the Workhouse; salary £80 per annum. No fees.

APPOINTMENT.

Wrexham Union.—Francis S. Manisty, M.R.C.S.E., L.S.A., to the Gresford District.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN AUGUST, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·13	0·071	0·015	0·010	11·5	2·5
West Middlesex	17·43	0·076	0·011	0·010	11·0	2·5
Southwark & Vauxhall	18·17	0·062	0·012	0·010	12·0	2·5
Chelsea	17·93	0·067	0·023	0·008	11·5	2·5
Lambeth	..	..	..	..	..	..
Other Companies.						
Kent	25·67	0·001	0·083	0·005	17·5	6·5
New River	14·69	0·033	0·049	0·008	11·0	2·5
East London	14·48	0·048	0·028	0·008	10·5	2·0

All the samples were perfectly bright when drawn from the Companies' mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

MEDICAL SENATORS.—M. Latour, in connexion with M. Nélaton's recent elevation, furnishes the exact version of the anecdote concerning Double which has been going the round of the journals. Double was the friend and Physician of Marshal Soult, and it was at his request that Louis-Philippe consented to create Double a peer, on the condition, however, that he gave up practice. (A similar offer, we believe, was made on like conditions to Sir Henry Halford by George IV.) The Marshal took the nomination to Double himself, and stated the condition attached to it. Double was very rich, approaching the end of his career, of simple or even austere habits; and certainly the desire of gain, and of the enjoyments obtainable by money, had no part in the resolution he came to. "Tell the King," he replied to the Marshal, "I can submit to no conditions. If I am to enter the Luxembourg, it must be stethoscope in hand." This was too much for Louis-Philippe, and the affair came to nothing. After all that has been said about the greater liberality manifested towards M. Nélaton by attaching no such conditions, it seems that he is to retire from practice! It is true that he has some time contemplated doing this, and has been withdrawing from consultations and operations; but it is very doubtful whether

he would have received the nomination had this not been known to be the case. With respect to the immense income he is said to derive from his practice, M. Latour believes the statement that it amounts to 600,000 francs is a great exaggeration. Trousseau, at his most flourishing period, observed that there were but three Practitioners in Paris whose income had sometimes exceeded 200,000 francs—viz., himself, and MM. Nélaton and Ricord. However this may be, Nélaton's retirement, and the deaths within so short a space of time of men so largely consulted as Trousseau, Velpeau, Rayer, and Jobert, have placed immense opportunities within the reach of the rising Practitioners.—*Union Méd.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Charles Ward.—Dr. Robert Coales, 10, Trinity-square, Borough, S.E.

n Old Subscriber, Eastbourne.—There is none such to be had in the United Kingdom, except the applicant be over 40 years of age, when the degree of M.D. may be obtained at St. Andrews; but it is only granted to a limited number.

REGULATIONS OF THE UNIVERSITIES OF PARIS, BONN, AND HEIDELBERG.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Could any of your readers inform me where I could gain some information with respect to the Medical degrees of Paris, Bonn, and Heidelberg? I am, &c. MAX.

August 31.

AN IMPOSTOR.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A person giving the name of Mrs. Stewart has called upon me in my capacity of Hon. Sec. to the Medical Benevolent Fund, seeking assistance for her husband, said to be a Medical man, whom I recognised as a clever swindler who took me and others in some years ago. She gets up a story remarkably well, and as she has prepared one for the Medical Profession she will probably try to use it. She does not ask for money in the first instance. She almost always brings the name of a friend or acquaintance of the person to whom she applies, and a name incautiously mentioned will send her straight to the individual with yours. By inserting this note you may put Medical men on their guard. I am, &c.

W. H. BROADBENT,
Honorary Secretary Medical Benevolent Fund.

P.S.—Unknown persons seeking assistance as connected with the Profession may be referred to me on payment of a fine to the Fund.

44, Seymour-street, September 2.

CORRIGENDUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you allow me to state that the ward in the St. Pancras Infirmary in which the child, on whom the inquest was held, died, contains 6698 cubic feet and eight beds, so that each child has 837 cubic feet of air space? The room referred to by me in my evidence is not in the infirmary, but in the workhouse, and therefore out of my jurisdiction.

I am, &c. F. W. GIBSON,
St. Pancras Infirmary, September 1. Resident Medical Officer.

COMMUNICATIONS have been received from—

SENEX; Dr. LA FARGUE; EASTBOURNE; Dr. MUSPRATT; Mr. MACKAYE; Mr. TAYLOR; MAX; THE WRITER OF C. AND C.; Dr. POWELL; Mr. GIBSON; INQUIRER; Dr. BROADBENT; Dr. W. J. TREUTLER; Dr. HUGHLINGS JACKSON; Dr. B. W. RICHARDSON; Mr. J. CHATTO; Dr. GORDON; Dr. BARNES; Dr. DOUGLAS POWELL; Dr. TAAFFE; L. A. M.; Dr. LETHEBY; Mr. STIRK.

BOOKS RECEIVED—

Balfour on Aneurism—Wood's Bible Animals, part ix.—Report of the East London Hospital for Children—Pharmacopœia of India—Pharmaceutical Journal, September—Practitioner, September—Nicaise sur le Choléra—Galezowski sur les Maladies des Yeux—Edinburgh Medical Journal, September—Medical Report of Aberdeen Lunatic Asylum—Revista Médico-Quirúrgica (Buenos Ayres)—Gantillon on Uterine Catarrh.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette Hebdomadaire—California Medical Gazette—Public Health—Gazette des Hôpitaux—Tribune Médicale—Medical Press and Circular—Londonderry Standard.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 29, 1868.

BIRTHS.

Births of Boys, 1121; Girls, 1126; Total, 2247.
Average of 10 corresponding weeks, 1858-67, 1812·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	682	674	1356
Average of the ten years 1858-67	608·0	590·5	1198·5
Average corrected to increased population..	..	..	1318
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	3	17	1	3	3	26	1
North ..	618,210	1	5	13	1	6	8	32	1
Central	378,058	1	3	8	2	1	7	18	2
East ..	571,158	2	3	7	1	2	19	47	3
South ..	773,175	3	7	12	..	12	14	63	3
Total ..	2,803,989	7	21	57	5	24	51	186	10

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 29, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Aug. 29.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Aug. 29.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2247	1441	1356	75·1	47·8	58·1	0·06	6
Bristol (City) . .	167487	35·7	119	75	*61	..	..	..	..	..
Birmingham (Boro')	352296	45·0	230	171	202	67·3	47·9	55·8	0·13	13
Liverpool (Borough)	500676	98·0	397	290	349	67·5	49·4	55·8	0·52	53
Manchester (City) .	366835	81·8	256	208	*274	..	..	..	..	..
Salford (Borough) .	117162	22·7	81	59	78	65·2	46·8	55·0	0·61	62
Sheffield (Borough).	232362	10·2	171	122	153	65·6	47·0	55·6	0·32	32
Bradford (Borough)	108019	16 4	123	55	83	..	..	..	..	..
Leeds (Borough) .	236746	11·0	286	120	176	65·0	47·0	55·7	0·69	70
Hull (Borough) .	108269	30·4	88	50	76	67·0	43·0	54·3	0·11	11
Newcstl-on-Tyne, do.	127701	23·9	113	68	73	63·0	46·0	52·5	0·75	76
Edinburgh (City) .	177039	40·0	121	85	80	68·7	48·0	54·8	1·00	101
Glasgow (City) .	449868	88·9	340	262	226	..	..	..	..	..
Dublin (City and some suburbs) .	319985	32·8	158	157	172	71·6	44·4	56·8	0·21	21
Total of 14 large Towns . . .	6391080	34·7	4730	3163	3364	75·1	43·0	55·4	0·44	44
					Week ending Aug. 22.	Week ending Aug. 22.				
Vienna (City) . .	(1863) 560000	..	..	..	273	..	..	†71·8	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·855 in. The barometrical reading increased from 29·18 in. at the beginning of the week to 30·10 in. on Saturday, August 29. The general direction of the wind was W.S.W. and W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 61·9°.

APPOINTMENTS FOR THE WEEK.

September 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

7. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

8. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

9. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

11. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

RULES AND REGULATIONS

OF THE

EXAMINING MEDICAL BODIES IN ENGLAND.

SESSION 1868—69.

REGISTRATION OF MEDICAL STUDENTS.

The following Regulations have been adopted by the General Medical Council, in reference to the registration of students of Medicine:

1. Every Medical student shall be registered in the manner prescribed by the General Medical Council.

2. No Medical student shall be registered until he has passed a Preliminary Examination, as required by the General Medical Council.

3. The commencement of the course of Professional study recognised by any of the Qualifying Bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

4. The registration of Medical students shall be placed under the charge of the Branch Registrars.

5. Every person desirous of being registered as a Medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form, which may be had on application to the several Qualifying Bodies, Medical Schools, and Hospitals; and shall produce or forward to the Branch Registrar a Certificate of his having passed a Preliminary Examination, as required by the General Medical Council, and a statement of his place of Medical Study.

6. Each of the Branch Registrars shall supply to the several Qualifying Bodies, Medical Schools, and Hospitals, in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of Medical students.

7. The several Qualifying Bodies are recommended not to admit, after October, 1870, to the final Examination for a Qualification under the Medical Acts, any Candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least four years previously.

In the case of Candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

PRELIMINARY EXAMINATIONS IN ARTS RECOGNISED BY THE GENERAL MEDICAL COUNCIL.

1. A Degree in Arts of any University of the United Kingdom or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council.

2. Oxford Responsions or Moderations.

3. Cambridge Previous Examinations.

4. Matriculation Examination of the University of London.

5. Oxford Middle Class Examinations (Senior).

6. Cambridge Middle Class Examinations (Senior).

7. Durham Middle Class Examinations (Senior).

8. Durham Examinations for Students in Arts in their second and first years.

9. Durham Registration Examination for Medical students.

10. Dublin University Entrance Examination.

11. Queen's University, Ireland, two years' Arts Course for the Diploma of Licentiate in Arts.

12. Queen's University Preliminary Examinations at the end of A.B. Course.

13. Queen's University Middle Class Examinations.

14. Queen's University Matriculation Examinations.

15. First Class Certificate of the College of Preceptors.

16. "Testamur" granted by Codrington College, Barbadoes.

17. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the Student has been examined in Latin and Mathematics.

18. Matriculation Examination of McGill University, Montreal.(a)

Students who cannot produce any of the above testimonials are required to pass an Examination in Arts, established by any of the Bodies named in Schedule (A) to the Medical Act, and approved by the General Medical Council.

It is recommended to the Licensing Boards not to accept the Certificate of Proficiency in General (preliminary) Education from any of the Bodies, the names of which are contained in the list annually circulated, unless such Certificate testify that the Student to whom it has been granted has been examined in—

1. English Language, including Grammar and Composition.(b)

2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations.

3. Geometry, first two books of Euclid.

4. Latin, including Translation and Grammar.

And in one of the following optional subjects:—

Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

No one may be admitted a Student in Medicine until he has passed all the Examinations required for the degree of B.A.

1. Candidates for the degree of B.M. are required to pass two Examinations, each of which is held yearly in full Michaelmas Term, usually at the end of November, due notice being given, in the usual manner, by the Professor of Medicine. The first Examination is conducted by the Regius Professor of Medicine and three persons who have been admitted to Regency either as Masters of Arts or as Doctors, and who are nominated yearly by the Vice-Chancellor subject to the approval of Convocation, the second by the Regius Professor and two Doctors of Medicine nominated in like manner. Each Examination is conducted partly in writing, partly *viva voce*, and part of each is practical. The subjects of the first Examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the Second Examination are the Theory and Practice of Medicine (including diseases of women and children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every Candidate at this second Examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus, or in one of those four, and in some modern author approved by the Regius Professor.(c)

Before a Candidate is admitted to the first of these two Examinations, he must have spent two years in Professional studies after having passed the Examinations required for the degree of B.A., unless he was placed in the First or Second Class in the School of Natural Science, in which case, if he received from the Public Examiners a special Certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this Examination at once, and need not then be examined again in any science specified in such Certificate. Before a Candidate is admitted to the Second Examination, he must have completed sixteen Terms from the date of the same *Testamur* and two years from the date of his *Testamur* in the first Medical Examination, and must deliver to the Regius Professor satisfactory Certificates of his attendance at some Hospital of good repute. Every one intending to be a Candidate at either Examination is required to give the Professor notice of his intention a fortnight at least before the week in which the Examination is to be held.

No one from another University can be incorporated as a Graduate in Medicine without passing these two Examinations.

(a) Certificates of Examination by the Bodies contained in the list subjoined have been accepted as sufficient Testimonials of Proficiency by some of the Licensing Bodies, and allowed by the Branch Councils to which they were referred.

1. University of Paris—Examination for Diploma of Bachelor of Sciences.
2. University of Toronto—Matriculation Examination.
3. University of King's College, Nova Scotia—Matriculation Examination.
4. Royal Military College, Sandhurst—Entrance Examination; Examination for Direct Commission.
5. Incorporated Law Society.
6. St. Mark's College—Examination required by the Committee of the Privy Council

(b The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the Candidate—1st. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition. 2nd. To write a portion of an English author to dictation. 3rd. To explain the grammatical construction of one or two sentences. 4th. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature. 5th. To give the derivation and definition of a few English words in common use.

Provided always that an Examination may be accepted as satisfactory that secures, on the part of the Candidate passing it, a sufficient grammatical knowledge of English.

(c) Such modern authors are Morgagni, Sydenham, Boerhaave,

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precinct of the Schools, in the presence of the Regius Professor, a Dissertation composed by himself on some Medical subject approved by the Professor, and to deliver to him a copy of it.

The following Teachers in Physical Science have Departments in the University Museum :—Regius Professor of Medicine, Dr. Acland, F.R.S.; Natural Philosophy, Professor B. Price, F.R.S.; Geometry, Professor H. S. Smith, F.R.S.; Experimental Philosophy, Professor Clifton, F.R.S.; Chemistry, Sir B. C. Brodie, Bart., M.A., F.R.S.; Demonstrator of Chemistry, E. Madan, M.A.; Zoology, Professor Westwood, M.A.; Geology, Professor Phillips, F.R.S.; Mineralogy, Professor Maskelyne, F.R.S.; Linacre Professor of Physiology, Professor Rolleston, F.R.S.; Lees Reader in Anatomy, W. E. Church, M.B.; Demonstrator in Anatomy, Charles Robertson, Esq.; Demonstrations in Pathological Anatomy by Henry Tuckwell, M D.

UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.—Before a Student can become a Bachelor of Medicine he must have resided nine terms (three academical years).

Five years of Medical study are required, of which time six terms (two academical years) shall be spent in the University after the student has passed the previous Examination. In the case of those who have graduated with honours as Bachelor of Arts, four years of Medical study are deemed sufficient, and four terms only of Medical Study in the University are required.

The Previous Examination may be passed in the Lent term (at the latter end of March) by those who declare themselves as Medical Students and have commenced residence in the University in the previous October. In addition to the previous Examination, the Student is required to pass an Examination in Algebra at the same time or in some subsequent term.

There are three examinations for M.B.

The first Examination is in—1. Mechanics and Hydrostatics; 2. Chemistry, with Heat and Electricity; 3. Botany. Before presenting himself for it the Student must have attended Lectures on Chemistry, including manipulations, and Botany. (Students who have obtained honours in any Tripos or passed the general Examination for B.A. are not required to be examined in Mechanics and Hydrostatics; and those who have passed the special Examination in Botany for B.A. are not required to be again examined in that subject.)

The Second Examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacology. The Student must have completed two years of Medical study, the time of Medical study required to be spent in the University being included in these two years, and must also produce Certificates of attendance on Lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy, and Pathology; one year's Hospital Practice and one season's Dissections.

Students who have obtained honours in the Natural Sciences Tripos, and have passed with credit the Examination in Chemistry, Botany, or Comparative Anatomy, are not required to be again examined in those subjects.

The Third Examination is in—1. Pathology and Practice of Physic (two papers); 2. Clinical Medicine (in the wards of the Hospital); 3. Medical Jurisprudence. The Candidate must have completed the course of Medical Study, and must produce Certificates of attendance on one Course of Lectures on each of the following subjects :—Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery, and of having attended Hospital Practice during three years.

After the Third Examination an Act has to be kept, which consists in reading an original thesis, followed by a *viva voce* Examination on the subject of the thesis, as well as on other subjects of the Faculty.

The *Degree of Doctor of Medicine* may be taken three years after M.B. An Act has to be kept with *viva voce* Examination, and an essay has to be written extempore. A Master of Arts of four years' standing can proceed direct to M.D., provided he produces the same certificates and passes the same Examinations as for M.B.

Degree of Master in Surgery.—The Candidate must have passed all the Examinations for the Degree of M.B., and must produce Certificates of having attended a second Course of Lectures on Human Anatomy, one Course of Lectures on the Principles and Practice of Surgery, one year's Clinical Surgical Lectures, ten cases of Midwifery, a second season of Dissections, three years the Surgical Practice of a recognised Hospital, and of having been House-Surgeon or Dresser at such Hospital for six months. The subjects of the Examination are—1. Surgical Anatomy; 2 Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery; and 4. Midwifery.

All the Examinations are partly in writing, partly *viva voce*, and take place in the Michaelmas and Easter terms, an interval of two days being allowed to intervene between the first and second Examinations for M.B.

Attendance at the Hospital and Lectures in Cambridge is recognised by the Universities of Cambridge and London, and (for one year) by the College of Surgeons and the Society of Apothecaries.

UNIVERSITY OF LONDON.

BURLINGTON HOUSE, W.

BACHELOR OF MEDICINE.

Candidates for the Degree of Bachelor of Medicine are required—

1. To have passed the Matriculation Examination of their University, or to have taken a Degree in Arts in one of the Universities in the United Kingdom or of Australia.

2. To have been engaged in their Professional studies during four years subsequently to Matriculation or Graduation in Arts, at one or more of the Medical Institutions or Schools recognised by this University; one year at least of the four to have been spent in one or more of the recognised Institutions or Schools in the United Kingdom.

3. To pass the Preliminary Scientific Examination,(a) and two Examinations in Medicine.

PRELIMINARY SCIENTIFIC EXAMINATION.

The Preliminary Scientific Examination takes place once in each year, and commences on the third Monday in July.

No candidate is admitted to this Examination until he has completed his seventeenth year, and has either passed the Matriculation Examination or taken a Degree in Arts in one of the Universities of the United Kingdom or of Australia; nor unless he have given notice of his intention to the Registrar at least *fourteen days* before the commencement of the Examination.

The fee for this Examination is £5.

Candidates are examined in the following subjects :(b)—Mechanical and Natural Philosophy; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology and Comparative Anatomy.

EXAMINATION FOR HONOURS.

Any candidate who has passed the Preliminary Scientific Examination may be examined for Honours in (1) Chemistry and Natural Philosophy, (2) Botany, (3) Zoology. If, in the opinion of the Examiners, any candidate of not more than twenty-two years of age who has passed either the Preliminary Scientific M.B. Examination or the First B.Sc. Examination possesses sufficient merit, the candidate who distinguishes himself the most of all the candidates who have passed either of the said Examinations, and who are not more than twenty-two years of age, in Chemistry and Natural Philosophy, and the candidate who distinguishes himself the most of all the candidates who have passed either of said Examinations, and who are not more than twenty-two years of age, in Botany, and the candidate who distinguishes himself the most of all the candidates who have passed either of the same Examinations, and who are not more than twenty-two years of age, in Zoology, shall each receive an Exhibition of £40 per annum for the next Two Years, payable in quarterly instalments (it being intended that one Exhibition only shall be given in each case among all the candidates, although some of such candidates may have passed the Preliminary Scientific M.B. Examination, and others the First B.Sc. Examination); provided that on receiving each instalment he declares his intention of presenting himself at the first M.B. Examination within three academical years from the time of his passing the Preliminary Scientific

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

(b) Candidates who pass in all the subjects of the Preliminary Scientific Examination, and also in the Mathematics of the First B.Sc. Examination, are considered as having passed both the Preliminary Scientific Examination, and also the First Bachelor of Science Examination, without the payment of any additional fee.

Examination, or at the second B.Sc. Examination within two academical years from the time of his passing the First B.Sc. Examination, as the case may be.

FIRST M.B. EXAMINATION.

The First M.B. Examination takes place once in each year, and commences on the last Monday in July. No candidate is admitted to this Examination unless he have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having passed the Preliminary Scientific Examination at least one year previously. (c) 3. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, been a Student during two years at one or more of the Medical Institutions or Schools recognised by this University, and of having attended a Course of Lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 4. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, dissected during two Winter Sessions. 5. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, attended a Course of Practical Chemistry, comprehending Practical Exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of Mineral Waters, Animal Secretions, Urinary Deposits, Calculi, etc. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the Preparation of Medicines.

These Certificates must be transmitted to the Registrar at least fourteen days before the commencement of the Examination.

The fee for this Examination is £5.

Candidates are examined in the following subjects:—Anatomy, Physiology, (d) Materia Medica and Pharmaceutical Chemistry and Organic Chemistry.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the First M.B. Examination may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

The Candidates who distinguish themselves most in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, (3) Materia Medica, and Pharmaceutical Chemistry and Organic Chemistry, respectively, each receive an Exhibition of forty pounds per annum for the next two years; provided that on receiving each instalment he declares his intention of presenting himself at the Second M.B. Examination within three academical years from the time of his passing the First M.B. Examination.

Under the same circumstances the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

SECOND M.B. EXAMINATION.(e)

The Second M.B. Examination takes place once in each year, and commences on the first Monday in November.

No Candidate is admitted to this Examination within two academical years of the time of his passing the First Examination, nor unless he have produced Certificates to the following effect:—

1. Of having passed the First M.B. Examination.

2. Of having, subsequently to having passed the First M.B. Examination, attended a Course of Lectures on each of two of the subjects comprehended in the foregoing list (*vide* First M.B. Examination, § 3), and for which the candidate had not presented Certificates at the First M.B. Examination.

3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified Practitioner in Medicine.

4. Of having attended the Surgical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery.

5. Of having attended the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Medicine. N.B.—The Student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5 may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the first M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with Clinical Instruction, may be substituted for a like period of attendance on Medical Hospital Practice.

6. Of having, subsequently to the completion of his attendance on Surgical and Medical Hospital Practice, attended to Practical Medicine, Surgery, or Midwifery, with special charge of patients in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months.

The Candidate must also produce a Certificate of Moral Character from a teacher in the last School or Institution at which he has studied, as far as the Teacher's opportunity of knowledge has extended.

These Certificates must be transmitted to the Registrar at least *fourteen days* before the Examination begins.

The fee for this Examination is £5.

Candidates are examined in the following subjects:—General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine.

Such candidates only as are placed in the First Division are admissible to the Examination for Honours.

The Senate desire it to be understood that Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the Second M.B. Examination may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If in the opinion of the Examiners sufficient merit be evinced, the Candidate who distinguishes himself the most in Medicine shall receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances the Candidate who distinguishes himself the most in Midwifery shall receive £30 per annum for the next two years, with the style of University Scholar in Midwifery. Under the same circumstances, the Candidate who distinguishes himself the most in Forensic Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

BACHELOR OF SURGERY.

The examination for the Degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the fourth Monday in November.

No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a Course of Instruction in Operative Surgery, and of having operated on the dead subject.

These Certificates must be transmitted to the Registrar at least *fourteen days* before the Examination begins.

The Fee for this Examination is £5.

The Examinations comprise—Surgical Anatomy and Surgical Operations, by printed papers; Examination and Report on Cases of Surgical Patients; Performance of Surgical Operations upon the Dead Subject; Application of Surgical Apparatus; *viva voce* Interrogation.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the B.S. Examination may be examined for Honours in Surgery. The Examination is conducted by means of printed papers.

The Candidate who distinguishes himself the most receives £50 per annum for the next two years, with the style of University Scholar in Surgery.

(c) See note (a), p. 288.

(d) Any Candidate is allowed, if he so prefer, to postpone his Examination in Physiology from the First M.B. Examination at which he presents himself for Examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such Candidate is not admitted to compete for Honours on either occasion; and is not admitted as a Candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his Examination in Physiology.

(e) Any Candidate for the Second M.B. Examination who has passed the First M.B Examination under the former Regulations will be required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present Regulations; at which Examination he is not allowed to compete for Honours.

Under the same circumstances, the first and second Candidates each receive a gold medal of the value of £5.

MASTER IN SURGERY.

The Examination for the Degree of Master in Surgery takes place once in each year, and commences on the fourth Monday in November.

No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Surgery(f) in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Surgery in this University—*a*. To Clinical or Practical Surgery during two years in a Hospital or Medical Institution recognised by this University; *b*. Or to Clinical or Practical Surgery during one year in a Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession; *c*. Or of having been engaged during five years in the practice of his Profession, either before or after taking the degree of Bachelor of Surgery in this University. (One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those Candidates who at the B.S. Examination have been placed in the First Division.) 3. Of moral character, signed by two persons of respectability.

These Certificates must be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for the Degree of Master in Surgery is £5.

The Examination shall be conducted by means of printed papers and *viva voce* interrogation.

Candidates are examined in the following subjects:—Surgery. Logic and Moral Philosophy. (Candidates who have taken the Degree of Doctor of Medicine in this University, or a Degree in Arts or in Science either in this University or in a University the Degrees granted by which are recognised by the Senate of this University, shall be exempted from the Examination in Logic and Moral Philosophy.)(g)

The candidate who distinguishes himself most in Surgery at the Examination for the Degree of Master in Surgery receives a gold medal of the value of £20.

DOCTOR OF MEDICINE.

The Examination for the Degree of Doctor of Medicine takes place once in each year, and commences on the fourth Monday in November. No candidate is admitted to this Examination unless he have produced certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Medicine in this University—*a*. To Clinical or Practical Medicine during two years in a Hospital or Medical Institution recognised by this University; *b*. Or, to Clinical or Practical Medicine during one year in a Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession; *c*. Or, of having been engaged during five years in the practice of his Profession, either before or after taking the Degree of Bachelor of Medicine in this University. (One year of attendance on Clinical or Practical Medicine, or two years of Practice, will be dispensed with in the case of those candidates who at the Second M.B. Examination have been placed in the First Division.) 3. Of moral character, signed by two persons of respectability.

These certificates must be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for the Degree of Doctor of Medicine is £5.

Candidates are examined in the following subjects:—1. Logic and Moral Philosophy. (Candidates who have taken a Degree in Arts or in Science in this University, or in a University the Degrees granted by which are recognised by the Senate of this University, are exempted from this part of the Examination.) (g) 2. Medicine (including Examination and Report on Cases, etc.). 3. A commentary on a case of Medicine or Midwifery, at the option of the candidate.

The candidate who distinguishes himself the most in Medicine at the Examination for the Degree of Doctor of Medicine shall receive a gold medal of the value of £20.

(f) Candidates who have obtained the Degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the Degree of Master in Surgery without having taken the Degree of Bachelor of Surgery; and in the case of such Candidates, the attendance on Surgical Practice required by Regulation 2 may commence from the date of the M.B. Degree.

(g) The Degrees in Arts of all Universities in the United Kingdom are recognised by the Senate for this purpose.

REGULATIONS RELATING TO CANDIDATES WHO COMMENCED THEIR MEDICAL STUDIES IN OR BEFORE JANUARY, 1839.

Bachelor of Medicine.—Candidates who commenced their Professional Studies in or before January, 1839, shall be required to pass the Preliminary Scientific Examination in Chemistry and Botany only, and shall be admitted to the First Examination for this Degree on producing certificates to the following effect:—1. Of having been engaged during two years in their Professional Studies. 2. Of having attended a Course of Lectures on each of four of the subjects comprehended in the list, § 3, First M.B. Ex. 3. Of having Dissected during nine months. 4. Of having attended to Practical Pharmacy during a sufficient length of time to enable them to acquire a practical knowledge in the preparation of Medicines.

Candidates who commenced their Professional Studies in or before January, 1839, shall be admitted to the Second Examination for the Degree of Bachelor of Medicine on producing Certificates to the following effect:—1. Of having been engaged during four years in their Professional Studies. 2. Of having passed the First M.B. Examination. 3. Of having attended a Course of Lectures on each of two of the subjects comprehended in the list, § 3, First M.B. Ex. 4. Of having Dissected during twelve months. 5. Of having attended to Practical Pharmacy during a sufficient length of time to enable them to acquire a practical knowledge in the preparation of Medicines. 6. Of having conducted at least six labours. 7. Of having attended the Surgical Practice of a recognised Hospital or Hospitals during twelve months. 8. Of having attended the Medical Practice of a recognised Hospital or Hospitals during other twelve months. 9. Of Moral Character from a Teacher in the last School or Institution at which they have studied, as far as the Teacher's opportunity of knowledge has extended. Candidates who have not taken a Degree in Arts or passed the Matriculation Examination in this University, will be required to translate a portion of Celsus *de Re Medica*.

REGULATIONS RELATING TO PRACTITIONERS IN MEDICINE OR SURGERY DESIROUS OF OBTAINING DEGREES IN MEDICINE.

Bachelor of Medicine.—Candidates shall be admitted to the two Examinations for this Degree on producing certificates to the following effect:—1. Of having been admitted prior to the year 1840 members of one of the legally constituted bodies in the United Kingdom for licensing Practitioners in Medicine or Surgery; or of having served previously to 1840 as Surgeons or Assistant-Surgeons in her Majesty's Army, Ordnance, or Navy, or in the service of the Honourable the East India Company. 2. Of having received a part of their education at a recognised Institution or School, as required by the Charter of the University. 3. Of moral character, signed by two persons of respectability.

Candidates who have not taken a Degree in Arts or passed the Matriculation Examination in this University, will be required to translate a portion of Celsus *de Re Medica*.

Doctor of Medicine.—Candidates who have been engaged during five years in the Practice of their Profession shall be admitted to the Examination for this Degree on producing certificates to the following effect:—1. Of having been engaged during five years in the practice of their Profession. 2. Of having taken the Degree of Bachelor of Medicine in this University.

Candidates who have not taken a Degree in Arts or passed the Matriculation Examination in this University, will be required to translate a portion of Celsus *de Re Medica*.

UNIVERSITY OF DURHAM.

REGULATIONS RELATING TO MEDICAL STUDENTS.

1. No one shall be held to be a Student in Medicine who has not been registered in a register kept for that purpose. No one shall be so registered unless he has passed the Registration Examination or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination shall be directed to the Rudiments of Religion, Literature, and Science; and shall be conducted by two or more Examiners nominated by the Warden.

2. No Grace for a Licence in Medicine shall be granted, unless the petitioner is of the age of 21 years, has spent four years in Medical study since his registration at one or more of the schools recognised by the licensing bodies named in Schedule A of the Medical Act, 1858. (Residence in Durham is therefore not imperative.) No Grace for a Licence in Medicine shall be granted unless the petitioner has passed two public examinations. No one shall be admissible to the first of these examinations unless he has spent two years at least in Medical study as above prescribed. No

one shall be admissible to the second of these examinations unless he has spent four years at least in Medical study as above prescribed, and has passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on Lectures and Hospital Practice as the Warden and Senate shall require (see below §). Each of these examinations shall be conducted by three or more Examiners, nominated by the Warden and approved by Convocation, and shall be directed to such subjects of Medical science and practice as shall have been fixed on by the Warden and Senate.

3. No Grace for the Degree of Bachelor in Medicine shall be granted unless the petitioner is of the standing of three terms at least as a Licentiate in Medicine, and of eighteen terms (six years) at least from the date of his registration or matriculation. No one who is not a Bachelor of Arts shall be admissible to the Degree of Bachelor of Medicine unless he has kept three terms by residence at Durham, and has passed the final examination for the Degree of Bachelor of Arts, or an equivalent to it, as hereinafter described, and also the examination for the Degree of Bachelor of Medicine, nor unless he has spent one year at least in Medical study at some School of Medicine in connexion with the University. The examination for the Degree of Bachelor of Medicine shall be directed chiefly to the practice of Medicine. The details are arranged by the Warden and Senate. The Warden and Senate shall have authority to arrange for Medical Students an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient Medical author or authors as they may think fit.

4. No Grace for the Degree of Doctor of Medicine shall be granted unless the petitioner is a Bachelor of Medicine of twenty-one terms at least (seven years) standing from his registration or matriculation, and of three terms at least from his admission to the Degree of Bachelor of Medicine, nor unless he has performed such exercises as the Warden and Senate require.

5. No grace for a Licence in Surgery shall be granted unless the petitioner is of the age of 21 years, has spent four years in Medical and Surgical study since his registration as a Student in Medicine, in some one or more of the Schools recognised by the Licensing Bodies named in Schedule A of the Medical Act, 1858. (Residence in Durham is therefore not imperative.) No Grace for a Licence in Surgery shall be granted unless the petitioner has passed two public examinations. The first of these examinations shall be the first examination appointed for Students in Medicine. No one shall be admissible to it who has not spent two years in Medical and Surgical study, as above prescribed. The second of these examinations shall be partly the same as the second examination appointed for Students in Medicine, and shall be partly in Surgical subjects. No one shall be admissible to it who has not spent four years at least in Medical and Surgical study as above prescribed, and passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on Lectures and Hospital Practice as the Warden and Senate shall require (see below §). Each of these examinations shall be conducted by three or more Examiners nominated by the Warden, and approved by Convocation, and shall be directed to such subjects as shall have been fixed on by the Warden and Senate. The second examination for a Licence in Surgery may or may not be passed at the same time with the second examination for a Licence in Medicine.

6. No Grace for the Degree of Master in Surgery shall be granted unless the petitioner is a Licentiate in Surgery, and also a Licentiate in Medicine, and is of the standing of eighteen terms (six years) at least from the date of his registration or Matriculation, and of three terms at least from the date of his admission to the Licence in Surgery. No one who is not a Bachelor of Arts shall be admissible to the Degree of Master in Surgery unless he has kept three terms by residence at Durham, and has passed the final examination for the Degree of Bachelor of Arts, or an equivalent to it, as hereinafter described, besides the examination for the Degree of Master in Surgery, nor unless he has spent one year at least in Medical and Surgical study in some School of Medicine in connexion with the University. The examination for the Degree of Master in Surgery shall be directed chiefly to the Practice of Surgery. The details are arranged by the Warden and Senate.

7. Any Student in Medicine who was registered before Easter Term, 1868, shall be entitled to be admitted to the Degree of Master in Surgery on the same conditions as are above required for a Licence in Surgery.

§ A Candidate for the Licence in Medicine and for the Licence in Surgery must bring evidence of having attended—1. During the first two years of study: Two six months' Courses of Lectures on Anatomy; two six months' Courses of Lectures on Physiology; one six months' Course of Lectures on Chemistry; of having been engaged for three months in Practical Pharmacy, and for two Winter Sessions in Practical Dissection of the human body, and of having attended for twelve months the Surgical and the Medical Practice, with Clinical Lectures on Surgery and on Medicine, at a Hospital recognised by the University. 2. During the remaining two years: Two six months' Courses of Lectures on the Principles and Practice of Surgery; two six months' Courses of Lectures on the Principles and Practice of Medicine; two three months' Courses of Lectures and Demonstrations on Morbid Anatomy; one three months' Course of Lectures on each of the following subjects:—Botany, Materia Medica, Practical Chemistry, Midwifery, and Medical Jurisprudence. Together with Surgical and Medical Hospital Practice, and Clinical Lectures on Surgery and Medicine for two Winter Sessions and one Summer Session.

Order of Senate relating to the Registration of Students in Medicine:—

1. The name of every Student in Medicine shall be placed on a Register kept by the Registrar of the University of Durham.

2. No one shall be registered unless he has produced to the Warden the requisite certificates of examination and character.

The requisite Certificate of Examination shall be a Certificate of his having passed either the Registration Examination appointed by the University of Durham, or any one of the examinations named in the Minutes of the Medical Council for England.

The Registration Examinations take place on September 22, 1868, and April 19 and September 20, 1869. Necessary subjects:—The History contained in the Acts of the Apostles; the History of England to the end of the reign of Henry III.; English Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Euclid, Books I. and II.; the Geography of Great Britain, Ireland, and France. Candidates will be expected to draw from memory Outline Maps of these Countries, showing their chief ranges of mountains and their principal rivers, and also to answer questions connected with them. Latin Grammar with—in April, Cæsar de Bello Gallico, Lib. I. and II.; in September, Virgil, Æneid, Lib. I. and II. Optional subjects:—Greek Grammar, with Xenophon's Memorabilia; French Grammar, with Voltaire's Charles XII.; German Grammar, with Goethe's Dichtung und Wahrheit, Book I.; Elementary Questions in Mechanics, Hydrostatics, and Pneumatics. Candidates who intend to pass an examination in any of these subjects must signify their intention fourteen days before the Examination.

The Examination Fee, £1, with a testimonial of character, and an application for admission, must be sent to A. Beanlands, Esq., Durham, one month before the Examination.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

MEMBERS.—EXTRACTS FROM THE BYLAWS.

1. The Members of the College, present and future, are alone eligible to the Fellowship. They have the use of the Library and Museum, and are admitted to all Lectures; but they are not entitled to any share in the Government, or to attend or vote at General Meetings, of the Corporation. 2. Persons who have been admitted before February 16, 1859, Licentiates of the College are entitled to be admitted Members of the College. 3. Any Extra-Licentiate who shall have produced Testimonials as to character satisfactory to the Censors, and shall have assured the said Censors that he is not engaged in the practice of Pharmacy, and who shall comply with such other Regulations as are required by the Bylaws of the said Corporation, may be proposed to the College to be admitted a Member of the College. 4. Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the Bylaws and Regulations of the College, may be proposed to the College to be admitted a Member of the College. 5. Every Candidate for the Member-

ship of the College, under the last Bylaw, who shall have commenced his Professional Studies after September, 1861, shall satisfy the Censors' Board that previously to the commencement of his Professional Studies he has obtained a Degree in Arts from some University of the United Kingdom or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed Examinations equivalent to those required for a Degree in Arts. All other Candidates for Membership shall be examined on the subjects of General Education by the President and Censors of the College. 6. Every Candidate for Membership shall furnish proof that he has attained the age of twenty-five years. 7. Every Candidate shall produce a Testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College. 8. Every Candidate (*except such as shall be admissible under the provisions of Sections* 15 *and* 16) shall produce proof of his having been engaged in Professional Studies during a period of five years, of which four years at least shall have been passed at a Medical School or Schools recognised by the College. 9. Every Candidate (*except such as shall be admissible under the provisions of Sections* 15 *and* 16) shall produce evidence, satisfactory to the Censors' Board, of his having fulfilled the Course of Study prescribed for Licentiates of the College (see below), with the following exceptions :—(1) The Candidate for Membership must have attended Lectures on Clinical Medicine during three Winter and three Summer Sessions, the attendance not to commence earlier than the Second Winter Session, at a recognised Medical School. (2) He must have attended diligently during three Winter Sessions and three Summer Sessions the Medical Practice, *and during three Winter Sessions and two Summer Sessions the Surgical Practice*, of an Hospital containing at least 100 beds; and have been engaged during six months in the Clinical Study of Diseases peculiar to Women; and have served the office of Clinical Clerk in the Medical Wards during at least six months. 10. Every Candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding Bylaw (*except such as shall be admissible under the provisions of Section* 16), shall, nevertheless, bring proof of his having attended, during at least twelve months, the Medical Practice of an Hospital in the United Kingdom containing at least 100 beds. 12. No Candidate shall be admitted to Examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a Chemist, or any other person, for the supply of medicines; or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues; or, 13, who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses. 15. Any Candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at a University in the United Kingdom, wherein the Courses of Study, and the Examinations to be undergone by the Students previously to graduation, shall have been adjuged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the Examinations hereinbefore described, except such as relate to the Third or Pass Examination; the nature and extent of which Examination shall, in the case of each Candidate, be determined by the Censors' Board. Every Candidate for the Membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages. 16. If any Candidate who has attained the age of forty years shall produce Testimonials not merely satisfactory as to his moral character and conduct, and his general and Professional acquirements, but further showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a Medical Practitioner, the Censors' Board, having well weighed and considered these Testimonials, may, if they see fit, submit them to the Fellows at a General Meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the Candidate shall be admitted to Examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient. 17. Any Candidate who shall produce satisfactory evidence of having passed an Examination on Anatomy and Physiology, conducted by any of the Bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a Course of Study and an Examination satisfactory to the College, will be exempt from re-examination on the subjects of the Primary Examination.(a) 18. Any Candidate who shall have obtained a Degree in Surgery, at a University in the United Kingdom, after a Course of Study and an Examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and the Principles and Practice of Surgery. 19. Any Candidate who shall have passed the Examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a Course of Study and an Examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

The fee to be paid for admission as a Member of the College is 30 guineas.

BYLAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE MEMBERSHIP.

Every Candidate for the Membership of the College (except such as shall be admissible under the provisions of Sections 15 and 16 of the Bylaws) will be required to pass the following examinations :—

The First Examination, on Anatomy and Physiology, will be conducted on successive days, as follows :—On the First day: *Evening*, from Seven to Ten, by written questions. On the Second day: *Evening*, commencing at Seven o'clock, *vivâ voce*, on Dissections and Preparations.

The Second Examination will be conducted on successive days, as follows :—On the First day: *Evening*, from Seven to Ten, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. On the Second day: *Morning*, the Candidate's practical knowledge will be tested, either at the College or in the Surgical Wards of an Hospital. *Afternoon*, from One to Four, on *Materia Medica*, and on *Chemistry in its applications to Pathology, Pharmacy, and Toxicology. This Examination will be conducted partly by written questions and partly in a practical manner. Evening*, commencing at Seven o'clock, by written questions on Midwifery and the Diseases peculiar to Women.

The Third or Pass Examination will be conducted on successive days, as follows :—On the First day: *Afternoon*, from Two to Six, by written questions on Medical Anatomy, and on the Principles of Medicine. On the Second day: *Afternoon*, from Two to Six, by written questions on the Practice of Medicine, including the *Principles of Public Health*, and on Psychological Medicine. On the Third day: The Candidate's practical knowledge will be tested, either at the College or in the Medical Wards of an Hospital. On the Fourth day: *Afternoon*, commencing at Three o'clock, *vivâ voce*, on Medical Anatomy, and on the Principles and Practice of Medicine.

The Regulations in italics apply to Candidates who commenced their Professional Education in the United Kingdom on or after October 1, 1865; and to Candidates who commenced their Professional Education at a recognised Foreign or Colonial School on or after October 1, 1866.

Examinations of Candidates for the Membership of the College will take place during 1868-69, commencing as follows :—*First Examination:* October 6; December 1; February 2; April 6; July 6; October 5; December 7. *Second or Pass Examination:* October 13; December 8; February 9; April 13; July 13; October 12; December 14. *Third or Pass Examination:* January 21; April 22; July 22; October 21.

Candidates will not be admitted to the First Examination until after the termination of the second Winter Session of Professional Study at a recognised Medical School, nor to the Second Examination until after the termination of four years of Professional Study, nor to the Third or Pass examination until after the completion of the required Course of Professional Study.

Every Candidate must give fourteen days' notice in writing to the Registrar of the College, of his intention to present himself for Examination, at the same time transmitting the following Certificates :—*For the Primary Examination*—Evidence of having passed an Arts Examination; of having been duly registered as a Medical Student; and of having completed the second Winter Session of Professional Study at a recognised Medical School. *For the Second Examination*—Evidence of having completed four years of Professional Study; of having attained the age of twenty-one years; of Instruction and Proficiency in the Practice of Vaccination; and of having

(a) *See* Regulations relating to the Examinations.

attended not less than twenty labours. *For the Pass Examination*—Proof of having attained the age of twenty-five years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of Professional Study.

Blank Forms of the required Certificates of attendance on Hospital Practice and on Lectures may be obtained on application at the College.

LICENTIATES.

The College will, under its Charter, grant Licences (which are not to extend to make the Licentiates Members of the Corporation) to persons who shall conform to the following Bylaws:—

Every Candidate for the College Licence (except when otherwise provided by the Bylaws) is required to produce satisfactory evidence to the following effect:—1. Of having attained the age of 21 years. 2. Of moral character. 3. Of having passed, before the commencement of Professional study, an Examination in the subjects of General Education recognised by the College. 4. Of having been registered as a Medical Student in the manner prescribed by the General Medical Council. 5. Of having been engaged in Professional studies during four years, of which at least three Winter Sessions and two Summer Sessions shall have been passed at a recognised Medical School or Schools, and one Winter Session and two Summer Sessions in one or other of the following ways:—(1) Attending the practice of a Hospital or other Institution recognised by the College for that purpose. (2) Receiving instruction as the pupil of a legally qualified Practitioner, holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery. (3) Attending Lectures on any of the required subjects of Professional study at a recognised place of instruction. Professional studies commenced *before* the Candidate shall have passed an Examination in the subjects of General Education will not be recognised by the College. 6. *Of having attended, during three Winter Sessions and two Summer Sessions, the Medical and Surgical Practice at a recognised Hospital or Hospitals;* and of having been engaged during six months in the Clinical Study of Diseases peculiar to Women. 7. Of having studied the following subjects:—Anatomy (with Dissections) during two Winter Sessions; (b) Physiology during two Winter Sessions; Chemistry during Six Months; Practical Chemistry during Three Months; Materia Medica during Three Months; Practical Pharmacy during Three Months. By Practical Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain, or of a Public Hospital or Dispensary recognised by the College. Botany during Three Months. This Course of Lectures may be attended prior to the commencement of Professional studies, and any Candidate producing satisfactory evidence that Botany formed one of the subjects of his Preliminary Examination, will be exempt from attendance on this Course. Morbid Anatomy during Six Months. This includes attendance and instruction in the Post-mortem Room during the period of Clinical study. Principles and Practice of Medicine during two Winter Sessions. It is required that the Principles of Public Health should be comprised in this Course of Lectures, or in the Course of Lectures on Forensic Medicine. The attendance on these Lectures must not commence earlier than the second Winter Session at a recognised Medical School. Principles and Practice of Surgery during *two Winter Sessions.* The attendance on these Lectures must not commence earlier than the second Winter Session at a recognised Medical School. Clinical Medicine during *two Winter Sessions and two Summer Sessions.* (a) The attendance on these Lectures must not commence until after the first Winter Session at a recognised Medical School. Clinical Surgery during *two Winter Sessions and two Summer Sessions.* The attendance on these Lectures must not commence until after first Winter Session at a recognised Medical School. By Clinical Medicine and Clinical Surgery are meant special Study and Instruction at the Bedside, with Lectures on Cases. Midwifery and the Diseases peculiar to Women during Three Months. Certificates must also be produced of attendance on not less than Twenty Labours, and of Instruction and Proficiency in Vaccination. Forensic Medicine during Three Months. 8. Of having passed the Professional Examinations. (The requirements printed in italics apply to Candidates who commenced their Professional Education in the United Kingdom on or after October 1, 1867, and to Candidates who commenced their Professional Education at a recognised Foreign or Colonial School on or after October 1, 1868.)

(b) The Winter Session comprises a period of six months, and the Summer Session a period of three months.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

The fee to be paid for the Licence to practise Physic as a Licentiate of the College shall be fifteen guineas.

BYLAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE LICENCE.

Every Candidate for the College Licence, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

The First Examination, on Anatomy and Physiology, will be conducted on successive days, as follows:—First day: Evening, from 7 to 10, by written questions. Second day: Evening, commencing at 7 o'clock, *viva voce*, on Dissections and Preparations. The Second or Pass Examination will be conducted on successive days, as follows:—First day: Evening, from 7 to 10, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Second day: Morning, when the Candidate's practical knowledge will be tested, either at the College, or in the Surgical Wards of an Hospital. Afternoon, from 1 to 4, on Materia Medica and on Chemistry, in its applications to Pathology, Pharmacy, and Toxicology. (c) This Examination will be conducted partly by written questions and partly in a practical manner. Evening, commencing at 7 o'clock, by written questions on Midwifery and the Diseases peculiar to Women. Third day: Evening, from 7 to 10, by written questions on Medical Anatomy, and on the Principles and Practice of Medicine, including the Principles of Public Health. Fourth day: Morning, when the Candidate's Practical Knowledge will be tested, either at the College or in the Medical Wards of an Hospital. Evening, commencing at 7 o'clock, *viva voce*, on the Principles and Practice of Medicine, Surgery, and Midwifery.

Candidates will not be admitted to the First Examination until after the termination of the second Winter Session of Professional Study at a recognised Medical School, nor to the Second or Pass Examination until after the termination of four years of Professional Study.

After October, 1870, the College will not admit to the Pass Examination any Candidate (not exempted from Registration) whose name had not been entered in the Medical Students' Register at least four years previously.

Any Candidate who shall be rejected at the First Examination will not be readmitted to Examination until after the lapse of three months, and will be required to produce a Certificate of the performance of Dissections, or other Professional Study satisfactory to the Examiners, during that time.

Any Candidate who shall be rejected at the Second or Pass Examination will not be readmitted to Examination until after the lapse of six months, and will be required to produce a Certificate of Attendance on the Practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures.

Every Candidate intending to present himself for Examination is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following Certificates:—For the First Examination: Evidence of having passed an Arts Examination; of having been duly registered as a Medical Student; and of having completed the Second Winter Session of Professional Study at a recognised Medical School. For the Second or Pass Examination: Evidence of having completed four years of Professional Study; of having attained the age of 21 years; of Instruction and Proficiency in the Practice of Vaccination; and of having attended not less than twenty labours. A testimonial of moral character is required of every Candidate.

(c) Candidates who shall have passed the First Examination for the Licence at this College before October 1, 1867, are exempted from re-examination on Materia Medica, and on Chemistry and its application to Pharmacy.

Examinations of Candidates for the College Licence will take place, commencing as follows:—

First Examination.		Second or Pass Examination.	
	1868.		
Tuesday	October 6	Tuesday	October 13
Tuesday	December 1	Tuesday	December 8
	1869.		
Tuesday	February 2	Tuesday	February 9
Tuesday	April 6	Tuesday	April 13
Tuesday	July 6	Tuesday	July 13
Tuesday	October 5	Tuesday	October 12
Tuesday	December 7	Tuesday	December 14

Blank Forms of the required Certificates of attendance on Hospital Practice and on Lectures may be obtained on application at the College.(d)

Any Candidate who shall produce satisfactory evidence of having passed an Examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an Examination satisfactory to the College, will be exempt from re-examination on the subjects of the First Examination.

Any Candidate who shall have obtained a Degree in Medicine at a University recognised by the College after a course of study and an Examination satisfactory to the College, shall be exempt from re-examination on the subjects of the Primary Examination.

Any Candidate who shall have obtained a Degree in Surgery at a University in the United Kingdom, after a course of study and an Examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

Any Candidate who shall have passed the Examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an Examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

Any "Registered Medical Practitioner," whose Qualification or Qualifications shall have been obtained before the 1st day of January, 1861, having been, with the consent of the College, admitted a Candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery, but he will be exempted from such other parts of the Professional Examinations as his Qualifications may seem to the Examiners to render in his case unnecessary.

The Fee for the College Licence is fifteen guineas, of which five guineas are to be paid on admission to the First Examination, which Fee will not be returned to any Candidate rejected at this Examination, but will be allowed in the Fee for the Licence, and he will be admitted to one subsequent First Examination without the payment of an additional fee.

Any Candidate who shall be rejected at the Second or Pass Examination will have the Fee paid on admission to this Examination returned to him, less three guineas.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RELATING TO THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF FELLOW.

Preliminary Examination—Candidates will be required to produce one or other of the following Certificates or Testamurs, viz. :—1. Of Graduation in Arts at a University recognised for this purpose. The following are the Universities at present recognised, viz. :—Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ireland, Edinburgh, Glasgow, Aberdeen, and St. Andrews ; Calcutta, Madras, and Bombay ; Canada—McGill's College, Montreal, and Queen's College, Kingston. A Certificate or Testamur of Graduation in Arts at a Foreign University, on the special recommendation of the Court of Examiners, approved by the Council. 2. Of having passed such examinations in Arts as shall from time to time be required for graduation in Medicine by a University recognised for this purpose. The following are the Universities at present recognised, viz. :—Oxford, Cambridge, Dublin, London, and Durham. 3. Candidates who shall not be able to produce one or other of the foregoing Certificates will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of the Council of the College.

The following are the subjects of the Examination (No. 3) during the years 1868 and 1869, viz. : Part I.—Compulsory Subjects.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition, such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No Candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the Sovereigns and the leading events of each reign. 8. Euclid, Book I. 9. Translation of a passage from the second book of Cæsar's Commentaries "De Bello Gallico." 10. Translation of a passage from the first book of the Anabasis of Xenophon. 11. Translation of a passage from X. B. Saintine's "Picciola." 12. Mathematics. Algebra to Simple Equations inclusive. Part II.—Optional Subjects.—Papers will also be set on the following four subjects, and each Candidate will be required to offer himself for examination on one subject, at his option : —1. Translation of a passage from Schiller's "Wilhelm Tell." Besides these translations into English, the Candidate will be required to answer questions on the Grammar of each subject, whether compulsory or selected. 2. Mechanics. The questions will be chiefly of an elementary character. 3. Chemistry. The questions will be on the elementary facts of Chemistry. 4. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and spelling will be taken into account.

N.B.—Each Candidate prior to his admission to the above Examination is required to pay the fee of £2. The Examination is at present held in June and December.

Note.—Candidates who have passed an Examination recognised as equivalent to the Preliminary Examination for the Diploma of Member will be required, in order to qualify for the Fellowship, to pass in the subjects numbered 10, 11, *and* 12 *in Part I., and in one, at their option, of the four subjects included in Part II. of the foregoing examination* (No. 3).

Professional Education.—I. Except in the cases and instances hereinafter provided for to the contrary, every Candidate for admission to the First or Anatomical and Physiological Examination for the Fellowship is required to produce the following Certificates, viz. :—1. Of having passed the Preliminary Examination appointed by the Council, or such other Examination as the Council may from time to time determine to be equivalent thereto. 2. Of having studied Practical Pharmacy during three months. 3. Of having studied Anatomy and Physiology by attendance on Lectures and Demonstrations and by Dissections during three Winter Sessions of not less than six months each at a recognised School or Schools. 4. Of having attended one course of Lectures on Comparative Anatomy, one course of Lectures on Chemistry, and a three months' course of Practical Chemistry at a recognised School or Schools.

II. Except in the cases and instances hereinafter provided for to the contrary, every Candidate before his admission to the second Professional Examination is required to produce the following Certificates, viz. :—1. Of being 25 years of age. 2. Of having been engaged for six years in the acquirement of Professional knowledge in Hospitals or Schools of Anatomy, Surgery, and Medicine recognised by the Council of the College for that purpose ; or if the Candidate be already a Member of the College, he shall produce Certificates of having been engaged for two years in the acquirement of Professional knowledge in recognised Hospitals and Schools, in addition to the Certificates required for the Diploma of Member. 3. Of having attended Lectures on the Theory and Practice of Surgery, during two Sessions of not less than six months each, at one or more recognised School or Schools. 4. Of having attended one course of Lectures on each of the following subjects, viz. :—Theory and Practice of Medicine, Materia Medica, Midwifery (with attendance on cases), and Medical Jurisprudence, at one or more recognised School or Schools. 5. Of having attended a course of Lectures on the Operations of Surgery by a recognised Lecturer. 6. Of having performed operations on the dead body under the superintendence of a recognised Teacher. 7. Of instruction and proficiency in the practice of vaccination. 8. Of having attended the Surgical Practice with Clinical Lectures on Surgery of a recognised Hospital or Hospitals during four Winter and four Summer Sessions, and the Medical Practice with Clinical Lectures on Medicine of a recognised Hospital or Hospitals during one Winter and one Summer Session. 9. Of having, subsequently to the completion of two years' Professional study, served the office of House-Surgeon or Dresser, for not less than six months, in a recognised Hospital in the United Kingdom.

III. In the case of a Candidate who shall have taken by Examination the Degree of Bachelor or Master of Arts in any University in the United Kingdom recognised by the Council for this purpose, it shall be sufficient for him to produce a Certificate or Certificates that he has been engaged for five years (instead of six years) in the acquirement of Professional knowledge in Hospitals or Schools of Anatomy, Surgery, and

d) Hours of attendance, from 11 a.m. to 4 p.m. ; Saturday, from 11 a.m. o 2 p.m.

Medicine recognised by the Council of the College for that purpose.

IV. Any Member of the College shall, after the expiration of eight years from the date of his diploma, be entitled to be admitted to the Professional Examination for the Fellowship upon the production of a Certificate, signed by three Fellows, that he has been for eight years in the Practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow if upon examination he shall be found qualified.

Professional Examinations.—1. The examinations are held twice in the year, in the months of May and November, and at such other times as the Council may appoint. 2. The Examinations occupy not less than two days, either successive or at such intervals as the Court of Examiners may appoint.

3. The first Examination on Anatomy and Physiology is partly written and partly *vivâ voce*, on the recently dissected subject and on prepared parts of the Human Body; the second Examination, on Pathology, Therapeutics, and Surgery, is partly written, partly *vivâ voce*, and partly on the practical use of Surgical Apparatus, and includes the examination of patients and operations on the dead body. 4. Prior to his admission to the First or Anatomical and Physiological Examition, the Candidate is required to pay—*a*. A fee of five guineas, to be allowed on the fee for the Diploma of Fellow, but to be retained in case of rejection. *b*. Prior to his admission to the Second Professional Examination, the Candidate is required to pay—*a*. A fee of five guineas(a) (if a Member) over and above all charges for stamps, to be retained in case of rejection. *b*. A fee of twenty-five guineas(a) (if not a Member) over and above all charges for stamps, of which five guineas will be retained in case of rejection. 6. A Candidate whose qualifications shall be found insufficient on his Anatomical and Physiological Examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of six months from the date of his reference. 7. A Candidate whose qualifications shall be found insufficient upon his Pathological and Surgical Examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of one year from the date of his reference, unless the Court of Examiners shall otherwise determine.

N.B. On and after October 1, 1868, *all Candidates presenting themselves for the final Examination for the Diploma of Fellow of the College, will be required to pass an Examination in Medicine at the College, or to produce a recognised Degree, Diploma, or Licence in Medicine before receiving the Diploma.*

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER OF THIS COLLEGE.

I. *Preliminary General Education and Examination.*—Candidates who commenced their Professional Education on or after January 1, 1861, will be required to produce one or other of the following Certificates:—1. Of Graduation in Arts at a University recognised for this purpose. The following are the Universities at present recognised—viz., Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ireland, Edinburgh, Glasgow, Aberdeen, and St. Andrew's; Calcutta, Madras, and Bombay; Canada—McGill College, Montreal; and Queen's College, Kingston. 2. Of having passed an Examination for Matriculation, or such other Examination as shall, in either case, from time to time be sanctioned by the Council of this College, at a University in the United Kingdom, or at a Colonial or Foreign University recognised by the Council of this College. The following are the Examinations at present recognised under this Clause (No. 2)—viz.: Oxford—Responsions or Moderations; Middle-class Examinations, Senior, the Certificates to include Latin. Cambridge: Previous Examination; Middle-class Examinations, Senior, the Certificates to include Latin. Dublin: Entrance Examination. London: Matriculation Examination. Durham: Examination of Students in Arts in their second and first years; Middle-class Examinations, Senior, the Certificates to include Latin; Registration Examination for Medical Students. Queen's University in Ireland: Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B.A. Course; Middle-class Examinations, the Certificates to include Latin; Matriculation Examinations. Edinburgh, Aberdeen, Glasgow, and St. Andrews: Preliminary or Extra-Professional Examinations for Graduation in Medicine. Calcutta, Madras, and Bombay: Matriculation Examinations. McGill College, Montreal, Canada: Matriculation Examination. Queen's College, Kingston, Canada: Matriculation Examination; Preliminary Examination of Students in Medicine. University College, Toronto, Canada: Matriculation Examination. Victoria College, Toronto, Canada: Matriculation Examination. University of Melbourne: Matriculation Examination, with a Certificate that the Student has passed an Examination in Latin. 3. Of having passed the Preliminary Examination for the Fellowship of this College. 4. Of having passed the Preliminary Examination of the Royal College of Surgeons in Ireland. 5. Of having passed the Preliminary Examination of the Royal College of Surgeons of Edinburgh. 6. Of having passed the Preliminary Examination of the Faculty of Physicians and Surgeons of Glasgow. 7. Of having passed the Examination in Arts of the Society of Apothecaries of London. 8. Of having passed the Examination in Arts of the Apothecaries' Hall of Ireland. 9. Of having passed the First-class Examination of the Royal College of Preceptors. 10. Testamur of the Codrington College, Barbadoes. 11. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the Student has been examined in Latin and Mathematics. 12. Candidates who shall not be able to produce one or other of the foregoing Certificates will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.

The following are the subjects of the Examination (No. 12) during the years 1868 and 1869—viz., Part I.—Compulsory Subjects: 1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the Sovereigns and the leading events of each reign. 8. Euclid, Book I. 9. Translation of a passage from the second book of Cæsar's Commentaries, "De Bello Gallico." Part II.—Optional Subjects: Papers will also be set on the following seven subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the first Book of the Anabasis of Xenophon. 2. Translation of a passage from X. B. Saintine's "Picciola." 3. Translation of a passage from Schiller's "Wilhelm Tell." Besides these translations into English, the Candidate will be required to answer questions on the Grammar of each subject, whether compulsory or optional. 4. Mathematics; Algebra to Simple Equations inclusive. 5. Mechanics. The questions will be chiefly of an elementary character. 6. Chemistry. The questions will be on the elementary facts of Chemistry. 7. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account.

N.B.—Each candidate is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. The examination is at present held in June and December.

NOTE.—A candidate, in order to qualify for the Fellowship, is required to pass in the subjects numbered 1, 2, and 4, and in one, at his option, of the subjects numbered 3, 5, 6, and 7, Part II., in addition to the compulsory subjects contained in Part I.

II. *Professional Education.*—1. Professional studies prior to the date at which the candidate shall have passed an Examination in General Knowledge, in conformity with the Regulation in the preceding Section, are not recognised.(b)

II. The following will be considered as the commencement of Professional Education:—1. Attendance on the Practice of a Hospital or other public institution recognised by this College for that purpose. 2. Instruction as the pupil of a legally qualified Surgeon, *holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.* 3. Attendance on Lectures

(a) The sum of £2 paid on the Preliminary Examination will be allowed against these amounts.

(b) This Regulation applies to candidates who commenced their Professional Education on or after October 1, 1862.

on Anatomy, Physiology, or Chemistry, by Lecturers recognised by this College. *The commencement of Professional study, otherwise than by attendance on Lectures in recognised Medical Schools, or by attendance on the Practice of recognised Hospitals, will not be admitted until a Certificate thereof shall be furnished to the Secretary, for registration at the College, by the Practitioner whose pupil the candidate shall have become, or by the Medical Superintendent of the Hospital or other institution to the practice of which he shall have entered, and will, consequently, date only from the reception of such Certificate by the Secretary; the Certificate to be accompanied by proof of having passed the necessary Preliminary Examination in General Knowledge.*

III. Candidates will be required to produce the following other Certificates, viz.:—1. Of being 21 years of age. 2. Of having been engaged during four years in the acquirement of Professional knowledge. 3. Of having studied Practical Pharmacy during three months. 4. Of having attended Lectures on Anatomy, delivered not less frequently than four times in each week, during two Winter Sessions. 5. Of having performed Dissections during not less than two Winter Sessions. 6. Of having attended Lectures on Physiology delivered not less frequently than twice in each week, during two Winter Sessions. 7. Of having attended Lectures on Surgery during two Winter Sessions, *of which one Course must not be earlier than the third Winter Session, at a recognised Medical School.* 8. Of having attended one Course of Lectures on each of the following subjects—viz., Chemistry, Materia Medica, Medicine, and Midwifery. 9. Of Instruction and Proficiency in the practice of Vaccination. 10. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Surgery during three Winter(c) and two Summer(d) Sessions; and of having, subsequently to the first Winter Session of the foregoing attendance, attended, at a recognised Hospital or Hospitals, Clinical Lectures on Surgery during two Winter and two Summer Sessions. 11. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Medicine and Clinical Lectures on Medicine during one Winter and one Summer Session. 12. *Of having, subsequently to the completion of two years' Professional Education, taken charge of Patients under the superintendence of a Surgeon during not less than Six Months, at a Hospital, General Dispensary, or Parochial or Union Infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.* N.B.—Blank Forms of the required Certificates may be obtained on application to the Secretary, and all necessary Certificates will be retained at the College.

III.—1. Certificates will not be received on more than one branch of science from one and the same Lecturer; but Anatomy and Dissections will be considered as one branch of science.

2. Certificates will not be recognised from any Hospital in the United Kingdom unless the Surgeons thereto be Members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the Teachers in such School be Members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the Teachers in such School be Members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

3. No Metropolitan Hospital will be recognised by this College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 patients.

4. The recognition of Colonial Hospitals and Schools is governed by the same Regulations, with respect to number of Patients and to Courses of Lectures, as apply to the recognition of Provincial Hospitals and Schools in England.

5. Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital attendance required by the Regulations of this College; and in such cases Clinical Lectures will not be necessary, *but a certificate of having acted as Dresser for the period of at least six months will be required.*

6. Certificates will not be received from Candidates who have studied in London unless they shall have registered at the College their cards of admission to attendance on Lectures and Hospital Practice within fifteen days from the commencement of the Session; nor from Candidates who have studied in the Provincial Schools in England, unless their names shall be duly returned from their respective Schools.

N.B.—At the registration in October, Candidates who shall have commenced their Professional Education subsequently to October 1, 1862, will be required to produce a certificate of having passed one or other of the Preliminary Examinations in General Knowledge recognised by this College.

NOTE.—*The Regulations in italics in Sections* II. *and* III. *apply to Candidates in the United Kingdom who commenced their Professional Education on or after October* 1, 1863; *and to Candidates who commenced their Professional Education in the Colonies on or after October* 1, 1864.

7. Those Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from Candidates for their Diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge; and in the case of Candidates who shall have pursued the whole of their studies at recognised Foreign or Colonial Universities, upon the production of the several Certificates required for their Degree by the authorities of such Universities, together with a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

9. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College will be admitted to examination on adducing, together with their Diploma or Degree, proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

IV. *Professional Examination.*—This Examination is divided into two parts. 1. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the Human Body. 2. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery, is partly written, partly oral, and partly on the practical use of Surgical Apparatus. 3. The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the Primary, or Anatomical and Physiological Examination, until after the termination of the second Winter Session of their attendance at a recognised School or Schools; nor to the Pass, or Surgical Examination, until after the termination of the fourth year of their Professional education. 5. The fee of Five Guineas, paid prior to the Primary Examination, and allowed on the whole fee of Twenty-two Pounds(e) payable for the Diploma, is retained; and after any two consecutive failures at the Primary Examination, the Candidate is required to pay an *additional* fee of Five Guineas prior to being again admitted to that Examination, which *additional* fee is also retained. 6. Five guineas, part of the sum of £16 15s., the balance of the whole fee due for the Diploma and paid prior to the Pass Examination, is retained; and after any two consecutive failures at the Pass Examination, the Candidate is required

(c) The Winter Session comprises a period of six months, and, in England, commences on the 1st of October and terminates on the 31st of March.

(d) The Summer Session comprises a period of three months, and, in England, commences on the 1st of May and terminates on the 31st of July.

(e) This sum of Twenty-Two Pounds is exclusive of the fee of Two Pounds paid for the Preliminary Examination.

to pay an *additional* fee of Five Guineas prior to being again admitted to the said Pass Examination, which *additional* fee is also retained. 7. A Candidate having entered his name for either the Primary or Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. 8. A Candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a Certificate of the performance of dissections during not less than three months, subsequently to the date of his reference. 9. A Candidate referred on the Pass Examination is required, prior to his admission to re-examination, to produce a Certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

N.B.—On and after October 1, 1868, all Candidates presenting themselves for the final Examination for the Diploma of Member of the College will be required to pass an Examination in Medicine at the College, or to produce a recognised Degree, Diploma, or Licence in Medicine, before receiving the Diploma.

QUALIFICATION IN MIDWIFERY.

REGULATIONS RESPECTING THE PROFESSIONAL EDUCATION OF CANDIDATES FOR THIS CERTIFICATE.

1. Persons who were Fellows or Members of the College prior to the 1st day of January, 1853, will be admitted to Examination for the Certificate of Qualification in Midwifery upon producing their Diploma.

2. Persons having become Members of the College subsequently to the 1st of January, 1853, will be admitted to Examination on producing their Diploma, together with a Certificate or Certificates of having attended twenty labours.

3. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will also be admitted to Examination on producing, together with their Diploma, Licence, or Degree, proof of being twenty-one years of age—of having been occupied at least four entire years in the acquirement of Professional knowledge—of having attended one Course of Lectures on Midwifery—and of having attended not less than twenty labours.

4. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College, will also be admitted to Examination on producing, together with their Diploma or Degree, proof of being twenty-one years of age—of having been occupied at least four entire years in the acquirement of Professional knowledge—of having completed, at recognised Schools, the Anatomical and Surgical education required of Candidates for the Diploma of Member of the College—of having attended one Course of Lectures on Midwifery—and of having attended not less than twenty labours.

5. Persons having commenced their Professional education, either by attendance on Hospital Practice, or on Lectures on Anatomy, prior to the 1st of January, 1853, will be admitted to Examination on producing the several Certificates of Professional education required for admission to Examination for the Diploma of Member of this College at the period when such persons shall respectively have, in such manner, commenced their Professional education.

6. Persons having commenced their Professional education, either by attendance on Hospital Practice or on lectures on Anatomy, after the 31st day of December, 1852, will be admitted to Examination on producing certificates of being 21 years of age, of having been engaged during at least four entire years in the acquirement of Professional knowledge, of having completed at recognised Schools the Professional education required of Candidates for the Diploma of Member of this College, of having attended one Course of Lectures on Midwifery and the Diseases of Women and Children, and of having personally conducted thirty labours.

Note.—All Candidates who shall commence their Professional education on or after October 1, 1866, will, in addition to the Certificates enumerated in the foregoing clauses, be required to produce a Certificate of having, prior to such commencement, passed a Preliminary Examination in General Knowledge recognised by this College.

N.B.—The Fee for the Certificate is as follows; viz.:—1. Persons who were Fellows or Members of this College prior to January 1, 1853, Two Guineas. 2. Persons admitted Fellows or Members of this College subsequently to January 1, 1853, Three Guineas. 3, 4. Persons producing any other Diploma or Certificate of Degree which may be considered by the Council to afford satisfactory proof of sufficient Surgical and Medical education, Three Guineas. 5, 6. All other persons, Ten Guineas.

The Examinations are held in the months of February, May, August, and December.

THE SOCIETY OF APOTHECARIES,

BLACKFRIARS, E.C.

REGULATIONS, ETC.

Every Candidate for a Certificate of Qualification to practise as an Apothecary will be required to produce Testimonials—

1. Of having passed a Preliminary Examination in Arts as a test of General Education.

This Examination must be passed before the commencement of Professional Studies, which is defined by the Medical Council "to be the time of commencing Studies at a Medical School."

2. Of having served an Apprenticeship or Pupilage of not less than five years to a Practitioner qualified by the Act of 1815. This period may include the time spent in attending Lectures and Hospital Practice.

3. Of having attained the full age of twenty-one years, of which satisfactory evidence will be required.

4. Of good moral conduct.

5. And of having pursued a course of Medical study in conformity with the Regulations of the Court.

COURSE OF STUDY.

Every Candidate whose attendance on Lectures shall commence on or after October 1, 1863, must attend the following Lectures and Medical Practice during not less three winter and two summer sessions: each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from the 1st of May to the 31st of July.

First Year.—Winter Session.—Chemistry; Anatomy and Physiology; Dissections. Summer Session.—Botany; Materia Medica and Therapeutics; Practical Chemistry.(a)

Second Year.—Winter Session.—Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session.—Midwifery and Diseases of Women and Children and Vaccination;(b) Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session.—Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.

No Certificates of Lectures, or of Anatomical Instructions delivered in private to particular Students apart from the ordinary classes of recognised public Medical Schools, can be received by the Court of Examiners.

All Certificates must be given on a printed Schedule, and signed by the respective Lecturers. Students will be supplied with Schedules at the time of their first Registration in London at this Hall, and in the Provincial Towns by the Registrars of the Medical Schools.

All Students are required personally to Register the several Tickets of admission to Lectures and Medical Practice within the first fifteen days of the months of October and May.

Examination in Arts.—An Examination in Arts will take place at the Hall three times in the year—viz., on the last Friday and Saturday in the months of January, April, and September. N.B. By order of the Medical Council an Examination in Arts is compulsory on all Gentlemen commencing their studies on or after October 1, 1861, and must be passed previous to registration.(c) Testimonals of proficiency in General Education will be received as exempting from the Examination in Arts at the Hall from the Educational Bodies recognised by the General Council, and also from any of the Licensing Bodies under the Medical Act of 1858.

Syllabus of Subjects for Examination, 1869.—I. The English Language: The leading features of its History; its Structure and Grammar; English Composition. [The Books recommended for study in this subject are Adams's "Elements of the English Language," and Trench "On the Study of Words."] II. The Latin Language: January Examination—Cicero, De Amicitia; April Examination—Ovid, Metamorph., Books I. and II.; September Examination—Horace, Odes, Books III. and IV. Retranslation of easy sentences; Grammatical Questions will be introduced into the Latin Paper, and each Candidate will be expected to give satisfactory answers to these. III. Mathematics: The Ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication and Division of Algebraical Quantities; Simple Equations; The First Two Books of Euclid. IV. (*a*) Greek: Xenophon; Anabasis, Books I. and II.; Grammatical Questions. (*b*) French: Paul and Virginia; Translation from English into French; Grammatical Questions. (*c*) German: Schiller's Wilhelm Tell; Translation of short Sentences from English into German; Grammatical Questions. (*d*) Natural Philosophy: Mechanics; Hydrostatics and Pneumatics. [The Book recommended for study in this subject is Snowball's "Cambridge Course of Elementary Natural Philosophy."]

N.B.—In pursuance of a Regulation of the Medical Council, the Examination, after the year 1869, will comprise five Branches, Greek being transferred to the list of compulsory subjects.

(a) By Practical Chemistry is intended a *specific* course of instruction in the Laboratory, with an opportunity of personal manipulation in the ordinary processes of Chemistry, and of acquiring a knowledge of the various reagents for poisons.

(b) A Certificate of attendance on not less than twenty cases will be received from a legally qualified Practitioner.

(c) The Medical Council define the commencement of Professional studies, "to be the time of commencing studies at a Medical school."

Professional Examinations.—The Court of Examiners meet in the Hall every Thursday, where candidates are required to attend at a quarter before four o'clock. Every person intending to offer himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials (as before specified), with the fee, at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock, and Saturdays from ten to two. The examination of candidates is divided into two parts, and is conducted partly in writing and partly *viva voce*.

First Examination, which may be passed after the second Winter Session, embraces the following subjects:—The British Pharmacopœia, Latin of; Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany, Materia Medica, and Therapeutics.

Second or Pass Examination, after the third Winter Session (the five years' pupilage being completed):—Principles and Practice of Medicine, Pathology, and Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

All Graduates in Medicine in British Universities will be admitted to a Practical Examination in Medicine and Midwifery only.

Licentiates of the Royal College of Physicians, London; of the Royal College of Physicians, Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *viva voce* Examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.

Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland, possessing a Surgical qualification only, will be admitted to a first and second Examination on one evening; which Examination will be conducted partly *viva voce*, and partly in writing, the latter in the subjects of Medicine, with Therapeutics, Midwifery, Forensic Medicine, and Toxicological Chemistry.

Any Candidate who has passed his first Examination for the Licence of the Royal College of Physicians, London; the Licence of the King and Queen's College of Physicians, Ireland; the joint Licence of the Royal Colleges of Physicians and Surgeons, Edinburgh; or for the single Licence of the College of Physicians, Edinburgh; the Licence of the Faculty of Physicians and Surgeons, Glasgow; the first Professional Examination for the Degree of M.B. or Master in Surgery in the Universities of Oxford, Cambridge, or London; or the second part of the Professional Examination for the Degree of M.B. or Master in Surgery in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the first Examination for Medical and Surgical Degrees in the Irish Universities; or the first Examination for the Licence of the Apothecaries' Company, Dublin, will be admitted to a single Examination in Materia Medica, Therapeutics, Medicine, Pathology, Midwifery, and Toxicology, part of which Examination will be conducted in writing.

The examination of Candidates for certificates of qualification to act as Assistant, in compounding and dispensing medicines, will be as follows:—In translating Physicians' Prescriptions in the British Pharmacopœia. In Pharmacy, and Materia Medica.

By the 22nd section of the Act of Parliament, no rejected Candidate can be re-examined until the expiration of six months from his former examination. A Candidate rejected on his first Professional Examination can be admitted for re-examination after the expiration of three months.

Fees.—For a Certificate of Qualification to Practise, Six Guineas; for an Assistant's Certificate, Two Guineas.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry.

The prizes consist of a Gold Medal awarded to the Candidate who distinguishes himself the most in the examination; and of a Silver Medal and a Book to the Candidate who does so in the next degree.

Regulations of Competitors for the Prizes can be had on application. The Society's Botanic Garden at Chelsea is open daily (except Sunday) from 10 till 5 o'clock p.m., and on Saturdays from 10 till 2 o'clock. Tickets of admission may be had on application at the Beadle's Office, Apothecaries' Hall, Blackfriars, E.C.

ARMY MEDICAL DEPARTMENT.

WHITEHALL-YARD.

QUALIFICATIONS AND EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE ARMY MEDICAL SERVICE.

1. Every Candidate desirous of presenting himself for admission to the Examination required for the Army Medical Service must be unmarried. He must produce a birth certificate from the District Registrar, or a certificate of baptism in which the date of birth is stated; or if neither of these can be obtained, an affidavit from one of the parents, or from some other near relative who can attest the date of birth, will be accepted. The certificate or affidavit must show that the Candidate is not above 28 nor under 21 years of age. He must also produce certificates of moral conduct and character, one of them from the parochial minister, if possible.

2. The Candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical officer in any climate. He must also attest his readiness to engage for general service immediately on being gazetted.

3. The Candidate must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it, in Great Britain or Ireland.

4. Certificates of registration in accordance with the Medical Act of 1858, and of age and character, must be lodged at the Army Medical Depament, for examination and registry, at least one week before the Candidate appears for examination.

5. On producing the foregoing qualifications, the Candidate will be examined by the Examining Board in the following subjects:—Anatomy and Physiology, Surgery, Medicine, including Therapeutics, the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of drugs. (The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical apparatus, and the examination of Medical and Surgical patients at the bedside.) The eligibility of each candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Candidates *who desire* it will be examined in Comparative Anatomy, Zoology, and Botany, with special reference to Materia Medica, and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the Examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of Science.

6. The names of Candidates who pass the Preliminary Examination of the Examining Board will be sent to the Director-General and communicated to the Professors of the Army Medical School. The names will be arranged in the order of merit.

7. After passing his Preliminary Examination, every Candidate will be required to attend one entire course of Practical Instruction at the Army Medical School before being admitted to his examination for a Commission. These courses to be of not less than four months' duration.

8. At their conclusion the Candidate will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any Medical officer deputed by him, may be present and take part in the examination. If the Candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical officer, he will be eligible for a Commission as Assistant-Surgeon.

9. During the period of his residence at the Army Medical School each Candidate will receive an allowance of 5*s*. per diem, with quarters, or 7*s*. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of an Assistant-Surgeon, but without the sword).

10. All Candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

The Assistant-Surgeon is subjected to three separate Examinations within the first ten years of his service, each Examination having a definite object. The first, to ascertain, previous to his admission into the Service as a Candidate, his scientific and Professional education, and to test his acquirements in the various branches of Professional knowledge; the

second, after having passed through a course of special instruction in the Army Medical School, to test his knowledge of the special duties of an Army Medical officer; and the third, previous to his promotion, to ascertain that he has kept pace with the progress of Medical Science.

11. The Examinations for Commissions in the Army Medical Service are held at Chelsea on the second Monday of February and August in each year.

EXTRACTS FROM THE ROYAL WARRANT (1867) FOR THE PAY AND NON-EFFECTIVE PAY OF MEDICAL OFFICERS OF THE ARMY.

The daily rates of pay of the Officers of the Medical branch of the Hospital Department of our Army shall be as follows:—

Medical Staff.—Daily Pay: Director-General, special; Inspector-General, £2, after twenty-five years' service £2 5s., after thirty years' service £2 7s., after thirty-five years' service £2 10s.; Deputy Inspector-General, £1 10s., after twenty-five years' service £1 12s., after thirty years' service £1 15s., after thirty-five years' service, £1 17s.; Surgeon-Major, £1 4s., after twenty-five years' service £1 7s.; Surgeon, 17s. 6d., after fifteen years' service 20s.; Assistant-Surgeon, on appointment, 10s., after five years' service 12s. 6d., after ten years' service 15s., after fifteen years' service 17s. 6d. Charge Pay: The Officer in Medical charge of an Army in the field, of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. Or, in Medical charge of a Colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

Apothecaries.—Daily Pay: Apothecaries, 9s., after five years' service 10s. 6d., after ten years' service 12s., after fifteen years' service 13s. 6d., after twenty years' service 15s., after twenty-five years' service 16s. 6d., after thirty years' service 18s.

Assistant-Surgeons shall, as a general rule, be promoted to the rank of Surgeon in the order of their seniority in the service, unless unfit for the discharge of their duties from physical or professional incompetence or misconduct. In cases of distinguished service, however, an Assistant-Surgeon may be promoted without reference to seniority; and in such cases, the recommendation detailing the services for which the officer is proposed for promotion shall be published in the General Orders of the Army, and in the *Gazette* in which such promotion shall appear.

A Surgeon, after twenty years' service in any rank, shall be styled Surgeon-Major, but a Surgeon of less than twenty years' full-pay service may be promoted to the rank of Surgeon-Major for distinguished service. The recommendation detailing the services for which the officer is proposed for promotion for distinguished service shall be published in the General Orders of the Army, and in the *Gazette* in which such promotion shall appear.

A Surgeon must have served ten years in our army, with a commission on full pay, of which period two years must have been passed, with the rank of Surgeon, in or with a regiment or depôt battalion, before he can be promoted to the rank of Deputy Inspector-General of Hospitals.

All promotion from the rank of Surgeon or Surgeon-Major to that of Deputy-Inspector, and from the rank of Deputy-Inspector to that of Inspector, shall be given by selection for ability and merit, the selection being made from the whole rank of Surgeons, whether styled Surgeons or Surgeons-Major; and the grounds of such selection shall be stated to us in writing, and recorded in the office of our Commander-in-Chief.

A Deputy Inspector-General of Hospitals must have served five years at home, or three abroad, in that rank, before he can be promoted to the rank of Inspector-General.

Our Secretary of State for War in cases of emergency may shorten the several periods of service above mentioned, as he shall deem expedient for the good of our service.

Good Service Pensions shall be awarded to the most meritorious Medical Officers of our army, under such regulations as shall be from time to time determined by us, with the advice of our Secretary of State for War. Six of the most meritorious Medical Officers of our Army shall be named our Honorary Physicians, and six our Honorary Surgeons.

Medical Officers shall have the right to retire on half-pay after 20 years' service, Medical Officers of the rank of Surgeon-Major, Surgeon, or Assistant-Surgeon, shall be placed on the Retired List at the age of 55, and all Inspectors-General and Deputy Inspectors-General at the age of 65 years.

Our Secretary of State for War may, when he shall deem it fit, employ officers of the Medical branch of our Hospital department in sundry situations, at such daily rates of pay, in addition to half-pay, as he shall from time to time determine.

A Medical Officer who, having voluntarily resigned his commission, has subsequently been permitted to re-enter the army, shall not, except under very special circumstances to be approved by our Secretary of State for War, be allowed to reckon his former service.

An Apothecary shall have the right to retire on half-pay after 30 years' good service.

Non-effective Pay.—A Medical Officer placed on half-pay by reduction of establishment, or on the report of a Medical Board, in consequence of wounds or ill-health caused in and by the discharge of his duties, or on account of age (under Article 11), shall be entitled to half-pay at the following daily rates:—Inspector-General, after 30 years' service, £1 17s. 6d.; 25 years, £1 13s. 6d.; 20 years, £1 10s. Deputy Inspector-General, 30 years, £1 5s. 6d.; 25 years, £1 2s. 6d.; 20 years, £1 1s. Surgeon-Major, 25 years, £1; 20 years, 16s. 6d. Surgeon: 15 years, 13s. 6d.; 10 years, 11s. Assistant-Surgeon, 10 years, 10s.; 5 years, 8s.; under 5 years, 6s.

The rate of half-pay awarded to officers retiring for their own convenience, after twenty years' service on full-pay, shall not exceed one-half of their full pay at the time of retirement.

Every Medical Officer who shall retire after a service upon full-pay for 25 years shall be granted a rate of half-pay equal to seven-tenths of the daily pay he may have been in receipt of when thus retiring or proceeding on half-pay, provided he shall have served three years in his rank or shall have served abroad for ten years in all ranks, or for five years with an army in the field. An officer of 25 years' full-pay service, whose service falls within neither of these conditions, shall be entitled to only seven-tenths of the daily pay he was in receipt of prior to his last promotion.

A Medical Officer placed on half-pay from any other cause shall be allowed only a temporary rate of half-pay (not exceeding the rates specified in Article 18) for such period and at such rate as our Secretary of State for War shall decide, with reference to the services rendered to the public by such officer.

Medical Officers of twenty years' full-pay service, placed temporarily on half-pay under Article 21, on account of ill-health, may, however, be allowed to retire on permanent half-pay at the rate fixed by Article 18, if after one year on half-pay they shall be reported by a Medical Board to be permanently unfit for further service.

An Apothecary shall be granted pay at the following daily rate, if placed on half-pay by reduction of establishment, or on account of age, or through ill-health, certified to the satisfaction of our Secretary of State for War to have been contracted in and by the Service.

Apothecary to the forces, after 30 years' service, 9s. a day; 25 years, 8s.; 20 years, 7s.; 15 years, 6s.; 10 years, 5s.

ARMY MEDICAL SCHOOL.

President of the Senate.—T. G. Logan, C.B., M.D., Director-General of the Army Medical Department.

Members of the Senate.—Sir Ranald Martin, C.B., Physician to the Indian Council; Inspector-General G. S. Beatson, M.D., Principal Medical Officer, Royal Victoria Hospital; Deputy-Inspector-General T. Longmore, C.B., Professor of Military Surgery; Deputy-Inspector-General W. C. Maclean, Professor of Military Medicine; William Aitken, M.D., Professor of Pathology; E. A. Parkes, M.D., F.R.S., Professor of Military Hygiene.

Assistant Professors.—Staff-Surgeon Major W. A. Mackinnon, C.B.; Staff-Surgeons W. J. Fyffe, F. François de Chaumont, and Staff-Assistant-Surgeon V. Wearne.

Candidates for Commissions in the Army, and in the Queen's Indian Service, proceed to Netley after passing the Examination at Chelsea. At Netley they attend the Medical and Surgical Practice of the Royal Victoria Hospital, and learn the system and arrangements of Military Hospitals. During four months they attend the Lectures given by the Professors and Assistant-Professors, and go through a course of Practical Instruction in the Hygienic Laboratory and Microscopical Room. The Lectures and Practical instruction are intended to explain the specialties of Military Medical Practice, attention being directed to gunshot and other wounds, Surgical arrangements in the field during action and sieges, means of transport, field Hospitals; tropical diseases and their means of investigation, service in India and in the

various colonies, the sanitary arrangements in peace and war, and the means of carrying out the sanitary regulations. Every opportunity is taken of practising operations on the dead body and practical points of a like kind. See Nos. 9 and 10 above.

NAVY MEDICAL DEPARTMENT.

REGULATIONS RELATIVE TO THE EXAMINATION OF CANDIDATES FOR THE APPOINTMENT OF ASSISTANT-SURGEON IN THE ROYAL NAVY.

1. That a Candidate for entry into the Royal Navy shall make a written application to that effect, addressed to the Secretary of the Admiralty, on the receipt of which application he will be furnished with the regulations, and a printed form, to be filled up by him, to show if he possesses the required qualification.

2. As vacancies occur, the number of Candidates required will be ordered to attend at the Admiralty Office on the first Tuesday in alternate months, commencing with Tuesday, July 2, 1867; but it is to be observed, that no person can be admitted as an Assistant-Surgeon in the Royal Navy unless he can produce satisfactory evidence that his name has been placed on the Medical Register as legally qualified to practise both Medicine and Surgery according to the Regulations established by the Medical Act. And further, he will be required to make a declaration that he is free from any mental or bodily disease, defect, or infirmity which could interfere with the efficient discharge of his duties as a Medical Officer in the Navy.(a)

3. Each Candidate will be required to produce a Certificate of good moral character, signed by the clergyman of the parish, or by the magistrate of the district.

4. A Certificate that he is not less than 20 nor more than 28 years of age.

5. That he has received a preliminary Classical Education.

6. That subsequently to the age of 18 he has actually attended a recognised Hospital for eighteen months, in which the average number of patients is not less than 100.

7. That he has been engaged in actual dissection for twelve months, and that he has performed the principal capital and minor operations on the dead body under a qualified teacher. The Certificates of Practical Anatomy must state the number of subjects or parts dissected by the Candidate.

8. On producing the above Certificates he will be examined before a Board of Naval Medical Officers, specially summoned by their Lordships, on the following subjects, viz.:—Anatomy, Surgery, Physiology, or Institutes of Medicine, Practice of Medicine, Chemistry, Materia Medica, Midwifery, Botany.

9. Although the above are the only qualifications which are absolutely required in Candidates for the appointment of Assistant-Surgeon, a favourable consideration will be given to those who have obtained the Degree of M.D. from any University in the United Kingdom, or who, by possessing a knowledge of the diseases of the eye, or of any branch of science connected with the Profession, such as Medical Jurisprudence, Natural History, and Natural Philosophy, appear to be more particularly eligible for admission into the service, observing, however, that lectures on these or any other subjects cannot be admitted as compensating for any deficiency in those required by the regulations.

10. Such candidates as shall have been found in all respects competent for the appointment of Assistant-Surgeon will be forthwith nominated to one of her Majesty's ships, or to a Naval Hospital at home; or, should their services not be immediately required, their names will be duly registered for early appointments as vacancies may occur. But it is distinctly to be observed, that Candidates admitted into the Naval Medical Service must serve in whatever ship they may be appointed to; and that in the event of their being unable to do so from sea-sickness, their names cannot be continued on the Naval Medical List, nor can they, of course, be allowed half-pay.

11. By the rules of the service no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea, after which he will be required to pass an examination before a Board of Naval Medical Officers, assembled at the department of the Medical Director-General of the Navy.

12. Assistant-Surgeons at home, after completing the stipulated five years' service, may, if the public service will admit, be granted two months' leave of absence on full pay on condition of their resuming their studies at a Medical School or Hospital.

13. Their Lordships have been pleased further to direct that a limited number of those Candidates who pass the best examination on entering the service shall be promoted annually to the rank of Surgeon at an earlier period than would occur under ordinary circumstances; and that these promotions shall be awarded as follows:—The Candidate who passes the best examination of his year—after five years' service. The Candidate who passes the second best examination of his year—after six years' service. The Candidate who passes the third best examination of his year—after seven years' service. Provided, however, that their second examinations are passed in an equally creditable manner, and that their conduct during the whole time they have been in the service has in all respects been satisfactory.

(a) His physical fitness will be determined by the Board of Medical Officers, who will be required to certify that his vision is sufficiently good to enable him to perform any Surgical operation without the aid of glasses, and that he is free from organic disease, constitutional weakness, or other disability likely to unfit him for the Naval Service in any climate.

RULES AND REGULATIONS OF THE EXAMINING MEDICAL BODIES IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

GRADUATION IN MEDICINE.—STATUTES OF THE UNIVERSITY OF EDINBURGH RELATIVE TO GRADUATION IN MEDICINE AND SURGERY.

THREE Medical Degrees are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

I. The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and the proficiency of Students in these branches is ascertained by examination, prior to the commencement of their Medical study.

II. No candidate is admitted to a Professional Examination who has not passed a satisfactory Examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place before the candidate has entered on his Medical Curriculum.

III. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all preliminary Examination; and an Examination in Arts by any corporate body, whose Examination has been recognised as qualifying for entrance on Medical study by resolution of the General Medical Council of the United Kingdom, provided the said Examination by the said corporate body shall be also approved by the University Court, shall exempt from preliminary Examination in Arts, on all subjects comprised in the said Examination of the said corporate body.

IV. No one is admitted to the Degree of Bachelor of Medicine or Master in Surgery who has not been engaged in Medical and Surgical study for four years—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

V. Every Candidate for the Degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of Medical Science—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery, and the Diseases peculiar to Women and Children (two Courses of Midwifery of Three Months each being reckoned equivalent to a Six Months' Course, provided different departments of Obstetric Medicine be taught in each of the Courses), General Pathology (or, in Schools where there is no such Course, a Three Months' Course of Lectures on Morbid Anatomy, together with a Supplemental Course of Practice of Medicine, or Clinical Medicine), during Courses including not less than one hundred Lectures; Practical Anatomy, a Course of the same duration

as those of not less than one hundred Lectures above prescribed; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or a Certificate of Attendance on six Cases from a registered Medical Practitioner; Clinical Medicine, Clinical Surgery, Courses of the same duration as those of not less than one hundred Lectures above prescribed, or two Courses of three months, Lectures being given at least twice a week; Medical Jurisprudence, Botany, Natural History, including Zoology, during Courses including not less than fifty Lectures.

2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons.

3. That he has been engaged for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the Laboratory of an Hospital, Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.

4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.(a)

VI. The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following Regulations:—

1. One of the four years of Medical and Surgical study, required by Section IV., must be in the University of Edinburgh.

2. Another of such four years of Medical and Surgical study must be either in the University of Edinburgh, or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital, which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures as above prescribed.

4. One year's attendance on the Lectures of Teachers of Medicine in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or of such Teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures, as above prescribed.

5. Candidates may, to the extent of Four of the Departments of Medical Study required by Section V., Sub-section 1, attend, in such year or years of their Medical and Surgical studies as may be most convenient to them, the Lectures of the Teachers of Medicine specified in the foregoing Sub-section 4.

6. All Candidates, not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

7. The Fee for attendance on the Lectures of an Extra-Academical Teacher in Edinburgh, with a view to Graduation, must be of the same amount as that exigible by Medical Professors in the University.(b)

8. No Teacher is recognised who is at the same time a teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

VII. Every Candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration in his own handwriting, that he has completed his twenty-first year,(c) and that he will not be, on the day of Graduation, under articles of apprenticeship to any Surgeon or other master.

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

VIII. Each Candidate is examined, both in writing and *viva voce*—*First*, on Chemistry, Botany, and Natural History; *Secondly*, on Anatomy, Institutes of Medicine, Materia Medica, and Pathology; *Thirdly*, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; *Fourthly*, Clinically on Medicine and on Surgery in an Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, and Natural History are conducted, as far as possible, by demonstrations of objects placed before the candidates.

IX. Students who profess themselves ready to submit to an examination on the first division of these subjects, at the end of their second year, may be admitted to examination at that time.

X. Students who have passed their examination on the first division of these subjects, may be admitted to examination on the second division at the end of their third year.

XI. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*.

XII. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

XIII. If any Candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied, during another year, two of the prescribed subjects, either in the University, or in some other School of Medicine.

XIV. The Degree of Doctor of Medicine may be conferred on any Candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of 24 years, and has been engaged, subsequently to his having received the Degree of Bachelor of Medicine, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice: Provided always, that the Degree of Doctor of Medicine shall not be conferred on any person unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory Examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects—namely, French, German, Higher Mathematics, and Natural Philosophy: And provided also that the Candidate for the Degree of Doctor of Medicine shall submit to the Medical Faculty a Thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the Professional Examinations for the Degree of Bachelor of Medicine, which he may have made a subject of study after having received that Degree.

XV. The Medical Examiners for all Candidates for Graduation in Medicine are the Professors in the Faculty of Medicine, and, in addition, three persons appointed annually by the University Court.

XVI. The Provisions of these Statutes came into operation on the 4th of February, 1861.

XVII. Persons who began their Medical studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

Note.—In conformity with the desire expressed by the Privy Council, it has been resolved that any Candidate for a Degree in Medicine must produce, at his final Examination, a Certificate from a Dispensary or other Public Institution where Vaccination is practised, attesting that he has been practically instructed in the operation, and is acquainted with the appearances which follow its performance.

Notice to Candidates for Graduation in Medicine.—Candidates who commenced their Medical studies by attendance on qualifying classes before February 4, 1861, are entitled to appear for examination for the Degree of Doctor of Medicine, after four years' study, on completing their 21st year, and without having taken the Degree of Bachelor of Medicine. They are also exempted from the preliminary examinations mentioned in Sections I. and II., and require only to undergo an examination in Latin. They are also exempted from attendance on Practical Chemistry and Practical Midwifery, and require only three months of Clinical Surgery and eighteen months of Hospital attendance.

In University College, in King's College, in the Hospital Schools of London, in the extra-Academical Schools of Edinburgh, in the School of the College of Surgeons of Dublin, and in certain Medical Schools where at least two Lecturers have been qualified by the University Court, a candidate may make *two Anni Medici*, one of which must be constituted by Hospital attendance and Practical Anatomy, and the other by at least two courses of one hundred Lectures, or one such course, and two courses of fifty Lectures. The classes at these Schools only qualify to the extent of four, and one of the four must be Practical Anatomy. But the three-

(a) See Note as to Vaccination appended to Section XVII.
(b) The Fee must be paid at the commencement of the Course.
(c) Or that he will have done so on or before the day of Graduation.

months' courses of Materia Medica, Pathology, and Midwifery do not qualify.

In Provincial Schools, where there are no Lecturers qualified by the University Court, a candidate can make *one Annus Medicus only*, and this is constituted by attendance on a qualified Hospital along with a course of Practical Anatomy.

The Edinburgh extra-Academical Classes only qualify if the fee paid at the commencement of the Session is the same as that paid to the Professors in the University.

Preliminary Examinations in Arts, October 20 and 21, 1868; March 23 and 24, 1869. First Professional Examination, October 24, 1868; April 1, 1869. Second Professional Examination, July 7 and 8, 1868; April 8 and 9, 1869. Final Professional Examination, June 2 and 3, 1868. Defence of Theses, July 31. Graduation, August 1. Candidates who appear for examination must produce certificates of having attended *complete* courses of the subjects on which they are to be examined. A Degree in Arts of any University of the United Kingdom or of the Colonies, or of such other Universities as may be specially recognised by the University Court, exempts from Preliminary Examination.

The Preliminary Examinations in Arts accepted by the General Council are recognised *pro tanto*—that is to say, they exempt from examination in Arts on the subjects comprised in them, in so far as the examinations are of the same extent as those required by this University. Any subjects required by the Statutes and not included in these examinations, or not carried out to the requisite extent, must be passed at the University.

N.B.—Theses are only required for the Degree of M.D., and none are now required for the Degree of M.B. Those who have under former regulations given in Theses when taking the Degree of M.B. require no Theses for M.D.

The fee for examination must be deposited with the Secretary before the day of examination. In the event of the candidate not passing, the fee is not returned, but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one half of the fee. The fees are—For the Degree of M.B., three examinations, £5 5s. each, £15 15s.; for the Degree of C.M., £5 5s. additional; for the Degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp.

Note.—Total fees and stamp for graduating as M.D. only, by Regulations for Students commencing before February, 1861, £25.

Students are recommended to commence their Medical studies by attending a Summer Session.

MEDICAL DEGREES.—PRELIMINARY EXAMINATION IN ARTS.
PROGRAMME FOR 1868-69.

I. In conformity with Section I. of the Statutes, examinations on the Preliminary Branches of extra-Professional Education will take place on Tuesday and Wednesday, October 20 and 21, 1868; and on Tuesday and Wednesday, March 23 and 24, 1869, at 10.30 o'clock a.m. Examination on Tuesdays—English, Arithmetic, Mechanics, Greek, Higher Mathematics, and German. Examination on Wednesdays—Latin, Elements of Mathematics, Natural Philosophy, French, Logic, and Moral Philosophy. 1. English.—A portion of an English author must be written to dictation; the grammatical construction of one or two sentences must be explained; the grammatical errors in a sentence ungrammatically composed must be pointed out and their nature explained, and the derivation and definition of a few English words in common use must be given. (See Bain's "English Grammar," and Angus "On the English Language.") 2. Latin.—Eighth Æneid of Virgil, an easy passage from a Latin prose author, and a single passage of English (translated from a Latin author) to be retranslated into Latin, the more difficult Latin words being given. 3 Arithmetic.—The Common Rules, including Decimals. 4. Elements of Mathematics.—Euclid, Books i., ii., and iii., and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. Elements of Mechanics.—Elementary Mechanics and Hydrostatics.

II. At the same dates, examinations will take place in conformity with Section II. of the said Statutes, which enacts that no candidate shall be admitted to a Professional examination who has not passed a satisfactory examination on at least *two* of the following subjects (in addition to the subjects mentioned above):—1. Greek.—Third Book of Xenophon's Anabasis. 2. French.—La Fontaine's Fables. 3. German.—Schiller's Wallenstein. 4. Higher Mathematics.—Euclid, Books i. to vi.—Algebra, Trigonometry, and Conic Sections. 5. Natural Philosophy.—A general knowledge of the Elements of Natural Philosophy, as in Ganot's Physics, translated by Atkinson. 6. Logic.—Whately's "Elements of Logic," Introduction and Book i., along with "Introduction" and "Intellectual Powers of Man" (Part I.) in Stewart's "Outlines," will form the basis of the examination. 7. Moral Philosophy.—Springs of Action—Duties—Ethical Theories, as, *e.g.*, in Stewart's "Outlines," Part II., will form the basis of the examination. According to the regulations of the General Medical Council, no Medical student can be registered who has not passed English, Latin, Arithmetic, Mathematics, along with one optional subject, as French, German, Greek, Mechanics, and Natural Philosophy.

III. In Section XVII. of the said Statutes, it is enacted that the Degree of Doctor of Medicine shall not be conferred on any person unless he be a Graduate in Arts, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. Two of these must be Greek and Logic or Moral Philosophy, and the *third* may be any one of the following subjects—namely, French, German, Higher Mathematics, Natural Philosophy.

Examinations of the same extent, and on the same subjects, at other British Universities granting the Degree of M.D., will exempt from these preliminary examinations. Certificates of having passed such examinations must be produced, with an official notice of the subjects on which the candidate has passed an examination.

Students who come under the Old Statutes, in consequence of having commenced their Medical Curriculum by attendance on Classes before February 4, 1861, will be examined in Latin on Wednesday, October 21, 1868, and Wednesday, March 24, 1869, at 10.30 a.m. For nature of examination, see Section I. of this programme.

The Medical Faculty have resolved that the written and oral examinations on Chemistry, Botany, and Natural History, in October, 1868, and April, 1869, shall be restricted in the following manner:—

1. *Chemistry.*—A knowledge of the general Laws of Affinity and Equivalents will be required. There must be a general acquaintance with the chief chemical properties of the more common elementary bodies and their compounds, especially those relating to Air and Water, and those commonly used in Medicine. In Organic Chemistry, the leading laws must be known, and the chief families of compounds, such as Ethers and Alcohols, must be familiar to the candidate. But special knowledge will be required of the Chemistry of the Nutritive and Digestive Fluids, the Excretions, and the Chemistry of Food.

2. *Botany.*—The Structure and Functions of Plants, the principles of Classification, Classes, Sub-Classes, and Sections of the Natural System—(see Balfour's "Class-Book," or his "Manual of Botany"). Botanical characters to be demonstrated on conspicuous specimens of the following Natural Orders:—Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Onagraceæ, Umbelliferæ, Dipsaceæ, Compositæ, Boraginaceæ, Labiatæ, Scrophulariaceæ, Primulaceæ, Euphorbiaceæ, Amentiferæ, Coniferæ, Orchidaceæ, Amaryllidaceæ, Liliaceæ, Palmæ, Gramineæ, Filices. The student will be examined practically on the Microscopical Structure of Plants, and he will be required to describe the organs of fresh plants put into his hands.

3. *Natural History.*—The general principles of Zoological Classification. Characters depending on specialisation of organs, and on Morphological type. The general Morphology of the Primary Groups of the Animal Kingdom. The general Morphology of the Classes of the Vertebrata, and of the Orders of Amphibia, Reptilia, and Mammalia. The principal Morphological and Physiological characters of the following groups:—Insecta, Crustacea, Echinodermata, Cephalopoda, Gasteropoda, Lamellibranchiata, Branchiopoda, Actinozoa, Hydrozoa, Infusoria, Rhizopoda.

Candidates who mean to appear at any of the above-mentioned Examinations must inscribe their names and addresses in a book which is kept at the Secretary's Office, College; and for the Professional Examinations, must give in their Schedules duly filled up, with their Matriculation Tickets, and Class Tickets and Certificates, and pay the fees at least ten days before the date of examination.

UNIVERSITY OF ABERDEEN.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners, dated March 16, 1861, and approved by her Majesty in Council.

The following are the Degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examination for the Degrees of M.B., C.M., and M.D., being in conformity with the Ordinances of the Scotch Universities' Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of Medical and Surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other University entitled to give the Degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each Candidate for the Degree of M.B. shall pay a fee of five guineas in respect of each of the three Professional Examinations.

2. If the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas.

3. And every Candidate for the Degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their Medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the Degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

Further information may be obtained from the Dean of the Medical Faculty, Professor Macrobin, M.D.

UNIVERSITY OF ST. ANDREWS.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners; they therefore generally correspond with those of the Universities of Edinburgh, Aberdeen, and Glasgow.

The Degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examinations for these Degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for Candidates for the Degrees of Bachelor of Medicine and Master of Surgery present some difference:—

No one shall be received as a Candidate for the Degree of

Bachelor of Medicine or Master in Surgery unless two years at least of his four years of Medical and Surgical Study shall have been in one or more of the following Universities and Colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of Medical and Surgical Study, other than those for which provision is made by the Ninth Section, may be either in one or more of the Universities and Colleges above specified, or in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of Medicine as may from time to time receive recognition from the University Court.

Attendance on the Lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen, shall not be reckoned for graduation in St. Andrews, if the fee for such Lectures be of less amount than is charged for the like Course of Lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Every Candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall be examined both in writing and *viva voce*—first, on Chemistry, Botany, Elementary Anatomy, and Materia Medica; secondly, on advanced Anatomy, Zoology, with Comparative Anatomy, Physiology, and Surgery; and, thirdly, on Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

FEES FOR GRADUATION.

For the Degree of Bachelor of Medicine five guineas in respect of each of the three divisions of the Examination on Professional subjects; and if the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but, if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas; and every Candidate for the Degree of Doctor of Medicine, who has previously obtained the Degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a Candidate for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

N.B.—The Degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered Medical Practitioner above the age of forty years, whose Professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his Professional knowledge; provided always, that Degrees shall not be conferred under this Section to a greater number than ten in any one year. Fee £52 10s.

REGULATIONS AS REGARDS THE EXAMINATION OF REGISTERED MEDICAL FRACTITIONERS ABOVE THE AGE OF FORTY YEARS.

On or before the 25th day of March in each year, Candidates shall lodge with the Registrar of the University the following certificates and deposits:—

I. A Certificate of Age.

II. Certificates from three Medical Men, of such acknowledged reputation in the Profession, or of such standing in the Medical Schools, as shall satisfy the Senatus of the Professional Position and Experience of the Candidate.

III. A certain portion (viz., £10 10s.) of the Graduation Fees; which sum shall be forfeited should the Candidate fail to appear at the time appointed for examination, or should he fail to pass the prescribed examination.

IV. The Examination shall be conducted both in writing and *viva voce*, and shall include the following subjects:—1. Materia Medica and General Therapeutics. 2. Medical Jurisprudence. 3. Practice of Medicine and Pathology. 4. Surgery. 5. Midwifery.

As regards the last two subjects—viz., Surgery and Midwifery—a minute knowledge shall not be required from those who do not practise these branches of the Profession.

Further information may be obtained on application to the Registrar of the University.

UNIVERSITY OF GLASGOW.

Three Degrees in Medicine are granted, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). [The Preliminary Examination, Curriculum, and Professional Examinations for these Degrees, being in conformity with the Ordinance of the Scottish University Commissioners, are the same as for the Universities of Edinburgh, St. Andrews, and Aberdeen.]

Of the four years constituting the Curriculum, one at least shall have been passed in the University of Glasgow, and another either in that University or some other University entitled to give Degrees in Medicine.

These Statutes apply to all Candidates who commenced their Medical studies on or after October 1, 1861. Candidates who began their Medical studies before that date are entitled to obtain their Degrees according to the regulations existing at the time when they commenced their studies.

The annual term for conferring Medical and Surgical Degrees is the first day of May.

The fees for the Degrees are as follows:—For the Degree of M.B. (for each of three examinations, £5 5s.), £15 15s.; for that of C.M. (in addition to the fee for M.B.), £5 5s.; for the Degree of M.D. (in addition to the fee for M.B.), £5 5s.; and the Government stamp for the Diploma, &c., £10 3s.

The Preliminary Examinations of Medical Students in branches of General Education take place at the beginning and at the end of the Winter Session.

The regulations under which the above Degrees are granted, and the notices of the subjects of Examination, will be obtained by application to the Registrar of the University.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

These are the same as those for the Double Qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons (see below), with the following exceptions in Professional education:—Anatomy, 1 Course, six months; Practical Anatomy, 1 Course, six months, or 2 Courses, three months each; Physiology or Institutes of Medicine, 1 Course, three months; no third Course of Medicine; Clinical Surgery, 1 Course, three months; no third Course of Surgery; Pathological Anatomy, 1 Course, three months; or General Pathology, 1 Course, three months; Practical Pharmacy, 1 Course, three months.

Candidates for the Licence of the College who already possess a qualification from a recognised Licensing Body, or who have passed the First Professional Examination before a Qualifying Body, will not be required to be re-examined on Anatomy, Physiology, and Chemistry, but will be at once admitted to the Second Part of the Examination.

No Candidate is admissible to Examination who has been rejected by any other Licensing Board within three months previous to his Examination.

The Fee payable by a Licentiate is Ten Guineas. In the event of a Candidate being unsuccessful at his Examination, the sum of Two Guineas will be retained to defray expenses.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.(a)

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR THE DIPLOMA.

These are the same as those given below for the conjoined qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons, with the following exceptions in Professional education:—

No third course of Medicine and no course of Pathological Anatomy are required.

A certificate of three months' instruction in Pathological Anatomy at the post-mortem room of a recognised Hospital will be required from Candidates commencing Professional study after October 1, 1861.

The following order of study is recommended as a guide to the Student, though not enjoined:—First Year: Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year: Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the Third Year), Hospital. Third Year: Practice of Physic, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Pathological Anatomy, Hospital. Fourth Year: Surgery, or Clinical Surgery, Midwifery and the Diseases of Women and

(a) We are informed that the Regulations for the qualification of this College and also for the Double Qualification of the Colleges of Physicians and Surgeons are under revisal with a view to certain alterations, and that a new set of Regulations will be published shortly.

Children, Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

It is strongly recommended to Students to avail themselves of any opportunities which they may possess of attending Lectures on Ophthalmic and Mental Diseases; also on Botany, Zoology, Comparative Anatomy, and the use of the Microscope, in addition to the Courses of Lectures which are absolutely prescribed.

The Regulations for the Preliminary Examination in General Education generally correspond with those to be observed by Candidates for the joint qualifications of the Royal Colleges of Physicians and Surgeons, Edinburgh.

PROFESSIONAL EXAMINATIONS FOR THE DIPLOMA OF THE COLLEGE.

The Regulations are generally the same as those for the Professional Examinations for the joint Diploma of the two Colleges, with the following exceptions:—

The sum of £4 must be paid to the Treasurer of the College for the First Examination, not later than 10 a.m. of the day preceding it. This sum will be considered as paid to account of the entire fee of £10 payable for the Diploma.

In the case of a Candidate being unsuccessful at this Examination, £2 will be returned to him, the remaining £2 being retained to meet the expense of the Examination.

Registered Medical Practitioners whose Degree or Licence in Medicine is dated prior to October 1, 1861, are exempt from the first Professional Examination. The Examinations under this regulation may take place on the first and third Tuesdays of each month.

The Second Examination embraces Surgery and Surgical Anatomy; also Medicine, Midwifery, Materia Medica, and Medical Jurisprudence; and shall not take place before the termination of the Winter Session of the last year of Study.

Applications for Examination must be made to the Secretary not later than the Monday previous to the day of the first examination.

Every Candidate must produce to the Secretary—(1) Satisfactory evidence of his having attained the age of 21 years; (2) the tickets and the Certificates of his classes; (3) the Certificate of his having passed the first Professional Examination; (4) a tabular statement (for which a printed form will be furnished by the officer) exhibiting the full amount of his Professional education, and distinguishing the Classes, Hospitals, and Dispensaries attended during each session of his studies. If he have been an apprentice, he must also insert the name of his master, the date of his indenture, and the length of time for which he was bound. This statement, accurately filled up, must be attested by his signature, and will be preserved by the College as a record.

If the Candidate have been an Apprentice to a Fellow of the College, he must also produce his discharged indenture.

The remaining fee payable to the College (being £6), together with the receipt for the fee paid for the first Professional Examination, must be lodged not later than 10 a.m. of the day preceding the examination day in the hands of the Treasurer, who will certify this upon the Inspector's letter. The sum of £4 will be returned to unsuccessful Candidates.

All Candidates are subjected to a practical Clinical Examination in the Surgical Hospital, which examination will include Surgical apparatus, bandages, etc.

FEES.

1. For the Diploma of the College, £10. 2. For a Certificate of Qualification to act as Assistant-Surgeon in the Navy, when no previous qualification has been received from the College, £5 5s.

NOTE.—The Fee payable for the Diploma by Apprentices of those who were Fellows of the College prior to the Charter of 1851 is £5.

Preliminary Examinations in General Education will take place on Saturday, Oct. 24, 1868; on Saturday, Nov. 7, 1868; on Saturday, April 24, 1869; on Saturday, July 24, 1869. A First Professional Examination will be held on Tuesday, Oct. 20, 1868. The Second Professional Examination will take place immediately after the conclusion of the first Professional Examination.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their Diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the Student may obtain the Diplomas of both Colleges.

Students passing the joint Examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

PROFESSIONAL EDUCATION.

Candidates commencing Professional Study after October 1, 1865, must have been engaged in Professional Study during four years after the Examination in General Education, which shall include not less than four Winter Sessions', or three Winter and two Summer Sessions' attendance at a recognised Medical School.(a)

The Candidate must have attended the following separate and distinct courses of lectures:—

Anatomy: Two Courses, Six Months each.(b) Practical Anatomy: Twelve Months; or, at the option of the Candidate, Anatomy: One Course, Six Months; Practical Anatomy: Eighteen Months. Chemistry: One Course, Six Months. Practical or Analytical Chemistry: One Course, Three Months. Materia Medica: One Course, Three Months. Physiology: Not less than Fifty Lectures.(c) Practice of Medicine: One Course, Six Months. Clinical Medicine, Six Months.(d) A Third Course of Medicine, which may be either Practice of Medicine or Clinical Medicine, at the option of the Student: One Course, Six Months. Principles and Practice of Surgery: One Course, Six Months. Clinical Surgery: One Course, Six Months. A Third Course of Surgery, which may either be Principles and Practice of Surgery or Clinical Surgery, at the option of the student: One Course, Six Months.(d) Midwifery and the Diseases of Women and Children: One Course, Three Months. Medical Jurisprudence: One Course, Three Months. Pathological Anatomy: Three Months.(e)

Besides the above-mentioned Courses of Lectures the candidate must have attended at least six cases of labour under the superintendence of a qualified Medical Practitioner, either in a recognised maternity Hospital, or a Dispensary where Midwifery cases are admitted, or in private practice; and must produce a certificate to that effect from the Practitioner under whom he attended. He must also have attended for three months a course of instruction in Practical Pharmacy at the Laboratory of an Apothecary, or of a Member of the Pharmaceutical Society of Great Britain, or of a Chemist and Druggist recognised by either College on special application, or of a public Hospital or Dispensary, or as Assistant to a registered Practitioner who dispenses medicines to his own patients.

The candidate must also have attended for twenty-four months a public general Hospital containing, on an average, at least eighty patients. He must also have attended, for six months, the practice of a public Dispensary specially recognised by either College; or have been engaged for six months as visiting Assistant to a registered Practitioner.

A Certificate of Proficiency in Vaccination, signed by a registered Practitioner, will be required of every candidate.(f)

The six months' Courses delivered in Scotland must consist of not fewer than 100 Lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' Courses must consist of not fewer than 50 Lectures.

The following order of study is recommended as a guide to the student, though not enjoined:—First Year: Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year: Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the third year), Hospital. Third Year: Practice

(a) Candidates commencing study prior to the above date will be admitted to examination after four Winter Sessions' or three Winter and two Summer Sessions' attendance on classes at a regular Medical School.

(b) The two Courses must not be simultaneous.

(c) In those Schools of England and Ireland in which two separate Courses of Lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these Courses will be received as a Course of Anatomy and the other as a Course of Physiology.

(d) Two Courses of Clinical Medicine, of three months each, if not simultaneous, will be held as equivalent to one Course of six months. They must be attended during the period of attendance at the Hospital where they are delivered. The same rules will apply to Clinical Surgery.

(e) A Certificate of attendance on the post-mortem examinations at a general Hospital will be accepted in lieu of this Course.

(f) By a regulation of the Privy Council, of date December 1, 1859, no one can be appointed as a contractor for Vaccination under the English Poor-law who does not produce a Certificate of Proficiency in Vaccination from a person authorised by the Privy Council to grant the same. A Certificator in Vaccination has been appointed in Edinburgh by the Privy Council.

of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital. Fourth Year: Surgery or Clinical Surgery, Midwifery and the Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

1. All Students who intend becoming Candidates for the Diplomas of the Colleges must have passed the complete Examination in General Education, and have had their names inscribed in the Register of Medical Students instituted by the General Medical Council at the commencement of their Professional Studies.

2. The following will be the subjects of the Preliminary Examination in General Education for the Double Qualification in Medicine and in Surgery conferred conjointly by the Royal Colleges of Physicians and Surgeons, and also for the separate Diploma of each College during the year 1868-69:—1. English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First two Books of Euclid. 4. Latin: Translation from one of the two following books, at the option of the Candidate—viz.: Cicero in Catilinam, Orat. I.; Virgil, Æneid, Lib. II.; and of an easy passage from a book not prescribed; Exercises in Parsing, and in rendering English correctly into Latin, the Latin words being supplied. 5. One of the following subjects at the option of the Candidate:—(1) Greek, Xenophon's Anabasis, Book III. Homer's Iliad, Book 1. (2) French, La Fontaine's Fables. (3) German, Schiller's "Wallensteins-Tod." (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. N.B.—In Greek, French, and German, parsing of words from the passages given to be translated will be required; also, translation of short sentences from English into the respective Languages.

3. Testimonials of proficiency granted by the national educational bodies recognised by the General Council will be accepted as sufficient evidence of general education, and will exempt from the Preliminary Examination.

4. The Preliminary Examinations shall take place at stated periods, and shall be conducted by a special Board of Examiners in Arts.

5. Candidates, the commencement of whose Professional studies was prior to October 1, 1865, may pass the Preliminary Examination in General Education at any of the periods previous to the first Professional Examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a Preliminary Examination in General Education, will be required to undergo that Examination on the day before the first Professional Examination, and shall pay a fee of £1.

6. Students who intend to undergo the Preliminary Examination shall give in their names, addresses, and places of birth to the officer of either College, not later than two days before the day of examination, and shall pay a fee of 10s., not to be returned in case of rejection, but will be admissible to re-examination without paying another fee.

The following will be the periods of Preliminary Examination for the qualifications of the Royal Colleges of Physicians and Surgeons of Edinburgh: Saturday, October 24, 1868; Saturday, November 7, 1868; Saturday, April 24, 1869; Saturday, July 24, 1869; and on each occasion the Examination will be continued on the succeeding Monday.

PROFESSIONAL EXAMINATIONS.

1. Candidates for the double qualification shall be subjected to two Professional Examinations, to be conducted at separate times, partly in writing and partly orally.

2. The first Examination shall embrace Anatomy, Physiology, and Chemistry, and take place not sooner than the end of the Second Winter Session.

3. Opportunities for both Examinations will be presented six times in each year. On each of those occasions the Candidates shall assemble for the purpose of writing answers to the questions proposed. The Oral Examinations will be conducted on the days immediately succeeding.

4. Candidates who desire to pass the first Professional Examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination, and must produce tickets, and also certificates of attendance in regard to all those courses of study which have reference to the subjects of that examination. They must also produce a certificate of having passed the Preliminary Examination.

5. The sum of £6 must be paid to the Inspector of Certificates for this Examination, not later than 10 a.m. of the day preceding it. This sum will be considered as paid to account of the entire fee of £16 payable for the two Diplomas.

6. In the case of a Candidate being unsuccessful at this examination, £4 will be returned to him; the remaining £2 being retained to meet the expense of examination.

7. The second Examination shall embrace Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and shall not take place before the termination of the Winter Session of the last year of study.

8. Applications for examination must be made to the Inspector of Certificates not later than the Saturday previous to the day of examination.

9. Every Candidate must produce to the Inspector—1st, satisfactory evidence of his having attained the age of 21 years; 2nd, tickets and certificates of his classes; 3rd, a certificate of having passed the first Professional Examination; and 4th, a tabular statement (for which a printed form will be furnished by the Inspector) exhibiting the full amount of his Professional Education, and distinguishing the Classes, Hospitals, and Dispensaries attended during each Session of his Studies. The tabular statement, accurately filled up, must be attested by his signature, and will be preserved by the Colleges as a record.

10. The fee payable for this Examination, which shall be £10, must be lodged with the Inspector not later than 10 a.m. of the day preceding the examination day.

11. Unsuccessful Candidates at either the first or second Examination shall be remitted to their studies for a period to be determined by the judgment of the Examiners, but not in any case less than three months.

12. In case of a candidate being unsuccessful at the second Examination, £8 will be returned to him, the remaining £2 being retained to meet the expense of the Examination.

13. Candidates who have passed the first Professional Examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination on producing certificates of the whole course of study prescribed, and of having passed the Preliminary Examination. If any of the three subjects of the first Examination have been omitted, such Candidates will have to undergo an Examination on the omitted subjects, and none of the subjects set down in section 7 will be omitted at the second Examination, even if some of them should have formed part of the first Examination by another Board. The Fee payable by such Candidates is £16, and unsuccessful Candidates will receive back £14.

14. All Candidates are subjected to a Practical Clinical Examination in Medicine and Surgery, which includes the Examination of Patients, Physical Diagnosis, the use of the Microscope, Surgical Appliances, Bandages, etc.

15. Candidates desirous of a Special Examination on other days than those fixed by the Colleges must state some sufficient reason for their applications; and, as some days may be inconvenient and even unprofitable days for the Colleges, it is necessary that they should give as early notice and as large a selection of days as possible. Such Candidates will pay an extra Fee of £5, which will not be returned, whatever may be the result of the Examination.

16. No Candidate shall be admissible to Examination who has been rejected by any other Licensing Board within the three months preceding his Examination.

A First Professional Examination takes place on Tuesday, October 20, 1868. A Second Professional Examination will take place immediately after the conclusion of the First.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

ABSTRACT OF REGULATIONS FOR THE LICENCE, 1868-69.

Course of Study.—(1). Anatomy, two courses, six months each. (2). Practical Anatomy, twelve months. (3). Chemistry, one course, six months. (4). Practical or Analytical Chemistry, one course, three months. (5). Physiology, not less than fifty Lectures. (6). Practice of Medicine, one course, six months. (7). Clinical Medicine, one course, six months. (8). Principles and Practice of Surgery, one course, six months. (9). Clinical Surgery, one course, six months. (10). In addition to the above courses of Surgery and Clinical Surgery, one six months' course of either of these at the option of the student: Materia Medica, one course, three months. (11). Midwifery and the Diseases of Women and Children, one course,

three months. (12). Medical Jurisprudence, one course, three months. (13). Practical Midwifery, attendance on at least six cases of labour. (14). Pathological Anatomy, three months' instruction in the post-mortem room of a recognised Hospital. (15). Practical Pharmacy, three months' practical instruction. (16). Hospital and Dispensary Practice, twenty-four months' attendance on the practice of a public General Hospital, containing on the average at least eighty patients.

A Certificate of Proficiency in Vaccination, from a Vaccine Institution recognised by the Faculty, will be required of every Candidate. Candidates commencing Professional study after October 1, 1865, must have been engaged in Professional study during four years, which shall include not less than four Winter Sessions' or three Winter and two Summer Sessions' attendance at a recognised Medical School.

(Candidates commencing Professional study prior to the above date are admitted to Examination after four Winter Sessions' or three Winter and two Summer Sessions' attendance at a regular Medical School.)

Candidates are subjected to two Professional Examinations. The First Examination embraces Anatomy, Physiology, and Chemistry, and cannot be undergone before the end of the Second Winter Session of Study.

The Second Examination embraces Surgery and Surgical Anatomy, Medicine, Materia Medica, Midwifery, and Medical Jurisprudence, and cannot be undergone before the termination of the full period of Study.

Intending Candidates for the Second Examination must produce evidence—1st, of being 21 years of age; and 2nd, of having passed the First Examination. They will also present to the Secretary for inspection their Class and Hospital Certificates, and write out a tabulated statement of their whole course of Study, for which the Secretary, on application, will supply Candidates with printed forms.

The Fee for the Diploma is £10—£4 for the First and £6 for the Second Examination.

First Examinations will be held on the second Tuesday of every month. Second Examinations will take place, the written and clinical parts on each of the above days, and the oral part on the succeeding day. A Candidate, on showing a sufficient reason, may be admitted to Examination, on a day specially arranged, by paying an extra fee of £3.

All applicants for the Licence must be registered on the form prescribed by the General Medical Council at the commencement of Professional study.

Candidates who possess a qualification to practise, or who have passed the Examination in Anatomy, Physiology, and Chemistry before any of the Licensing Boards, will be admitted to the Second Examination on producing evidence of having attended the full Curriculum, and paying the Fee of £10.

DOUBLE QUALIFICATION.

The Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, while they still continue to give their Diplomas separately, under separate regulations, have made arrangements by which, after one series of Examinations, the Student may obtain two separate Licences—one in Medicine and one in Surgery.

The Fee for the two Diplomas granted conjointly is £16—£6 for the First and £10 for the Second Examination.

The First Examination for the Double Qualification will be held in the Faculty Hall, Glasgow, on the second Thursday of January, April, May, July, August, and October, and on each occasion it will be continued on the succeeding day. The Second Examination will be held, the written part on each of the above days, and the oral part on the succeeding day. Applications to be admitted, either to the First or the Second Examination, must be made to the Secretary of the Faculty not later than the Monday preceding the Examination.

A Candidate, on showing a sufficient reason, may be admitted to Examination on a day specially arranged, on paying an extra Fee of £5, which will not be returned in the event of his being remitted to his studies. The Curriculum is the same as that required for the Licence of the Faculty, with the addition of a second course of Medicine.

PRELIMINARY EXAMINATIONS CONDUCTED BY THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW, SESSION 1868-69.

1. Preliminary Examinations in General Literature in accordance with the regulations of the General Medical Council will be held in the Faculty Hall during the Session 1868-69 on the following days, commencing at eleven o'clock, viz.:—Friday, October 23, 1868; Friday, November 6, 1868; Friday, April 30, 1869; and Friday, July 23, 1869; and on each occasion the Examination will be continued on the succeeding day.

The Examination will embrace the following subjects:—1. English language. 2. Latin. 3. Arithmetic; Algebra. 4. Geometry 5. One of the following subjects at the option of the Candidate:—(1). Natural Philosophy—Mechanics, Hydrostatics, and Pneumatics. (2). Greek. (3). French. (4). German.

The Fee for the Examination and Certificate is 10s., payable to the Secretary previous to the Examination.

FACULTY OF MEDICINE IN IRELAND.

UNIVERSITIES, COLLEGES, COURSES OF STUDY, DEGREES, AND LICENCES TO PRACTISE.

The following Bodies grant one or more Degrees or Licences to practise Medicine or Surgery, and provide courses of instruction in the Medical Sciences:—The University of Dublin grants the Degrees of M.B. or Bachelor of Medicine; M.D. or Doctor of Medicine; M.C. or Master of Surgery; also Licences in Medicine (L.M.) and Surgery (L.S.). The Queen's University in Ireland, with its Provincial Colleges at Belfast, Cork, and Galway; this University confers the Degrees of M.D. and M.Ch. The King and Queen's College of Physicians in Ireland, granting a Licence and a Fellowship. This Institution, in connexion with the Medical Faculty of the University of Dublin, constitutes the School of Physic in Ireland. The Royal College of Surgeons in Ireland, which grants Letters Testimonial qualifying to practise Surgery as a Licentiate, and also confers a Fellowship. Fellows and Licentiates of the Colleges of Physicians and Surgeons may obtain from their respective Colleges a Diploma in Midwifery. The Rotunda and Coombe Lying-in Hospitals grant Diplomas in Midwifery, which are, however, not recognised under the Medical Act. The Governor and Company of the Apothecaries' Hall of Ireland also confer a Diploma.

The Medical Session in Ireland commences about the first week in November.

UNIVERSITY OF DUBLIN.

SCHOOL OF PHYSIC.

The School of Physic in the University of Dublin is under the joint control of the Board of Trinity College and of the President and Fellows of the College of Physicians.

MATRICULATION.

All students of the School of Physic must be matriculated by the Senior Lecturer of Trinity College, for which a fee of five shillings is payable. No student can be admitted for the Winter Courses after November 25.

DEGREES AND LICENCES IN MEDICINE AND SURGERY.

The Act 21 and 22 Vict. c. 99, recognises, as qualifications for Medical and Surgical Practitioners, the Degrees and Licences in Medicine and Surgery granted by the University. The Degrees are—1. Bachelor of Medicine. 2. Doctor of Medicine. 3. Master in Surgery.

UNIVERSITY DEGREES.

1. *Bachelor in Medicine.*—A Candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same Commencement as that at which he receives his Degree of B.A., or at any subsequent Commencement, provided the requisite Medical education shall have been completed. The Medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on the following Courses of Lectures, viz.:—Courses of five months' duration (November to April)—Anatomy, Practical Anatomy, with Dissections, Surgery, Chemistry, Practice of Medicine, Midwifery. Courses of three months' duration (April to July)—Botany, Practical Chemistry, Medical Jurisprudence, Materia Medica and Pharmacy, Institutes of Medicine.

Hospital Attendance.—1. Nine months' attendance on the Clinical Lectures of Sir Patrick Dun's Hospital. 2. Nine months' additional attendance on the Clinical Lectures of any Hospital recognised by the Board. 3. Instruction in Practical Midwifery, including not less than six deliveries.

Any of the above-named six or three months' Courses may be attended at any Medical School in Dublin, recognised by the Provost and Senior Fellows (and three of them, at the discretion of the Candidate, may be attended in the University of Edinburgh), provided the Candidate have kept an *Annus Medicus* in the School of Physic.

The Schools recognised are—1. The School of the Royal College of Surgeons in Ireland. 2. The Carmichael School. 3. The School of Dr. Steevens' Hospital. 4. The St. Peter-street School. 5. The School of the Catholic University. The recognition of these Schools is conditional on their students being furnished with *bona fide* certificates of an amount of regular attendance equivalent to that required by the University—viz., three-fourths of the entire number of Lectures in each Course.

An *Annus Medicus*, or a year's attendance in the School of Physic, may be kept in three ways—1. By attending at least two, or not more than three, of the foregoing Courses, which are of six months' duration. 2. By attending one Course of six months' and two of three months' duration. 3. By nine months' attendance on Sir Patrick Dun's Hospital and Clinical Lectures; together with one course of six months, or, in lieu thereof, two courses of three months' duration.

The Fee for nine months' attendance at Sir Patrick Dun's Hospital is twelve guineas. The Fee for each Course of Lectures is three guineas. The Fee for the *Liceat ad Examinandum* is £5. The Fee for the Degree of M.B. is £11.

§ 2. *Doctor in Medicine.*—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the Degree of M.B. for three years, and must perform exercises for the Degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of Fees for this Degree, £13.

3. *Master in Surgery.*—The Degree of Master in Surgery can only be obtained by Students who are Bachelors of Arts, and who have completed the Professional Curriculum and passed the examinations required. The Curriculum extends over a period of four years, and comprises attendance upon the following Course of Lectures—viz.: Anatomy, one Course; Demonstrations, three Courses; Dissections, three Courses; Theory and Practice of Surgery, two Courses; Practice of Medicine, one Course; Chemistry, one Course; Materia Medica, one Course; Midwifery, one Course; Practical Chemistry, one Course; Botany, one Course; Medical Jurisprudence, one Course.

Hospital Attendance.—Three Sessions, each of nine consecutive months' duration, in any recognised Hospital, together with attendance on the Clinical Lectures on Medicine and Surgery there delivered. Any of the above-named Courses may be attended at any of the Medical Schools of Dublin recognised by the Board, provided the Candidate has kept an *Annus Medicus* in the School of Physic. The following Hospitals are recognised by the Board:—1, Sir Patrick Dun's School of Physic Hospital; 2, Meath Hospital; 3, Richmond, Whitworth, and Hardwicke Hospitals; 4, Dr. Steevens' Hospital; 5, Jervis-street Infirmary; 6, City of Dublin Hospital; 7, Mercer's Hospital; 8, St. Vincent's Hospital; 9, Adelaide Hospital; 10, Mater Misericordiæ Hospital. Of the Courses of Lectures, which are of five months' duration, not more than three can be attended during any one Session. Candidates will also be required to perform Surgical operations on the dead subject. Candidates for the Degree of Master in Surgery, who have already passed the Examination for the Degree of Bachelor of Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the Degree of M.Ch., £11.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine or Surgery must be matriculated in Medicine, and must have completed four years in Medical Studies. Candidates for the Licences in Medicine or Surgery must pass the following Examination in Arts, unless they be Students in the Senior Freshman or some higher class:—Homer's Iliad, Books I., II. (omitting Catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History, Modern Geography; Arithmetic; Algebra to the end of Simple Equations; Euclid, Books I., II., III. In case the Student should wish to continue the Undergraduate Course in Arts, with a view to the Degree of B.A., his answering in the above will be reckoned as equivalent to the Entrance Examination, and the Hilary Examination of the Junior Freshman year. Students who have passed the foregoing Examination will be required to pay the admission fee of £15.

1. *Licentiate in Medicine.*—The Medical Course and Examination necessary for the Licence in Medicine is the same as for the Degree of M.B., with the exception that any general Hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, or Members of the College of Surgeons of England, on passing the foregoing Arts Examination, will be admitted to Examination for the Licence in Medicine. Fee for the *Liceat ad Examinandum*, £5. Fee for the Licence in Medicine, £5.

2. *Licentiate in Surgery.*—The Surgical Course and Examination necessary for the Licence in Surgery is the same as for the Degree of Master in Surgery. Fee for the *Liceat ad Examinandum*, £5. Fee for the Licence in Surgery, £5.

PREVIOUS MEDICAL EXAMINATION.

Candidates for Degrees and Licences in Medicine and Surgery are expected to pass two Examinations, the first of which will be held at the close of the second year of Medical Study, and the other, as heretofore, after the full Curriculum has been completed. The subjects required at the Previous Examination are the following:—Descriptive Anatomy, Botany, Materia Medica and Pharmacy, Chemistry, Theoretical and Practical, with Chemical Physics.

At a Board meeting, held June 17, 1863, it was resolved:—"Students who shall have passed the Previous Examination, and whose answering in any of the following subjects, viz., Botany, Chemistry, DescriptiveAnatomy, and Materia Medica, shall have satisfied the respective Examiners, shall be exempted from answering in such subject or subjects at the final Examination for Medical Degrees and Licences."

MEDICAL SCHOLARSHIPS.

Two Medical Scholarships will be given annually, tenable for two years, with a salary of £20 per annum, on the condition of the successful Candidates proceeding regularly for two years with the Medical Course in the University.

MEDICAL SCHOOL EXHIBITIONS.

The Professors of the School of Physic give three Exhibitions annually—two senior Exhibitions, value respectively £15 and £10, to be competed for by Students who have attended the School of Physic for three years; and a Junior Exhibition, value £15, to Students who have attended two years.

Total Expense of obtaining the Degrees of Bachelor in Medicine and Master in Surgery.—I. Lectures: 1. Anatomy (one Course), £3 3s. 2. Practical Anatomy (three Courses), £9 9s. 3. Dissections (three Courses), £12 12s. 4. Surgery (two Courses), £4 4s. 5. Practice of Medicine, £3 3s. 6. Chemistry (two Courses), £4 4s. 7. Materia Medica and Pharmacy, £3 3s. 8. Midwifery, £3 3s. 9. Botany. 10. Medical Jurisprudence, £3 3s. 11. Institutes of Medicine, £3 3s.—II. Hospitals: 1. Sir P. Dun's (first year), £12 12s. 2. Second and third years' attendance, £15 15s.—III. Degrees: 1. *Liceat ad Examinandum in Medicina*, £5. 2. *Liceat ad Examinandum in Chirurgia*, £5. 3. M.B. Degree £11. 4. M. Ch. Degree, £11.—Total Expenses: 1. Lectures, £49 7s. 2. Hospitals, £28 7s. 3. Degrees, £32. 4. Private Tuition, £20. Total, £129 14s. N.B.—As no Degrees in Medicine or Surgery are conferred except upon Graduates in Arts, the expense of the Degree of Bachelor in Arts, amounting altogether to £82 4s., should be added to the foregoing, making the total cost something over £200.

THE QUEEN'S UNIVERSITY IN IRELAND,

granting the Degrees of Doctor in Medicine and Master in Surgery, includes three Colleges—the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The curriculum of Medical Study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above Courses of Lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the Candidate, in any University, College, or School recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Experimental Physics, and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised Laboratory, and the Practice during six

months of a recognised Medico-Chirurgical Hospital, containing at least sixty beds, together with Clinical Lectures delivered therein; during the second period at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of Labour, under the superintendence of the Medical officer of any Hospital or Dispensary where cases of labour are treated; and eighteen months' Practice of a recognised Medico-Chirurgical Hospital, containing at least sixty beds, and in which Clinical Instruction is delivered. There are two University Examinations; one comprising the subjects of study in the first period, the other the subjects of the second period. The University Examinations are held twice in each year, in June and September. Further information will be found in the "Queen's University Calendar," or may be obtained by application to the Secretary.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RESPECTING THE EDUCATION, EXAMINATION, AND ADMISSION OF CANDIDATES FOR THE LICENTIATESHIP IN MEDICINE.

Candidates for the Licentiateship in Medicine are required to give proof of their having attained the age of 21 years, of having been engaged during a period of four years in the study of Medicine at a School or Schools recognised by the College, and shall also produce evidence of having studied the following subjects, viz.:—Anatomy, Physiology, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica and Botany, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and of having attended a Medico-Chirurgical Hospital, in which regular Courses of Clinical Lectures are delivered, together with Clinical Instruction, for twenty-seven months, or such Hospital for eighteen months, with nine months' attendance on a Medical Hospital, and similar Courses of Clinical Lectures and Clinical Instruction, the attendance in each case being for not more than nine months in any year—namely, for six winter and three summer months—and the attendance on a Medico-Chirurgical Hospital and Medical Hospital not being taken out in the same year, and of having attended Practical Midwifery.

Candidates who are not personally known to any Fellow of the College are required to transmit testimonials of character from registered Physicians or Surgeons.

The Examination is divided into two parts:—

First Part.—Anatomy, Physiology, Botany, and Chemistry.

Second Part.—Materia Medica, Practice of Medicine, Medical Jurisprudence, and Midwifery.

Students may be examined in the subjects of the first part at the termination of the first period of study, or in all the subjects of their education on the completion of their Medical studies.

Candidates are required to have passed an Examination in General Education held by some of the Qualifying Bodies, or by some one of the National Education Bodies approved by the College.

Students in Arts of one year's standing, of any University in the United Kingdom requiring Examinations in the first year; Graduates or Licentiates in Medicine or Surgery of any University or College of Great Britain or Ireland, will be exempt from the Preliminary Examination.

The above regulations respecting Preliminary Examination will not apply to Candidates who commenced their Professional education previously to January 1, 1861.

Candidates qualified as follows are required to undergo the second part of the Professional Examination only, viz.:—1. Graduates in Medicine of a University in the United Kingdom, or of any foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh. 3. Graduates or Licentiates in Surgery.

Licence in Midwifery.—Members of the College who may desire to obtain the Licence in Midwifery will be required to undergo a special Examination.

Candidates for the Licence in Midwifery, who are not Members of the College, will be admitted to examination for such Licence in Midwifery, on the following qualifications:—The Degree or Licence in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom, together with a certificate of having attended a six months' Course of Lectures on Midwifery, with the attendance for six months at a recognised Lying-in Hospital, or of having attended Practical Midwifery for six months.

Fees for Licence and Examinations.—The fee for the Licence is £15 15s., which may be divided as follows, viz.:—For Examination at the termination of the first period of study, £5 5s. The Final Examination for the Licence, £10 10s. Fee for the Midwifery Diploma, £3 3s. Fee for the Licences in Medicine and Midwifery, if taken out at the same time, £16.

The admission fee, with the exception of two guineas deducted to meet the expense of Examination, will be returned to any Candidate who may be rejected.

Examinations are held on the second Wednesday in each month, except August and September.

At all Examinations for the Licences of the College, Candidates will be examined as follows:—1. By written questions; 2. By oral questions.

Candidates qualified as follows, and of above five years' standing as such, will be exempted from the written examination, viz.:—1. Graduates in Medicine of a University in the United Kingdom, or of any foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh, who have been admitted upon Examination. 3. Graduates or Licentiates in Surgery.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

I.—REGISTRATION OF PUPILS.

A Fee of £5 5s. is required to be paid before Registration.

II.—QUALIFICATIONS OF CANDIDATES FOR LETTERS TESTIMONIAL.

Every Registered Pupil shall be admitted to an Examination for Letters Testimonial if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged a sum of twenty guineas in the Bank of Ireland to the credit of the President and for the use of the College.

b. A Certificate that he has passed an Examination as to his acquaintance with the Greek and Latin languages.

c. Certificate showing that he has been engaged in the study of his Profession for not less than four years.

d. Certificates of attendance on an Hospital recognised by the Council, where Clinical Instruction is given during three years.

e. Certificates of attendance on three courses of Lectures on Anatomy and Physiology; three Courses of Lectures on the Theory and Practice of Surgery; and of the performance of three courses of Dissections, accompanied by demonstrations; also certificates of attendance on two courses of Lectures on Chemistry, or one course of Lectures on General and one on Practical Chemistry; one course of Lectures on Materia Medica; one course of Lectures on the Practice of Medicine; one course of Lectures on Midwifery; one course of Lectures on Medical Jurisprudence; and one course of Lectures on Botany.

QUARTERLY EXAMINATION.

1st. Examinations are held Quarterly, on the second Tuesday in February, May, August, and November, at which Candidates shall be divided into two classes—Junior and Senior.

2nd. The Junior Class shall produce Certificates of having attended three courses of Lectures on Anatomy and Physiology, three courses of Lectures on Practical Anatomy, with Dissections; two courses of Lectures on Chemistry, one course of Lectures on Materia Medica, one course of Lectures on Botany, and one course of Lectures on Forensic Medicine.

3. This Class shall be examined in Anatomy, Physiology, and Materia Medica.

4. The Fee for this Examination shall be five guineas; not to be returned in case of rejection, but to be allowed in the fee for the Second Examination.

5. The Senior Class shall produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, one course of Lectures an the Practice of Medicine, and one course of Lectures on Midwifery; also certificates of attendance on a recognised Hospital for three Winter and three Summer Sessions.

6. This Class shall be examined in Surgery, Operative Surgery, the Practice of Medicine, and form of Prescription.

7. Both these Examinations shall be partly written and partly oral.

8. The fee for this examination shall be fifteen guineas.

Fees to be paid by Candidates for Letters Testimonial.—1. The Candidate pays ten shillings for his Preliminary Examination.

2. Five guineas as Registered Pupil of the College.

3. Five guineas for the Junior Class Examination, which is not returned in case of rejection, but is allowed in the fee for his Second Examination.

4. Fifteen guineas for the Senior Class Examination—total, £26 15s.

5. Every Candidate rejected at the Quarterly Examination shall be required to pay to the College the sum of two guineas on applying for re-examination, so as to recompense the College for the necessary expense.

III.—QUALIFICATIONS OF CANDIDATES FOR THE FELLOWSHIP.

Every Registered Pupil or Licentiate shall be admitted to Examination for the Fellowship if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged in the Bank of Ireland, for the use of the College, if he be a Licentiate, the sum of twenty guineas, or thirty-five in case he be a Registered Pupil; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he shall lodge, if he is a Licentiate, thirty guineas: or if he is a Registered Pupil, forty-five guineas. Fellows entering on the country list, who may subsequently settle as Practitioners in Dublin, or within ten miles thereof, shall pay ten guineas to the College.

b. A certificate that he is twenty-five years of age.

c. A certificate that he is a Bachelor of Arts of some University, or that he has been examined in such manner as the Council may from time to time direct, with a view to ascertain that he has obtained a liberal preliminary education.

d. A certificate, signed by two or more Fellows of the College, of good general conduct during his Professional education.

e. Certificates that he has been engaged in the acquisition of Professional knowledge for a period of not less than six years, during three of which he must have studied in one or more of the Schools and Hospitals recognised by the Council. He may have studied for the other three years in any School or Schools of the United Kingdom which shall be approved by the Council, or in any foreign School of repute. It is also required that the Candidate shall have had opportunities of practical instruction as House-Surgeon or Dresser in a recognised Hospital.

f. Certificates of attendance on the several courses of Lectures required to be attended by Candidates for Letters Testimonial, together with one course of Lectures on Comparative Anatomy and one course on Natural Philosophy.

g. A thesis on some Medical subject or Clinical reports, with observations of six or more Medical or Surgical cases taken by himself.

h. Candidates of the required age, who shall have taken the degree of Bachelor of Arts in a British or Irish University, and have complied with the foregoing regulations in other respects, will be admitted to examination at the end of five years of Professional study, of which three years must have been passed in one or more of the recognised Schools or Hospitals.

i. Licentiates of the College, who may not be able to show that they have followed the course of study specified in the preceding regulations, may, at the expiration of ten years from the date of their diploma, be admitted to the examination required for the Fellowship, provided they produce such evidence as shall be satisfactory to the Council that they have conducted themselves honourably in the practice of their Profession.

IV.—QUALIFICATIONS OF CANDIDATES FOR THE DIPLOMA IN MIDWIFERY.

Any Fellow or Licentiate of the College shall be admitted to an examination for the Diploma in Midwifery upon laying before the Council the following documents:—

a. A certificate showing that he has attended one Course of Lectures on Midwifery and Diseases of Women and Children, delivered by a Professor or Lecturer in some School of Medicine or Surgery recognised by the Council.

b. A certificate showing that he has attended the practice of a Lying-in Hospital, recognised by the Council, for a period of six months; or the practice of a Dispensary for Lying-in Women and Children, recognised by the Council, and devoted to this branch of Surgery alone.

c. A certificate showing that he has conducted thirty labour cases at least.

Candidates for the Midwifery Diploma shall be publicly examined on the Organisation of the Female, the Growth and Peculiarities of the Fœtus, the Practice of Midwifery, and the Diseases of Women and Children, and, if approved of, shall receive a Licence or Diploma certifying the same.

PRELIMINARY EXAMINATION, REGISTRATION, AND MATRICULATION.

Registered Pupils are admitted to answer the Preliminary Examination at any period previous to the final Examination for Letters Testimonial.

Students who are not Registered Pupils are also admitted to answer the Preliminary Examination at any period previous to the final Examination for Letters Testimonial, upon payment of a matriculation fee of ten shillings; but they are not enrolled as Registered Pupils, or entitled to the privileges reserved for such pupils, until they have paid the full Registration fee of five guineas.

That, in the Preliminary Examination of Students, the Examiners be instructed to select such portions of the books to be examined on as they themselves think right, and not leave it solely to the candidates; the selection of the books still remaining with the candidates. "In Greek—The Gospel of St. John, the Menippus of Lucian, or the First Book of Xenophon's Anabasis. In Latin—The First and Second Books of the Æneid of Virgil, the Jugurthine War of Sallust, or the Third Book of Livy. Candidates will also be required to write English correctly from dictation, and to give evidence of proficiency in Arithmetic." These Examinations are held quarterly—viz., on the last Wednesday in January, April, July, and October in each year. Fee, ten shillings.

Candidates are requested to enter their names, and pay the fee to the Registrar, at least three days previous to the day of Examination.

Registered Pupils are permitted to study in the Museum on two days in each week, and to read in the Library every day, from ten o'clock to three o'clock. They are also permitted to attend the Lectures on Comparative Anatomy, and to obtain certificate of such attendance, without payment of any fee. No student is admitted as a candidate to the Quarterly Examination, or to the final Examination for Letters Testimonial, until he has been enrolled as a Registered Pupil.

THE APOTHECARIES' HALL OF IRELAND.

BYLAWS AND REGULATIONS REGARDING THE LICENCE TO PRACTISE AS AN APOTHECARY.

Every candidate is required to undergo a Preliminary and a Professional Examination.

THE PRELIMINARY EDUCATION AND EXAMINATION include—1. English; 2. Mathematics; 3. French; 4. Latin; 5. Greek; 6. Natural Philosophy; 7. Natural History.

A Preliminary Examination will be held at the Hall four times in the year—viz., on the third Friday in the months of January, April, July, and October, at the hour of 2 p.m.

Unsuccessful candidates will not be re-admitted to examination until after the lapse of six months.

THE PROFESSIONAL EDUCATION AND EXAMINATION.

Every candidate for the Licence to practise must produce certificates to the following effect:—

1. Of having passed an Examination in Arts previously to entering on Professional study.

2. Of being registered as a student in Medicine by one of the Bodies named in Schedule (A) of the Medical Act.

3. Of being at least twenty-one years of age, and of good moral character.

4. Of apprenticeship to a qualified Apothecary, or of having been engaged at Practical Pharmacy with an Apothecary for a period of three years subsequent to having passed the Examination in Arts.

5. Of having spent four years in Professional study.

6. Of having attended the following Courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Materia Medica and Therapeutics, during one summer session; Practical Chemistry (in a recognised Laboratory), during three months; Principles and Practice of Medicine, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; Instruction in the Practice of Vaccination.

7. Of having attended, at a recognised Hospital or Hospitals,

the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session.

The Examination for the Licence to practise is divided into two parts.

The first part comprehends Chemistry, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy.

The second—Medicine, Surgery (Principles of), Pathology, Midwifery, Forensic Medicine, and Hygiene.

The first part may be undergone at the close of the second winter session, and after the Candidate has attended the Courses upon the several subjects named for this Examination, and the second not before the completion of the fourth winter session.

The Professional Examination will be held quarterly, of which due notice will be given.

Candidates for the Licence must lodge their testimonials and enrol their names and address with the Clerk at the Hall, in Dublin, a week prior to the day of Examination.

A rejected Candidate cannot be re-admitted to Examination until after the expiration of six months.

Candidates for the Certificate of Assistant to an Apothecary, in Compounding and Dispensing Medicine, must have completed at least three years of Apprenticeship with an Apothecary, or have a Certificate from an Apothecary of having been engaged at Practical Pharmacy for a period of three years, together with a Certificate of good moral character.

The Examination of the intended Assistant will be restricted to the British Pharmacopœia and to Pharmacy, scientific and practical, including the history and character of Medicines, their preparation, combination, and doses, and the translation of Latin Prescriptions.

TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

In order to confine the whole of this week's Number to information specially important to Students, we are compelled to defer answers to several Correspondents, together with all notices of passing events, until next week.

Medical Times and Gazette.

SATURDAY, SEPTEMBER 12, 1868.

THE FIVE POINTS OF MEDICAL EDUCATION.

Every man who is beginning to study Medicine may usefully bear in mind that there are five distinct kinds of qualification which he must aim at. First, he ought to have the education of a GENTLEMAN; secondly, he ought to be a SCIENTIFIC man; thirdly, he must make himself a PATHOLOGIST (that is, must learn the scientific basis of Medicine); fourthly, he must acquire the ART of treating disease; and fifthly, he must learn the BUSINESS of a Practitioner, so as to be able to live by his labours.

We need not insist upon too rigid and pedantic an adherence to method; still, the experience of the last thirty years has shown the advantage of taking these several points in the order in which we have put them.

The first point ought to be accomplished before beginning scientific studies, properly so called. Twenty or thirty years ago miserable youths used to be found in the *funking-room* at Hall and College, trembling lest they should get plucked for their inability to translate a few lines of Celsus on the very evening on which they were to be examined in the whole field of Medicine or Surgery. *Now* the ability to pass an examination in the subjects of a liberal education is wisely made the preliminary to Medical study. It would be well if the Colleges and Halls and other licensing bodies would entirely disembarrass themselves of all examinations in arts, and require every commencing student in Medicine to produce a matriculation testimonial or diploma from the Oxford or Cambridge local examinations or from the University of London. Be this as it may, the student who possesses the education of a gentleman will be able to read Latin easily, and Greek with a little help from a Lexicon; he should know French grammatically, and the elements at least of German; he will be familiar with the elements of mathematics, and have a good general idea of history and geography. He will thus be prepared to avoid the fallacies arising from misuse of language and vicious modes of reasoning. Nay, he may have the qualifications of a fluent and correct speaker and writer, and be capable of taking his part in political and social movements, so that, perhaps, in another generation the Medical Profession may be able to hold its own against the church and the law.

The second point is science in the general sense; and by this is understood a knowledge acquired by a peculiar orderly and exact method of study of the physical and chemical properties of matter, and of biology, or the phenomena of living beings. It were beside our present purpose to consider whether or not some degree of scientific training might not advantageously be combined with the ordinary school education; but certainly it has no claim to take the place of classics and mathematics. In his first sessions, it is science which the Medical student has to pursue. He must bear in mind that, as Medicine advances, there is not one branch of science which may not be her auxiliary. Thirty years ago, Dr. Graves (whose memory is revered not alone by the Dublin School, of which he was an ornament) said that chemistry and botany, important as they were in themselves, were so foreign to the avocations of the Practitioner, that a knowledge of them ought not to be exacted from the student. Yet we find that the aid of botany must be sought by those who would know the nature of certain diseases of the skin.(a) A knowledge of electricity is the *sine qua non* in the study of the nervous system. But even if the positive knowledge gained by the study of chemistry, general and human anatomy, physiology, and botany were of no use in itself, the *method* of study—the minute observation of form and structure, the training in the use of the hand and eye, the appeal to number, weight, and measure, and the substitution of precise for loose methods of observation and statements of the results, would be valuable in themselves as means of education.

Thirdly, when our student has made himself acquainted with the physical and chemical properties of inorganic matter and with the structure and functions of living beings, he will be prepared for the wards of the Hospital, for the study of *pathology*—the science of Medicine proper—the history of deviations from healthy structure and function, and of diagnosis, or the art of distinguishing, in the living body, the precise seat and nature of disorder.

To this he will superadd, fourthly, the gradual acquaintance with the practical art of treating disease, which can only be done by watching the practice of his seniors, and by treating Medical and Surgical cases under their eye; and, lastly, the *business* of life, the mode of keeping accounts, of arranging the day's work, of estimating the value of services rendered, and of taking the necessary means for obtaining payment. This, like the art of practice, is best got, for most purposes, by acting as assistant to an experienced and busy Practitioner.

We do not hesitate to say that the whole of the future career may be influenced by the order in which the student takes these five points. Formerly, it was the custom to begin with the business element—the mixing drugs, posting books, and the like—and the result was to make the Practitioner but

(a) See Mr. Tuffen West's lecture on the Parasitic Diseases of Plants, *Med. Times and Gaz.* August 29, 1868.

a superior kind of tradesman. Even of late years it has been customary to begin with an apprenticeship, in which the details of business and the treatment of the sick formed the initial points of instruction. No one, it used to be said, can begin too soon to acquire a *practical* knowledge of remedies for disease. Unluckily "remedies" are matters learned from instinct, tradition, custom, and prejudice; and "diseases," in the old sense, were groups of symptoms, many of which, on analysis, belong to divers pathological conditions, and require divers remedies. Any tradesman can carry on a business, and any old woman can acquire a practical knowledge of "remedies;" but it is only the man who has laid a solid scientific basis for his Professional education who can hope to make practice as definite and intelligible as pathology and diagnosis.

We may as well add that, although a man may have had the education of a gentleman, although he be thoroughly trained in science, general and Medical, although he may have acquired great experience in practice and be a sharp man of business, yet that besides he must cultivate the habit of good temper, of frank, honourable, manly conduct, so that he may *please*. Some men are said to get on well in the world by the art of pleasing, although they know little of their profession. This is not peculiar to Medicine. Queen Elizabeth chose Sir Christopher Hatton as Lord Chancellor, not because he was a good lawyer (for he was a dandy, and never a student), but because he was a good-looking man, of fine, manly figure. We, too, have to do with women, and must not wonder if they prefer an open-faced, bright-looking man as their Medical attendant in preference to a sheepish sloven. Hatton, when appointed, acted like a man of sense. To get a reputation for knowledge, he employed a man to write a book for him. He kept a drudge to advise him and keep him out of scrapes. He gave capital dinners, and was famous for his excellent "sack." He was reserved in speech, and took care not to commit himself. He gained popularity with the multitude by graciousness and urbanity, and when it suited his purpose he could shed tears or fall on his knees and say prayers with equal facility.

Because ignorant adventurers in Physic may sometimes rise into popular vogue by these very same arts, there is no reason why the student of science should despise those qualifications which enable a man to please in society. The Medical student, if wise, will be no recluse, nor bookworm, nor sloven. He will keep out of all slangish talk, all low haunts, all sordid dissipation, and never miss an opportunity of getting into good society. He will remember that there is no day of student life which will not leave its mark on the future for evil or for good.

CHANGES IN AND ABOUT THE LONDON HOSPITALS AND SCHOOLS.

The time fast approaches when the representatives of the past, present, and future of Medicine will commingle in the lecture theatres of our various London schools—when anxious aspirants to Medical renown, and those who have borne away honours from many a well-contested fight, will meet together on the common ground of listeners to introductory lectures. To those, especially of the "old pupils," who make the first of October an annual holiday devoted to revisiting their old teachers and schools, some little account of the various changes which have taken place or are about to take place in them may not be without interest.

Every year changes take place; new faces supplant the old ones, both in the professorial chairs and among the ranks of listeners; and almost every year some change also takes place in the *matériel* as well as in the *personnel* of the school. This time the changes in the Hospitals themselves would appear to be more numerous, as well as of greater importance, than usual.

One of the most rising of our London schools is, without doubt, St. Mary's, and the great and much-needed addition to the wards of this Hospital cannot fail to have a beneficial effect on its teaching as on its salubrity. Of the changes at this school, we observe that Mr. J. R. Lane, now full Surgeon to the Hospital, is to share the chair of Surgery with Mr. Spencer Smith. Dr. Markham has retired from his post as Physician to the Institution, Dr. Lawson being appointed Assistant-Physician. Dr. Matthiessen has given up his chair of Chemistry, in which he has been succeeded by Dr. Russell. Dr. Charlton Bastian has resigned his post as Pathologist to this Hospital, and has been succeeded by Dr. Frank Payne.

Many who have had occasion to pass along Oxford-street, or to visit the rooms of the Royal Medical and Chirurgical Society, will have observed that the Middlesex Hospital has for a long time been surrounded by a scaffolding, now, however, removed. The whole front of the Hospital has been, in fact, renewed and cased with Portland stone; its clock has been enlarged and adapted for illumination; and its wards have been ventilated on a new and improved plan, very simple, yet abundantly satisfactory, the invention of the resident Medical officer, Dr. Stephen. The same plan will, we understand, be adopted in several of the new Hospitals to be erected in and about London. Another scheme on foot in connexion with Middlesex is the formation of a home for trained and training nurses, and to this end a very large sum of money has been already subscribed. The only change of importance in the School attached to this Hospital is the appointment of Dr. Cayley to the chair of Microscopic Anatomy, formerly held by Dr. Woodham Webb. Neither are there in University College any great changes in the staff to be noted. Dr. Charlton Bastian has been appointed Assistant-Physician and Professor of Pathological Anatomy, the vacancy being occasioned by the transfer of Dr. Wilson Fox to the Holme Professorship of Clinical Medicine, Dr. Russell Reynolds taking the chair of Medicine vacated by Sir William Jenner. By the addition of a story to University College Hospital the governors will be enabled to open three new wards about the beginning of the session—an increase to its accommodation which cannot fail to be pleasing to its skilful and industrious officers.

Of course, this year we could expect no change of importance at St. Thomas's Hospital; a full account of the palatial structure now in process of building opposite the Houses of Parliament has already appeared in these columns. At Guy's there are rumours of additions which will make the Hospital one of the largest, if not the very largest, in London. The only important alteration to be noted this year in the Hospital is the new and elegant operating theatre, the only fault of which seems to be its small size; in the School, Mr. Howse has been appointed Demonstrator of Histology. A new school is badly wanted at Guy's. There is also not much to be noted about the London Hospital except its improved out-patient rooms and its capital post-mortem theatre, now one of the best, if not the best, in London. The rooms for the reception of accidents are also greatly improved, to the comfort of both pupils and patients. In this School Mr. John Adams has resigned the chair of Anatomy, in which he has been succeeded by Mr. W. Rivington. Dr. Fenwick has been appointed Assistant-Physician, and Mr. Adams, one of the Demonstrators of Anatomy, Assistant-Surgeon to the Hospital. At Charing-cross Hospital, also, the out-patient system and rooms, as well as the operating theatre, have been improved, and it is in contemplation to add largely to the accommodation for in-patients. In the School we observe that Dr. Claye Shaw succeeds Dr. Morris Tonge in the chair of Physiology, and that Dr. J. H. Greene has been appointed Pathologist to the Hospital, and Lecturer on Pathology in the Hospital School. Dr. Alexander Silver has been appointed Assistant-Physician to the Hospital, in consequence of the transfer of Dr. Chowne

to the consulting staff, and has been promoted to the chair of Forensic Medicine and Toxicology, that of Botany being now held by Mr. W. J. Smith. Dr. Morris Tonge has been appointed Assistant-Physician to King's College Hospital, from which Dr. J. Harley and Dr. Conway Evans retire.

At St. Bartholomew's we note that Dr. Andrew is to share the chair of Medicine with Dr. Black. Dr. Mathiessen is to take part with Dr. Odling in teaching Chemistry, and Dr. Gee has been made Assistant-Physician to the Hospital.

Many changes have taken place at Westminster. Mr. Bruce has been made Assistant-Surgeon and Lecturer on Anatomy, in place of Mr. Power and Mr. Teevan; Dr. Maclure takes the chair of Physiology, resigned by Mr. Power; and Dr. Sturges has been made Assistant-Physician and co-Lecturer on Forensic Medicine. Mr. Bennett succeeded Mr. Syme in the chair of Botany, and Dr. Cavafy has been appointed Demonstrator of Morbid Anatomy.

Last, but very far from least, comes St. George's Hospital. Here Dr. Whipham has been appointed Demonstrator of Anatomy, and Dr. Bright of Histology and Physiology, as well as Lecturer on Comparative Anatomy. Dr. Page and Mr. Tatum have retired; so that Dr. Wadham and Mr. Holmes have been promoted. Dr. Child has succeeded Dr. Lawson in the chair of Botany, and Mr. Henry Power has been appointed Ophthalmic Surgeon to the Hospital, with the chair of Ophthalmic Surgery in the School.

But there are other, and even more important, changes. A large and new wing has been added to the Hospital building, but it is not yet ready for opening. The out-patient rooms and dispensary have been greatly improved, and a totally new school has been built. This will be opened on the 1st, by Professor Acland. The shape of the school buildings is extremely irregular, owing to the nature of the ground on which it stands, for building land at Hyde-park-corner is both scarce and dear. The school is built directly in the rear of the Hospital, and is best reached by descending into the basement of the Hospital, and so to the yard behind. Entering by swinging doors, two gentle flights of steps, the one on the right hand, the other on the left, conduct the descending visitor to the level of the floor. Straight before him lies one passage, right and left stretch two others. To the left hand of this passage, which leads straight from the doorway, is the dissecting-room, not yet fitted up. On the right are the lecture theatre and the chemical laboratory. All of these rooms are admirably lighted, especially the dissecting-room and the lecture theatre. At the termination of the passage, which is adorned with busts of Hunter, Brodie, Hawkins, and Baillie, is the museum, which is exceedingly well lighted, and its walls, painted of a bluish neutral tint, serve as an admirable background to the valuable preparations here contained. These are arranged on the ground floor, in the order described in Dr. J. W. Ogle and Mr. T. Holmes's admirable catalogue, the gallery being occupied on the one side with physiological, on the other with comparative anatomy specimens. Two small rooms for the use of the curator adjoin the museum. Retracing our steps, and following that passage which stretches away to the right hand on entering the door (that on the left leads to the dissecting-room only), we come upon a small class-room, which may be used for demonstrations or for any class attended by a small number of students. We next reach the students' entrance to the lecture theatre, which is on a level with the floor, below the concentric benches of the theatre. Directly facing the students' entrance, and behind the lecturer, is a very good medallion bust of Hunter. In the museum is a marble bust of Brodie; some have suggested that these ought to have changed places. The only other room of importance along this passage is the library, a nice little octagonal room, lighted, like all the others, from the roof. Altogether, St. George's Hospital may be congratulated on possessing one of the nicest little schools in London, not so symmetrical, perhaps, as that of the London Hospital—the site would not admit of it—but there can be no higher praise than saying that everything which could be done has been done, and that the result is both pleasing and satisfactory.

ENCOURAGEMENT FOR MEDICAL STUDENTS.

There are sanguine cheerful men in our body who think that there is a "good time coming" for Medical students and Medicine, not only in the higher and better sense, but in the more worldly and ambitious meaning. They hope for a speedy and wider recognition of the benefits rendered by Medicine to the nation, and for some national rewards for public services granted to our Profession in some such degree as they are bestowed on Church and Law, Army and Navy, and for political services. We hope there may be some foundation for these bright visions; and it cannot be doubted that the elevation of our great French brother, Nélaton, to the rank of senator will have an effect at least European, if not Britannic. Its importance in France is enormous, for Nélaton may be said to be the first French Medical senator. Dumas, though a Doctor of Medicine, was a chemist. He never practised; and, when he once boasted that "he had never killed a patient," he was met by the prompt retort that he had never treated one. Conneau, again, was not raised to the Senate for Medical services or scientific position—it was simply as an old friend of the Emperor, and as a reward for long and faithful services in exile. Our readers need not be reminded that the title of Baron given to Larrey, Dupuytren, and others was only equivalent to one of our knighthoods—a mere titular distinction, giving no senatorial dignity. Louis-Philippe offered a peerage to his Physician Double, but on the condition that he ceased to practise. Double replied, "I am so proud of my Profession that I will not give it up even for a peerage." The King afterwards made the same offer to his Surgeon Roux. "Thanks," said he, rubbing his great nose, a sign with him of deep thought, "a peerage is not worth my practice." No such condition has been attached to the elevation of Nélaton. He has made a large fortune, and is sixty years of age, so that it is not likely he will practise very long; indeed, it is said that he will soon cease to operate, and will only see patients in consultation with other Practitioners. But it is a significant fact that the condition of ceasing to practise Medicine and Surgery before entering the French Chamber of Peers has not been enforced. Here a baronetcy or a knighthood is the highest honour as yet conferred on members of our Profession. There was some talk of a peerage for Sir Benjamin Brodie, but not till he had almost ceased to practise, and it was at the time that life peerages were being advocated, as we hope they will be again and again till they become a part of our Constitution. Quite recently the elevation of Sir James Clark to the Peerage has been spoken of as probable. We need not say how grateful such a recognition of devoted service to the Crown, and of a long, useful, and honourable career in Medicine, would be to the whole Profession. Sir James has deserved it on scientific grounds fully as much as Nélaton, and his personal service to the Queen has been far closer and longer than that of the French Surgeon to his Emperor. It only requires some such recognition as this—some further proofs from Government that real service to the people will not go unrewarded by the State—to encourage those who have already entered upon the study of Medicine to work as heartily and to good purpose, and to attract to our Profession young men whose birth and education and ability would afford the best guarantee that they would cultivate Medicine as a science or profession for the good of mankind, not as a trade or a mere road to riches. We want the best men among us. We do not want them all to aim at the Church, or the law, or the military services. And it will be a "good time" for England when a wise government learns that a country should not only be grateful to her great men, but should acknowledge her gratitude by national rewards.

TABLES

GIVING THE NAMES OF LECTURERS, HOURS OF LECTURE, DAYS OF ATTENDANCE, AND FEES IN THE METROPOLITAN MEDICAL SCHOOLS AND HOSPITALS.

LECTURES.	ST. BARTHOLOMEW'S.						CHARING CROSS.						ST. GEORGE'S.					
	Lecturers.	Days and Hours.	Fees. 1 Course		Fees. 2 Courses		Fees. Perpetual.		Lecturers.	Days and Hours.	Fees. 1 Course		Fees. 2 Courses		Fees. Perpetual.		Lecturers.	Days and Hours.	Fees. 1 Course		Fees. 2 Courses		Fees. Perpetual.	
			£	s.	£	s.	£	s.			£	s.	£	s.	£	s.			£	s.	£	s.	£	s.
WINTER SESSION.																								
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Black Dr. Andrew	M Tu and Th 3 30	5	5	..		7	7	Dr. H. Salter	M W F 2.30	4	4	6	6	7	7	Dr. Barclay	M W F 9	6	6	..		7	7
SURGERY	Mr. Paget Mr. Coote	M 2.30 W 9 F 3.30	5	5	..		7	7	Mr. Canton	Tu Th S 9	3	3	5	5	6	6	Mr. Holmes	Tu Th S 9	6	6	..		7	7
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Holden Mr. Callender	Tu W Th F 2.30	7	7	..		10	10	Mr. Barwell	M W F 9 Tu 4.30	4	4	6	6	7	7	Mr. Rouse	M W F 3	6	6	..		7	7
ANATOMICAL DEMONSTRATIONS.	Mr. M. Baker Mr. Langton	Daily 10.15 till 2	3	3	5	5	..		Mr. Bellamy	Daily, 10 to 1	2	2	4	4	4	4	Dr. Whipham Mr. Christian Mr. Byam	..	3	3	..		..	
GENERAL ANATOMY AND PHYSIOLOGY	Mr. Savory	M Tu Th F 9	7	7	..		10	10	Dr. T. Claye Shaw	M Tu Th F 3.30	4	4	6	6	7	7	Dr. W. Ogle Dr. Bright, *dem.*	Tu Th 3 S 10	6	6	..		7	7
CHEMISTRY	Dr. Odling	M W F 10	5	5	..		7	7	Mr. Heaton	M W F 10	5	5	6	6	7	7	Dr. Noad	Tu Th S 11.30	6	6	..		8	8
HOSPITAL PRACTICE—																								
Physicians	Dr. Farre Dr. Black Dr. Edwards Dr. Harris	Tu 12 Th S 1 M Tu Th 1 M W 8.30 Th S 1.30 Tu Th S 1.30	12 6 mths	12	18 2 yrs.	18	26	5	Dr. H. Salter Dr. Headland Dr. Tilbury Fox (*Skin Diseases*)	Daily 1	10 6 mths	10	15 12 mths	15	21	0	Dr. Fuller Dr. Barclay Dr. J. Ogle Dr. Wadham	Tu S 1 M F 1 M F 1 Tu S 12, 1	8 6 mths	8	16 3 years	16	25	
Assistant-Physicians ..	Dr. Andrew Dr. Southey Dr. Church Dr. Gee	M Th 11 W S 11 F 11 Tu 11	..		..		..		Dr. Pollock Dr. Silver	..	..		..		..		Dr. Dickinson Dr. W. Ogle	.. M F 12	..		..		..	
Surgeons	Mr. Paget Mr. Coote Mr. Holden Mr. Savory	M Tu Th F S 1.30 M W F S 1.30 Tu F S 1.30 M Tu W Th F S 1.30	15 6 mths	15	21 1 year	0	26	5	Mr. Hancock Mr. Canton	Daily 1	10 6 mths	10	15 12 mths	15	21	0	Mr. P. Hewett Mr. Pollock Mr. H. Lee Mr. Holmes	M F 1 Tu S 1 Tu S 1 M F 1	15 6 mths	15	21 3 years	0	42	0
Assistant-Surgeons	Mr. Callender Mr. T. Smith Mr. Willett Mr. Langton	W S 12 M Th 12 F 12 Tu 12	..		..		..		Mr. Hird Mr. Barwell	..	..		..		..		Mr. Brodhurst Mr. Rouse	Tu S 12 M F 12	..		..		..	
Physician-Accoucheur ..	Dr. Greenhalgh	W 1 30 S 9	..		..		..		Dr. Parson	..	..		..		..		Dr. J. Clarke	Tu S 1 Th 12	..		..		..	
CLINICAL MEDICINE ..	Dr. Farre Dr. Black Dr. Edwards Dr. Harris	Tu 12 S 9 *Summer* S 12.45	..		..		..		By the Physicians Dr. A. J. Pollock	.. Tu 4 sum	..		..		..		Dr. Fuller Dr. Wadham Dr. Barclay	M 2 M 2 M 2 *sum.*	..		..		..	
CLINICAL SURGERY ..	Mr. Skey Mr. Paget Mr. Coote Mr. Holden Mr. Savory	Tu 12 S 9 *Summer* S 12.45	..		..		..		By the Surgeons	..	..		..		..		Mr. Hewett Mr. Pollock Mr. Holmes	Tu 2 Tu 2 Tu 2 *sum.*	..		..		..	
DISEASES OF WOMEN ..	Dr. Greenhalgh		..		..		..		..	..	..		..		..		Dr. Clarke	Th 2	..		..		..	
MORBID ANATOMY AND PATHOLOGY	Dr. Church	12	..		..		..		Dr. J. H. Greene	Tu Th 11 sum	..		..		..		Dr. J. Ogle	Th 3	5	5	..		..	
OPHTHALMIC SURGERY ..	..	..	..		..		..		..	..	..		..		..		Mr. H. Power	W 10 *win.* & *sum.*	..		..		..	
SUMMER SESSION.																								
MATERIA MEDICA	Dr. Farre	Tu Th S 10 W 11	5	5	..		6	6	Dr. Headland	Tu Th S 12	3	3	5	5	6	6	Dr. Dickinson	M W F 3	4	4	..		5	5
BOTANY	Rev. G. Henslow	M W F 10	3	3	..		4	4	Dr. W. J. Smith	M W F 10	2	2	3	3	4	4	Dr. Child	Tu Th S 3	3	3	..		4	4
FORENSIC MEDICINE ..	Dr. R. Southey	M Th S 9	3	3	..		4	4	Dr. Silver	M W F 4	2	2	3	3	4	4	Dr. Wadham	Tu Th S 9	4	4	..		5	5
MIDWIFERY	Dr. Greenhalgh	Tu W F S 3.30 a.m.	5	5	..		6	6	Dr. Chowne Dr. Parson	M W Th 3	3	3	5	5	6	6	Dr. J. Clarke	M W F 9	5	5	..		6	6
PRACTICAL CHEMISTRY ..	Dr. Odling	M Tu Th F 11 to 1.30	2	2	..		3	3	Mr. Heaton	M W F 11	2	2	..		..		Dr. Noad	Daily 10	4	4	..		..	
MICROSCOPIC ANATOMY ..	Mr. Savory	..	1	1	..		..		..	..	..		..		..		..	..	..		..		..	
DEMONSTRATIONS OF MICROSCOPIC ANATOMY ..	Mr. Savory Mr. Vernon Mr. Marsh	..	..		..		..		..	..	..		..		..		..	..	..		..		..	
COMPARATIVE ANATOMY ..	Dr. Church	Tu Th 11 *Summer*	2	2	..		3	3	Mr. W. H. Spencer	Tu Th S 4	3	3	..		4	4	Dr. Bright	M F 4.30	..		..		..	
ORTHOPÆDIC SURGERY ..	..	..	..		..		..		..	..	..		..		..		Mr. Brodhurst	W 10	..		..		..	
DRESSERSHIPS	..	..	12 3 mths	12	18 6 mths	18	26 1 year	5	..	..	..		..		..		..	..	..		..		..	
DENTAL SURGERY	Mr. Coleman	S 10	2	2	..		3	3	Mr. Parkinson	..	..		..		..		Mr. Vasey	Tu 10	1	1	..		..	
PSYCHOLOGICAL MEDICINE	..	..	..		..		..		..	..	..		..		..		Dr. Blandford	W 3	..		..		..	
OPERATIVE SURGERY ..	Mr. M. Baker Mr. Langton	..	2	2	..		..		Mr. Barwell	..	..		..		..		Mr. Rouse	..	4	4	..		..	
SKIN DISEASES	..	..	..		..		..		Dr. Tilbury Fox	Tu 2.30	..		..		..		..	..	..		..		..	
PRACTICAL PHARMACY ..	The Apothecary	..	..		..		..		..	..	..		..		..		..	..	..		..		..	
Entrance to the Lectures and Hospital Practice for the Licences of the Col. of Phys. and Soc. of Apoth., and the M.R.C.S. Exam.							99	15							74	11	Compounding Fee						105	0
To the Hospital Practice only	..	..	..		..		..		..	..	..		..		31	10	..	..	..		..		94 37	10 16
To the Lectures only	..	..	..		..		..		..	..	..		..		48	6	..	..	..		..		..	
Unlimited to all Lectures ..	..	..	..		..		65	2	..	..	..		..		..		..	..	..		..		..	

LECTURES.	GUY'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	KING'S COLLEGE AND HOSPITAL. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	LONDON. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Owen Rees Dr. Wilks	M W F 3	5 5	..	..	Dr. G. Johnson	Tu 4 Th F 5	7 7	..	7 7	Dr. H. Davies Dr. A. Clark Dr. Ramskill	W Th 9 F 4	5 5	.	6 6
SURGERY	Mr. Birkett Mr. C. Forster	Tu Th 3.30 S 9.45	5 5	..	..	Sir W. Fergusson	M Tu W 5	6 6	..	7 7	Mr. Hutchinson	Tu F S 9	5 5	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Durham	Tu W Th F 9	5 5	..	..	Mr. Partridge	Daily except M 9	7 7	..	10 10	Mr. Rivington	M Tu Th F 3	5 5	..	8 8
ANATOMICAL DEMONSTRATIONS	Mr. Bankart Dr. Pye Smith Dr. Phillips Mr. Howse, *Assist-Dem.*	Daily 9 to 4	5 5	..	..	Mr. Wood *Ass.-Demonst.* Mr. Amsden Mr. Perrin Mr. Pritchard	..	..	..	..	Mr. Rivington Mr. J. Adams Mr. W. Tay	Daily 10 to 3 exc. W. & S after.	5 5	..	8 8
GENERAL ANATOMY AND PHYSIOLOGY	Dr. Pavy	M W F 4.15	5 5	..	..	Dr. L. Beale	M W Th F 4	7 7	..	10 10	Dr. H. Jackson Dr. Mackenzie	M W Th 4	4 4	..	6 6
CHEMISTRY	Dr. Alf. Taylor	Tu Th S 11	5 5	..	..	Dr. Miller Mr. J. T. Bottomley, *dem.*	M W Th S 10.15	8 8	..	10 10	Dr. Letheby Dr. C. M. Tidy	M W F 10.30	7 7	..	7 7
HOSPITAL PRACTICE—						*In-patients*—		10 10	15 15	21 0					
Physicians	Dr. Owen Rees Dr. Habershon Dr. Wilks Dr. Oldham *obs.*	M Th 1.30 Tu F 1.30 M Th 1.30 Tu F 1.30	10 10 3 mths	15 15 6 mths	26 5	Dr. Johnson Dr. Beale Dr. Garrod *Out-patients*— Dr. Guy Dr. Priestley, *obs.*	M W F 1.30 Tu Th S 2 Tu Th S 1.30 Tu Th S 1.30	6 mths	18 mths		Dr. Davies Dr. A. Clark Dr. Ramskill Dr. Head, *obs.*	Tu F 9 M Th 1 W S 1 W S 1	6 6 6 mths	12 12 Period reqd. by Apoth. H.	21 0
Assistant-Physicians ..	Dr. Pavy Dr. Moxon Dr. C. H. Fagge Dr. J. B. Hicks *obs.*	F 12 M 12 Tu W 12 Th S 12 M F 1.30	..	..	..	Dr. M. Tonge Dr. A. Duffin Dr. Playfair *obs.*	Tu Th S 1 M W F 1 M W F 12.30	..	..	..	Dr. Down Dr. H. Jackson Dr. Mackenzie Dr. Sutton Dr. Palfrey, *obs*	Tu F 1 M 1 W S 1 Th 1 W S 1			
Surgeons	Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland Mr. Poland *oph.* Mr. Hinton *aur*	M Th S 1.30 M Th 1.30 M Th 1.30 W S 1.30 M Th 1.30 Tu 12	10 10 3 mths	15 15 6 mths	26 5	Sir W. Fergusson Mr. Partridge Mr. Wells, *oph.*	Tu Th S 1.30 M W F 1.30 Tu Th S 1	15 15 6 mths	21 0 21 mths	26 5	Mr. Adams Mr. Curling Mr. Hutchinson Mr. Hutchinson, *oph.*	W S 1 Tu F 1 M Th 1 S 8.30 sum.	8 8 6 mths	18 18 18 mths	25 0 3 years
Assistant-Surgeons	Mr. C. Forster Mr. Bryant Mr. A. Durham Mr. Bader *oph.*	S 12 M Th 12 W 12 Tu F 12	..	..	..	Mr. Wood Mr. H. Smith	Tu Th S 1 M W F 1	..	..	..	Mr. Maunder Mr. Couper Mr. Couper, *oph.* Mr. Little Mr. Rivington Mr. Rivington, *aur.*	Tu F 1 W S 1 W S 8.30 M Th 1 S 8.30	..	..	..
CLINICAL MEDICINE ..	Eye Wards *Winter*— Dr. O. Rees Dr. Habershon Dr. Wilks *Summer*— Dr. Pavy Dr. Moxon Dr. Fagge	W S 1.30 Weekly	..	..	..	Dr. Johnson Dr. Beale Dr. Garrod Dr. Priestley *obs.*	Every alt. M 2 p.m. Every alt. Th 2 p.m. Every alt. Tu 2 p.m. Every alt. Th 3	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY ..	*Winter*— Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland *Summer*— Mr. C. Forster Mr. Bryant Mr. Durham	Weekly Weekly	..	..	..	Sir W. Fergusson Mr. Partridge Mr. Wells, *oph.*	Every alt. Th 2 p.m. Every alt. F 2 p.m. Every alt. M 1	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Oldham Dr. Hicks	Weekly	..	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Moxon	Daily 2.30 S 8.45 sum	..	..	..	Dr. Beale, Phys., Surgs., & Registrars	Tu Th 4 sum	2 2	..	..	Dr. Sutton Dr. H. Jackson Mr. Little		..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Habershon	Tu Th F 3	4 4	..	..	Dr. A. B. Garrod	Tu W Th F 8 a.m.	4 4	..	5 5	Dr. J. L. Down	Tu Th F 4	3 3	..	4 4
BOTANY	Mr. Johnson	Tu Th S 11.30	4 4	.. ..	..	Mr. Bentley	M Tu Th F 12.15	4 4	..	5 5	Dr. Silver	M W F 10	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. A. Taylor	Tu Th S 10	4 4		..	Dr. Guy	M Tu W F 3	4 4	..	5 5	Mr. Rodgers Dr. P. James	Daily exc. Sat 10.15	3 3	..	4 4
MIDWIFERY	Dr. B. Hicks	Tu W Th F 8.45 a.m.	5 5	..	..	Dr. W. O. Priestley	Tu W Th F 9	6 6	..	7 7	Dr. E. Head	M W Th F 3	4 4	..	6 6
PRACTICAL CHEMISTRY ..	Dr. Stevenson	M W F 10 to 1	4 4	..	..	Mr C. L. Bloxam	M W F 10.15	5 5	..	8 8	Dr. Letheby Dr. C. M. Tidy	M Th S 9	2 2	..	..
COMPARATIVE ANATOMY..	Dr. Pye-Smith	Tu F 12.45	4 4	..	..	Mr. T. R. Jones	M W F 4	3 3	..	4 4	Dr. S. Fenwick	W 4	3 3	..	..
PRACTICAL HISTOLOGY ..	..	..	..	..	..	..	..	..	..	..	Dr. H. Jackson Dr. Mackenzie	..	..	..	..
NATURAL PHILOSOPHY ..	Dr. Stevenson Mr. D. Colley	W 12 win.	..	..	..	..	..	..	..	..	..	..	..	.	..
OPERATIVE SURGERY ..	Mr. Bryant	W 3	..	..	..	..	..	..	..	..	Mr. Maunder	..	..	..	..
DENTAL SURGERY ..	Mr. Salter	..	..	..	..	Mr. Cartwright	Tu F 9	6 6	..	8 8	Mr. Barrett	..	2 2	..	..
AURAL SURGERY	Mr. Hinton	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CUTANEOUS DISEASES ..	Dr. H. Fagge	Tu 1 win.	..	..	..	..	..	..	..	..	..	..	..	..	..
OPHTHALMIC SURGERY ..	Mr. Poland Mr. Bader	M 8.45 a.m.	..	..	..	Mr. J. S. Wells	M Tu W Th 9	3 3	..	..	Mr. J. Hutchinson	Tu F 8 in June	..	..	..
DISEASES OF THE THROAT	..	..	..	..	..	..	..	..	..	..	Dr. Mackenzie	..	..	..	..
PRACTICAL BOTANY ..	Mr. Johnson	Th 12.30	..	..	..	..	..	..	..	..	Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons, £88 4s.				
USE OF MICROSCOPE ..	Mr. Howse	M 3.30	..	..	..	..	..	..	..	..					
TUTOR'S CLASS	..	..	..	..	..	Mr. J. B. Yeo	Day. ex. S 9	3 3	..	..	To the Lectures alone, £50.				
							Win. M W F 5	3 3		.	Perpetual Fee to Lectures and Hospital practice, £93 14s.				

Fee for Hospital Practice and Lectures, 1st year, £40; 2nd year, £40; and £10 for each succeeding year. A Perpetual Ticket, £100.

Fee for Lectures and Hospital Practice required by Colleges of Physicians and Surgeons and Hall, £105; if paid in a single sum, £100; each ad. yr. £10 10s.

LECTURES.	ST. MARY'S.					MIDDLESEX.					ST. THOMAS'S.				
	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Chambers Dr. Handfield Jones	M W Th 4	..	..	..	Dr. Murchison	Tu Th S 9	6 6	..	8 8	Dr. Barker Dr. Peacock	M Th 2 W 12.30	..	..	..
SURGERY	Mr. Spencer Smith & Mr. J. R. Lane	Tu F 4 W 3	..	..	..	Mr. Shaw Mr. De Morgan	M W F 9	6 6	..	8 8	Mr. Solly Mr. Le Gros Clark	Tu W F 3	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Gascoyen Mr. Norton	M Tu Th F 2.45	..	..	..	Dr. R. Liveing	Daily exc. S 10	8 8	..	12 12	Mr. S. Jones	M F S 1 Th 3	..	..	..
ANATOMICAL DEMONSTRATIONS	Mr. Norton Mr. A. J. Wall	Daily 9 to 5	3 3	..	..	Dr. R. Liveing Mr. Reeves	Daily 8—5	6 6	..	8 8	Mr. Rainey Mr. Croft Mr. W. Wagstaffe	Daily 9 to 3	..	..	..
PHYSIOLOGY	Dr. Broadbent Dr. Lawson	M Tu Th F 9 W S 12	..	..	..	Dr. Sanderson Mr. Hulke	M W F 4	6 6	..	8 8	Dr. Bristowe Mr. Ord	M W F 4	..	..	..
CHEMISTRY	Dr. W. J. Russell	M Tu Th F 10.15	..	..	..	Mr. T. Taylor Mr. Heisch	M W F S 11	6 6	..	8 8	Dr. Bernays	Tu Th S 11	..	..	..
HOSPITAL PRACTICE:															
Physicians	Dr. Sibson Dr. H. Jones Dr. Sieveking Dr. T. Smith, *obs.*	M Th 1.15 W S 1.15 Tu F 1.15 Tu S 1.30	7 7 6 mths	12 12 1 year	21 0	Dr. Goodfellow Dr. Thompson Dr. Murchison Dr. J. Hall Davis, *obs.*	M W F 1.30 Tu Th S 1 M W F 1 Tu W F S 1.30	12 12 6 mths	21 0 18 mths	25 0	Dr. J. R. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe Dr. Barnes, *obs*	Physicians' visits, 8.30 to 9.30 a.m.	..	..	..
Assistant-Physicians	Dr. Broadbent Dr. Cheadle Dr. Lawson	M Th 1 Tu F 1 W S 1	..	..	..	Dr. Greenhow Dr. B. Sanderson Dr. Liveing	F 8.30 M 8 Tu 8.30	..	..	..	Dr. Clapton Dr. Gervis, *obs.*	..	..	..	..
Surgeons	Mr. Lane Mr. Spencer Smith Mr. H. Walton	Tu F 1.15 M Th 1.15 W S 1.15	9 9 6 mths	21 0 1 year	31 0	Mr. Shaw Mr. De Morgan Mr. Moore Mr. Nunn	Tu F 1 M Th 1 M Th 1 Tu F 1 Th 1.30	15 15 12 mths	21 0 3 years	25 0	Mr. Solly Mr. Le Gros Clark Mr. Simon	Surgeons' visits, 8.30 to 9.30 a.m.			
	Mr. J. Lane Mr. Ernest Hart, *opht.*	Tu F 1 W S 1.30				Mr. Hulke, *opht*	Tu F 8.30								
Assistant-Surgeons	Mr. Gascoyen Mr A. T. Norton	M Th 1 W S 1	..	..	..	Mr. Hulke Mr. Lawson	M F 1 Th S 1	..	..	..	Mr. S. Jones Mr. J. Croft	..	..	..	..
CLINICAL MEDICINE	Dr Sibson Dr. H. Jones Dr. Sieveking	M 2 Every alt. S 2 Every alt. F 2	..	..	..	The Physicians	F 3	..	..	..	Dr. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe	*Winter*— After their visits *Summer*— After vis.	..	..	..
CLINICAL SURGERY	Mr. Lane Mr. Spencer Smith Mr. H. Walton	Every Tu 2 Every alt. Th 2 Every alt. S 2	..	..	..	The Surgeons Mr. Hulke, *opht.*	M 3 Tu 3	..	..	..	By the Surgeons	After their visits	..	..	..
DISEASES OF WOMEN	Dr. T. Smith	..	..	..	..	Dr. J. H. Davis	Tu 10	..	..	..	Dr. Barnes	M 3	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. F. J. Payne	Summer Tu F 11	..	..	..	Mr. Sibley Dr. Cayley	Tu Th 4	3 3	..	4 4	Dr. J. Lees	Daily 9.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA.	Dr. Sieveking	Tu W Th F 8 a.m	..	..	..	Dr. H. Thompson	M W F 9	4 4	..	5 5	Dr. Clapton	Tu Th F 2	..	..	..
BOTANY	Dr. Trimen	M W F 12	..	..	..	Dr. T. S. Cobbold	M W F 4	4 4	..	5 5	Dr. J. W. Hicks	M W Th 12	..	..	..
FORENSIC MEDICINE	Dr. Randall	M Tu Th 10	..	..	..	Dr. Greenhow	Tu Th S 9	4 4	..	5 5	Dr. Gervis and Dr. Stone	Tu F 12 S 8	..	..	..
MIDWIFERY	Dr. Tyler Smith	Daily ex. S 9	..	..	..	Dr. J. Hall Davis	M W F 10	4 4	..	5 5	Dr. R. Barnes	M Tu Th F 3	..	..	..
PRACTICAL CHEMISTRY	Dr. Russell	Tu Th S 11.30—1	3 3	..	..	Mr. Taylor Mr. Heisch	M W F 11	3 3	..	..	Dr. Bernays	F 11 Tu Th 10—12 S 10—1	..	..	..
COMPARATIVE ANATOMY	Mr. S. G. Mivart	W F 10	2 2	..	3 3	Dr. T. S. Cobbold	Tu Th 4	3 3	..	..	Mr. Ord, M.B.	Tu Th 1	..	..	..
OPHTHALMIC SURGERY	Mr. Ernest Hart	Tu 2.45	2 2	..	..	Mr. Hulke	Tu 3 wintr. & summer	..	..	..	Mr. S. Jones	M F 1	..	..	..
PRACTICAL HISTOLOGY	Drs. Broadbent and Lawson, with Physiology	..	..	..	..	Dr. Cayley	Tu Th 3	3 3	..	..	Mr. Rainey	Tu 12.30 winter	..	..	..
OPERATIVE SURGERY	Mr. J. Lane	Winter	..	..	..	Mr. Nunn	S Winter	5 5	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Sercombe	Winter S 9	2 2	..	..	Mr. Tomes Mr. Turner	..	5 5	..	..	Mr. Elliott	..	..	..	..
GENERAL PATHOLOGY	..	..	..	..	..	..	..	..	..	..	Mr. Simon	..	..	..	..
PATHOLOGICAL CHEMISTRY	..	..	..	..	..	..	..	..	..	..	Dr. Thudichum	Tu Th 4 winter	..	..	..
PUBLIC HEALTH	Dr. Randall, with For. Med.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
PRACTICAL PHARMACY	..	..	3 3 3 mths	6 6 6 mths	10 10 12 mths	..	..	5 5 6 mths	8 8 12 mths	..	..	..	..	..	..
Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons	£89 5s.,	or in	one	sum	84 0	..	..	..	..	90 0	..	..	..	..	..
To the Lectures alone	..	..	..	..	52 10	..	..	..	..	..	..	..	..	..	..
To the Hospital Practice alone	..	..	..	..	35 15	..	..	..	..	42 0	..	..	..	..	..
Unlimited	..	£105, or in	one	sum	99 15	..	..	..	..	..	..	..	..	..	90 0

LECTURES.	UNIVERSITY COLLEGE AND HOSPITAL. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	WESTMINSTER. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s. d.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. J. R. Reynolds	Day. ex. M 9	6 16 6	..	8 8	Dr. Basham	M Th F 4	5 5	..	7 7
SURGERY	Mr. Marshall	Tu W F 4	4 14 6	..	6 6	Mr. Holthouse	Tu W Th 3	5 5	..	7 7
DESCRIPTIVE ANATOMY	Mr. Ellis	Daily 12	7 7 0	..	10 10	Mr. Bruce	M Tu Th F 9.15	5 5	..	7 7
DEMONSTRATIONS	Mr. Ellis, Mr. J. S. Cluff, Mr. M. Beck, Mr. S. Peacock	Daily				Mr. Pearse	Daily 10—1	2 2	..	3 3
PHYSIOLOGY AND GENERAL ANATOMY	Dr. Sharpey	Daily ex. S 10	6 6 0	..	9 9	Dr. Maclure	M F 3 W 4	5 5	..	7 7
CHEMISTRY	Dr. Williamson	Daily ex. S 11	6 6 0	..	9 9	Dr. Dupré	Tu Th 3 F 10.30	5 5	..	7 7
HOSPITAL PRACTICE—										
Physicians	Sir W. Jenner, Bart., M.D.		..	..	..	Dr. Basham	M Th 1.30	8 8	12 12	21 0
	Dr. Reynolds, Dr. G. Harley, Dr. W. Fox, Dr. S. Ringer	Daily 1 & 2	For 6 months to the Physicians' and Surgeons' practice, £16 10s. To either separately, £11 15s.	For 1 year to the Physicians' and Surgeons' practice, £21 15s. To either separately, £16 10s.		Dr. Fincham, Dr. Radcliffe, Dr. F. Bird, *obs.*	W S 1.30, Tu F 1.30, Tu F 3	6 months	1 year	
	Dr. Grailly Hewitt, *obs.*	Three times a week								
	Dr. Hillier, Skin Infirmary	S 9								
Assistant-Physicians	Dr. Charlton Bastian	..			..	Dr. Anstie, Sir D. Gibb, Dr. Sturges	M Th 1, Tu F 1, W S 1	8 8, 6 months	12 12, 1 year	21 0
Surgeons	Mr. Erichsen, Mr. Marshall, Sir H. Thompson	Daily 1 & 2			..	Mr. Holt, Mr. Brooke, Mr. Holthouse	M Th 1.30, Tu F 1.30, W S 1.30			
	Mr. W. Jones, *oph.*	M W F 1								
	Mr. Streatfeild, *oph.*									
Assistant-Surgeons	Mr. Berkeley Hill, Mr. C. Heath	..			27 0	Mr. Hillman, Mr. Mason, Mr. Bruce	M Th 1, Tu F 1, W S 1	..	..	..
CLINICAL MEDICINE	Sir W. Jenner, Dr. Reynolds	Once a fortnight			..	By the Physicians	Weekly	..	..	..
	Dr. W. Fox	Twice a week								
	Dr. Hillier	Once a fortnight								
CLINICAL SURGERY	Mr. Erichsen	Twice a week			..	By the Surgeons	Weekly	..	..	..
	Mr. Marshall, Sir H. Thompson	Fortnightly								
	Mr. W. Jones, *oph.*	Once a fortnight								
CLINICAL MIDWIFERY	Dr. G. Hewitt	Fortnightly	..	..	..	..	..	..	..	..
MORBID ANATOMY	Dr. C. Bastian	Tu Th F 4 sum.	4 4 0	..	6 6	Dr. Cavafy	..	..	..	..
SUMMER SESSION.										
MATERIA MEDICA	Dr. Ringer	Daily exc. S 12	4 4 0	..	6 6	Dr. Anstie	M Th F 3	3 3	..	4 4
BOTANY	Mr. Oliver	Daily exc. S 4	3 3 0	..	4 4	Dr. Bennett	M W F 9.30	3 3	..	4 4
FORENSIC MEDICINE	Dr. G. Harley	Tu W Th F 10	3 3 0	..	4 4	Dr. Gibb, Dr. Sturges	Tu W F 3	3 3	..	4 4
MIDWIFERY	Dr. Grailly Hewitt	Daily except W and S 9	4 4 0	..	6 6	Dr. Bird	Tu Th F 4	4 4	..	5 5
PRACTICAL CHEMISTRY	Dr. Williamson	Tu W Th F 11	4 4 0	..	..	Dr. Dupré	Tu Th 10.30	2 2	..	..
COMPARATIVE ANATOMY	Dr. Grant, *with Zoology*	Daily except S 3, from Oct. to June	8 8 0	..	9 9	Vacant	W S 9.30	2 2	..	..
BANDAGING, &c.	..	..	..	..	..	Mr. Mason	Tu Th 9	..	..	..
OPERATIVE SURGERY	Mr. C. Heath	Daily 3 in April	4 4 0	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Ibbetson	Tu Th 5 in Jan	1 1 0	..	..	Mr. Walker	W 9.30, Oct., Nov., Dec.	..	..	..
NATURAL PHILOSOPHY	Prof. Foster	M W F 4	5 5 0	..	..	Mr. Brooke	Tu 3 sum.	1 1	..	..
OPHTHALMIC SURGERY	Mr. W. Jones	Tu Th	2 2 0	..	..	..	..	..	..	..
PALÆO-ZOOLOGY	Dr. Grant	Daily except S 3 sum.	1 1 0	..	..	..	..	..	..	..
HISTOLOGY AND PRACTICAL PHYSIOLOGY	Dr. M. Foster, Mr. Allchin	S 9.30 win.	4 4 0	..	5 5	..	..	..	..	..
MENTAL DISEASES	Dr. Sankey	Tu W Th 11	1 11 6	..	..	..	..	..	..	..
PRACTICAL PHARMACY	Mr. Martindale	..	3 3 0	..	5 5	..	..	..	..	..
			3 months		6 months					
Fees for the Lectures and Hospital Practice for the Licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S.	..	..	..	..	93 3	..	..	..	..	78 15
For the Hospital Practice alone	..	..	..	..	27 0	..	..	..	..	29 8
Perpetual to Lectures and Hospital Practice	..	..	..	..	..	..	..	..	..	84 0

ADDITIONAL INFORMATION RESPECTING THE METROPOLITAN SCHOOLS, ETC.

ST. BARTHOLOMEW'S HOSPITAL AND MEDICAL COLLEGE.

THIS Hospital contains 650 beds.

Fees for Lectures and Hospital Practice are payable by instalments —£31 10s. at the beginning of the first Winter Session, £31 10s. at the beginning of the first Summer Session, £36 15s. at the beginning of the second Winter Session. The Midwifery-Assistant, the Clinical Clerks to the Physicians and to the Physician-Accoucheur, certain of the Dressers, and the Clerks to the Assistant-Physicians and Assistant-Surgeons are chosen from the most diligent Students. Sixteen Dresserships are annually given to the Students who pass the best examinations in Surgery, or who may be otherwise specially recommended.

A course of Microscopic Demonstrations is given during the Summer Session, under the superintendence of Mr. Savory. Arrangements have been made for conducting the study of Diseases of the Skin (Dr. Andrew and Dr. Southey, Thursday and Saturday at 12·30), Diseases of the Eye (Mr. Langton and Mr. Vernon, Wednesday and Saturday at 12.30), Diseases of the Ear (Mr. T. Smith, Monday at 1.30), and of Orthopædic Surgery (Mr. Willett, Friday at 1.30), during the Sessions 1868-69.

The following Scholarships and Prizes are awarded :— Senior Scholarship of the value of £50, Medicine, Surgery, and Materia Medica. Senior Scholarship of the value of £50,

Anatomy, Physiology, and Chemistry. Scholarships of the value of £25 each will be awarded to those Students who are placed second in the Examinations for the Senior Scholarships. Junior Scholarships of the value of £50, £30, and £20 are awarded after the General Examination at the end of the Summer and Winter Sessions. The Jeaffreson Exhibition, founded 1868, to the value of £20, is awarded to the Student who passes the best examination in the subjects of Preliminary Education at the commencement of each Winter Session. Wix Prize, founded 1842, is awarded for the best Essay on "The Connexion between Ancient and Modern Literature, and the Studies of Natural Science." Hitchin's Prize, founded 1851. Subject of Examination—Bishop Butler's Analogy. Bentley Prize, founded 1842. For the best Report of Surgical cases occurring in the Wards of the Hospital during the previous year. It is expected that the reports will comprise the Histories, Progress, Treatment, and Results of not less than Twelve Cases, with observations thereupon. Foster Prize. Subject of Examination—Practical Anatomy; Senior. Treasurer's Prize. Subject of Examination—Practical Anatomy; Junior. The Kirkes Medal. Subject of Examination—Clinical Medicine. Students preparing for the Universities may be examined by the Tutors. Fee £5 5s. Students preparing for the College of Surgeons are examined by the Demonstrators; those preparing for the College of Physicians and for the Apothecaries' Hall are examined by Dr. Andrew, Dr. Southey, or by the Tutors, Dr. Duckworth, Mr. Baker, and Mr. Shepard. Students of the first year are examined weekly in the several subjects of their studies by the Tutors.

A Collegiate Establishment, in which Students are lodged and boarded, exists in connexion with the Hospital. The Warden is Mr. Morrant Baker. Each Student pays an entrance fee of £2 2s. The expense of board, lodging, etc., is from £1 10s. to £1 13s. a week.

Fee for general subjects for Students of Dental Surgery: First Winter, £26 5s.; First Summer, £26 5s.; or a single payment of £52.

All communications must be addressed to Dr. Southey, Mr. Callender, or Mr. Morrant Baker, at the Hospital.

CHARING-CROSS HOSPITAL.

Gentlemen are received—1st. As Matriculated Students, or those who enter for their entire Medical Education at the Charing-cross Hospital Medical College. 2ndly. As occasional Students, or those who enter to one or more particular classes. Matriculated Students alone have the privilege of filling the offices of Registrar, Pathological Assistant, Assistant-Demonstrator, Clinical Clerks, Dressers, Dentist's Assistant, Resident Medical Officer, Resident Surgical Officer, and Physician Accoucheur's Assistant, and of becoming Candidates for the Scholarships, Medals, and various general class prizes.

The fee for the Courses of Lectures and Hospital Practice required by the University of London, the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries, to Non-Matriculated Students, is £79 16s.; for the Hospital Practice alone, £31 10s. The Fee to Matriculated Students for the full period of the Lectures and Hospital Practice required by the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries, is £72 9s.; for the Hospital Practice alone, £26 5s. The Fee for Matriculation is £2 2s., to be paid on entering. Payment of Fees may be made either in one sum (£74 11s.) on Matriculation, or in two sums, the first (£38 6s. 6d.) at the commencement of the Winter Session, the second (£36 4s. 6d.) immediately after the first or Christmas vacation. It is strongly recommended that Students enter at the same time to the Medical Tutor's Class. Fee: One Session, £2 2s.; two Sessions, £3 3s.

The office of Registrar to the Hospital, and Pathological Registrar to the School, tenable for two or three years, for the efficient performance of the duties appertaining to which the Council award an annual stipend, is open to all Matriculated Students of the Hospital who have obtained their qualifications.

Scholarships, Medals, and Prizes. — *Scholarships:* The Llewellyn Scholarship of £25 is open to all Matriculated Students who have just completed their second academical year. The Golding Scholarship of £15 a year, tenable for two years, is open to all Matriculated Students who have just completed their first academical year. The following medals are awarded annually:—The Gold Medal, for General Proficiency; the Governor's Clinical Silver Medal; Silver Class Medals, on all the subjects of the Lectures; Bronze Class Medals, on all the subjects of the Lectures.

Free Scholarships.—Candidates for Free Scholarships are required to be sons of Professional men, of reduced circumstances and position, or of gentlemen in a corresponding station of society, and are to have had a classical education fitting them for the Medical Profession. They must have already commenced their Medical studies, and, from unforeseen circumstances, be unable to complete their Professional education without such assistance. They are to send in their applications and testimonials before September 1.

ST. GEORGE'S HOSPITAL.

Perpetual pupils pay at the time of entry a compounding fee of £105. They are admitted to the Practice of the Physicians and Surgeons, to all the Lectures (except Practical Chemistry), to compete for all prizes and exhibitions, to hold the appointments of House-Physician, House-Surgeon, and Assistant House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods.

Gentlemen are admitted to the Hospital Practice and Lectures required for the Licence of the College of Physicians, for the Diploma of Member of the College of Surgeons, and for the Licence of the Society of Apothecaries, with the exception of Practical Chemistry, on payment of the following fees—viz., £42 for the first year of study, £42 for the second year of study, and £10 10s. for each succeeding year.

Special Courses of Lectures are given on Pathology, including Morbid Anatomy, Comparative Anatomy, Psychology, Ophthalmic Surgery, Orthopædic Surgery, Operative Surgery, and Dental Surgery. Demonstrations of diseases of the Skin and Lectures on Public Health are given by the Lecturer on Medicine. Demonstrations on the Laryngoscope are given by the Lecturer on Surgery, and Clinical Instruction on the Diseases of Women by the Lecturer on Midwifery. A Maternity department is attached to the Hospital.

Exhibitions and Prizes.—"The William Brown Exhibition," of £40 per annum, tenable for three years: This Exhibition is competed for by perpetual pupils who have commenced their third, but not completed their fourth Winter Session. It will be "bestowed on the candidate who shall show the best general fitness for the exercise of the Medical Profession, and whose moral conduct shall in all respects be satisfactory." Sir Charles Clarke's Prize for Good Conduct: The interest of £200 Consols to be awarded annually to the student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A Silver Medal to be awarded annually for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the perpetual pupil of the Hospital who shall have delivered to the Surgeons the best report of not more than twenty Surgical cases which have occurred in the Hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine will be awarded to the perpetual pupil of the Hospital who shall produce the best report of not more than twenty Medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes:—To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

The appointments of House-Physician, House-Surgeons, Curator, Registrars, Obstetric Assistant, and Demonstrator of Anatomy (the four latter with salaries attached), are open to senior pupils.

For further information apply to Dr. Barclay or Mr. Holmes.

GUY'S HOSPITAL.

This Hospital contains nearly 600 beds.

Voluntary Examinations are held at four periods of the Student's Course, as follows:—1st. At Entrance, commencing on October 5, in Elementary Classics, Ancient and Modern History, and Mathematics. The Candidate who most distinguishes himself receives £25; the Second Candidate, £20; the third, £15. 2nd. At the end of the first Sessional year, in all the subjects of that year:—one sum of £30, another of £25, and a third of £10 10s. (presented by one of the Governors). 3rd. At the end of the second Sessional year, in the

subjects which form the Course of Study up to that time :—£35 and £30. 4th. At the end of the third Sessional year, in all the subjects of the Curriculum :—£40 and £35. Honorary Certificates are also given to candidates who pass creditable examinations.

Special Examinations.—Two Gold Medals are given annually by the Treasurer to Students who have completed their third, and not exceeded their fourth year—the one for Clinical Medicine, the other for Clinical Surgery.

The Fees for Hospital Practice and Lectures are as follows : For the First Year, £40 ; for the Second Year, £40 ; and £10 for every succeeding year of attendance—the one payment of £100 entitles a student to a perpetual ticket. Materials used in practical courses are charged extra.

Medical and Surgical Ward Clerks, Post-mortem Clerks, Clinical Clerks, Dressers, Resident Obstetric Clerks, and Dressers in the Eye Wards, are selected from the Students, according to merit. Each Dresser (except those in the Eye Wards) has the privilege of rooms and commons in the Hospital free of charge for one month of his Course. The Obstetric Clerks have the like privileges for two months each—one month as junior, another as senior. There are two House-Surgeons, each of whom holds office for four months—two as junior and two as senior. A Resident House-Physician is appointed every six months.

The Registrars and the Demonstrators in Anatomy and Chemistry assist the pupils in their studies.

For further information apply to Mr. Stocker, Apothecary to the Hospital.

KING'S COLLEGE.

The fees, in three sums, may be paid either in one sum on Matriculation or at the commencement of each Winter Session. Students are, however, recommended to add £2 2s. for a second Course of Chemistry, as well as the fee for attendance on the Medical Tutor's class for one year—viz., £3 3s. All resident Students are required to attend the Tutor during their first year.

Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from Matriculated Students who are Pupils of the Hospital.

Scholarships.—Warneford Scholarships : The sum of £200 is set apart annually for Scholarships in the Medical Department—viz., "For the encouragement of the previous education of Medical Students," two Scholarships of £25 per annum for three years ; "For the encouragement of resident Medical Students," one Scholarship of £25 per annum for two years. College Scholarships : The following are given every year to Matriculated Students of this department :—1. One of £40 for two years, open to Students of the third and fourth year ; 2. One of £30 for one year, open to Students of the second year ; 3. One of £20 for one year, open to Students of the first year. Daniel Scholarship : £20 tenable for two years is open to every Student of the College who has worked in the Laboratory for at least six months. Sambrooke Registrarships : Two of £30 every year.

Prizes.—Leathes Prizes : Bible and Prayer-book to two Matriculated Medical Students. Warneford Prizes : £40 is expended in the purchase of Medals and Books as Prizes to two Matriculated Medical Students. Class Prizes are awarded annually for proficiency ; these consist of Books of the value of £3. Two Medical Clinical Prizes, one of £3 for the Winter Session and the other of £2 for the Summer Session ; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize : This Prize was founded in memory of the late Dr. Todd. It consists of a Bronze Medal and Books to the value of £4 4s.

Residence of Students.—A limited number may reside within the College.

For further information apply to Professor Bentley, Dean of the Medical Department.

ST. MARY'S HOSPITAL.

The Hospital contains 170 beds—68 Medical, and 102 Surgical. The entrance fees may be paid in instalments by arrangement with the Dean of the School.

Resident Medical Officer, House-Surgeons, Clinical Clerks, and Dressers.—All these Appointments are open to the Pupils without additional fee, and are held in succession, so as to secure a complete system of Clinical training. Five of these Appointments exceed in value an equal number of scholarships of £50 each. All General Students are required to perform the duties of Clinical Clerks and Dressers for a period of six months during the last two years of their curriculum. A Resident Registrarship within the Hospital has been created with a salary of £100 a year, tenable for two years, *and open to re-election*, preference being given to past House-Surgeons and Perpetual Pupils.

Prizes.—Examinations for Prizes are held at the termination of each Session, the Classes being grouped in accordance with the curriculum laid down for Students of the First, Second, and Third Year. The average value of each of these Prizes is £5 5s. A Scholarship in Anatomy, of the annual value of £25 (the holder of which will be styled Assistant-Demonstrator, and assist in the teaching of Practical Anatomy), will be awarded to the best qualified Student. A Prize of £20 for Students for the First Year is awarded at the end of the Winter Session. A Prize of the value of £4 4s. will be given to the Student who shall make the best Anatomical Preparation, such Preparation to become the property of the School. Two Prosectors are appointed annually, who each receive a Certificate and £5 for their services in the Dissecting-room.

The Fee for Instruction in Vaccination is £1 1s. A Fee of £1 1s. is required to be paid to the Library and Reading-room.

Further information may be obtained from Mr. Ernest Hart, Dean of the School.

THE LONDON HOSPITAL.

The Hospital contains 520 beds—160 Medical and the remainder Surgical. 200 are exclusively appropriated to cases of accident.

There are special departments for Diseases of Women, Syphilis, Diseases of the Skin, Ear, Eye, etc. All the numerous appointments (Registrarships, Dresserships, Clinical Clerkships, etc.) are open to Students without fee or expense of any kind whatever. Some of these appointments are very valuable, far more so than the best scholarships or prizes.

The holders of all the Resident appointments are provided with rooms and board entirely free of expense.

The entry fee to Lectures and Hospital Practice is payable in two instalments of £44 2s. each at the commencement of the two first Winter Sessions. A fee of £1 1s. is paid for instruction in Vaccination. The fee to the Library (compulsory) is £1 1s., and is perpetual.

Prizes and Appointments.—1. Two Scholarships will be awarded during the next Winter Session. The competition will be restricted to first-year Students. The first, value £20, will be awarded to the Student who shall pass in December, 1868, the best examination in Human Osteology, etc. The second, value £25, will be awarded to the Student who shall pass at the end of the Winter Session the best examination in Anatomy, Physiology, and Chemistry. They will not be awarded to the same Student. 2. The Duckworth-Nelson Prize, value £10 10s., will be awarded by competition in May, 1869, and is open to all Students who have not completed their education. The subjects of examination will be Practical Medicine and Surgery. 3. A Hospital Scholarship, value £20, for zeal and proficiency in Clinical Medicine. 4. A Hospital Scholarship, value £20, for zeal and proficiency in Clinical Surgery. 5. A Hospital Scholarship, value £20, for zeal and proficiency in Practical Obstetrics. 6. A Resident Medical Officer, who resides and boards in the Hospital, and receives £75, is appointed for twelve months by the Committee of the Hospital. The Resident Medical Officer is eligible for re-election for the further period of twelve months, and then receives £100. In the absence of the Physicians and Assistant-Physicians, the Resident Medical Officer has the general superintendence of the patients in the Medical wards. 7. A Medical Registrar is appointed annually, and receives £25. 8. A Surgical Registrar is appointed annually, and receives £35. 9. Three House-Surgeons are elected every six months, without any additional expense ; they reside in the Hospital, and are provided with commons. The House-Surgeons are eligible for re-election for a further period of three months. In the absence of the Surgeons and Assistant-Surgeons, the House-Surgeons have the general superintendence of the Surgical department of the Hospital. 10. A Resident Accoucheur is appointed for six months, free of all expense, and is provided with residence and board. He is the Clinical Assistant to the Obstetric Physcian and the Assistant Obstetric Physician, and under their superintendence assists in the care of the In and Out Obstetric Patients, and in the conduct of the Maternity Department and the Vaccination Department. 11. An

Assistant Medical Officer is chosen from among the Medical Pupils. He remains in the Hospital day and night, and is provided with board. 12. Money prizes to the value of £60 per annum are awarded by the House Committee to the most meritorious of the Dressers in the Out-Patients' Room. 13. Two Clinical Assistants are appointed for the Medical Out-Patients, and receive salaries of £40 each annually.

Further information may be obtained from Mr. Adams or Mr. Hutchinson, or on application at the College.

MIDDLESEX HOSPITAL.

The Hospital contains upwards of 300 beds, of which 185 are for Surgical, and 120 for Medical cases. There is a special department for Cancer cases, affording accommodation for 33 In-patients, whose period of residence in the Hospital is unlimited. Wards are also appropriated for the reception of cases of Uterine Disease and of Syphilis and beds are set apart for patients suffering from Diseases of the Eye.

Special attention is bestowed on the Clinical Instruction of the Students, both in the wards and out-patient-rooms. Three Clinical Prizes, including the Governors' Prize of twenty guineas, are annually awarded to those Students who pass the most satisfactory examination at the bedside and in the post-mortem room. Class Prizes are also given, and six resident clinical appointments are annually awarded, after competitive examination, to Students who have completed their education, and complied with the regulations of the School. The officers thus appointed reside and board in the Hospital free of expense.

The College Tutor assists all general Students free of charge, especially those who are preparing for examination, and his daily instruction is arranged with a view to avoid the necessity of Students obtaining any private teaching apart from that of the Medical School.

The fee for attendance on the Hospital Practice and Lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries is £90, which may be paid by instalments.

The Introductory Address will be delivered by Dr. Burdon Sanderson, F.R.S., on Thursday, October 1, at 3 p.m.

ST. THOMAS'S HOSPITAL.

The admission fee to Hospital Practice and all the Lectures is £40 for the first year, and a similar sum for the second, and £10 for each succeeding year; or £90 at one payment for unlimited attendance. Special entries may be made to any course of lectures, or to the Hospital Practice.

There are special departments for Diseases of the Eye, Diseases of Women and Children, Vaccination, Diseases of the Skin, and Diseases of the Teeth.

Prizes and Appointments.—The William Tite Scholarship, awarded every third year: A Scholarship has been founded by W. Tite, Esq., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, on proof of continued residence and good conduct. Preference, in case of equality between students, to be given to the son of a Medical man, and more particularly of one who has been educated at St. Thomas's Hospital, or is in practice at Bath. To the three most distinguished pupils for general proficiency, the following Prizes are awarded at the end of the Session 1868-69:—First Year's Students—1st. College Prize of £30; 2nd. A College Prize of £20; 3rd. Dicto of £10. Second Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. Clinical Clerks and Dressers are selected according to merit from among Second Year's Students. The Dressers are provided with rooms and commons during their period of attendance in the Hospital free of expense. Third Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. The Cheselden Medal, founded by George Vaughan, Esq., is awarded in respect of a Special Examination in Surgery and Surgical Anatomy. The Treasurer's Gold Medal is given annually for general proficiency and good conduct. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the Third or Fourth Year's Students for a Physiological Essay, to be illustrated by preparations.

The House-Surgeons and Resident Accoucheur are chosen from gentlemen who have obtained their Professional diplomas. All are provided with rooms and commons. The two offices of Medical Registrar and Surgical Registrar are from time to time filled from among gentlemen who have completed their studies in the School. Each Registrar, on completing his Annual Report to the satisfaction of the Physicians and Surgeons, receives a gratuity of £40. If the two offices are held by one person, he then receives, on completing his Reports as above, a gratuity of £80.

The Tutor in Arts is Mr. S. Hague, LL.B, B.A. Lond.

For further information, apply to Mr. R. G. Whitfield, Medical Secretary, resident at the Hospital.

UNIVERSITY COLLEGE, LONDON.

The fee for Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid at once or distributed in payment over three years, as follows:—First Winter Term, £37 10s.; First Summer Term, £16 16s.; Second Winter Term, £25 4s.; Second Summer Term, £7 7s.; Third Summer Term, £6 6s.; total, £93 3s.

Entrance Exhibitions.—Three entrance Exhibitions, of the respective values of £30, £20, and £10 per annum, tenable for two years, are annually awarded, upon examination by written papers, to gentlemen who are about to commence their first winter's attendance in a Medical School. The subjects of the Examinations are: Classics, Elementary Mathematics, Natural Philosophy, and in either French or German at the option of the Candidate. The next Examination will take place at the College on September 24 and 25. Notice of intention to compete, with a statement of the modern language in which the Candidate wishes to be examined, must be left addressed to the Secretary, not later than 2 p.m. on Wednesday, September 23, at the office of the College, where the Regulations may be obtained.

Scholarships and Exhibitions.—Atkinson Morley Surgical Scholarships: A Scholarship of £45, tenable for three years, is annually awarded to the Student who, upon examination, shall be found to possess the greatest proficiency in the Theory and Practice of Surgery. Filliter Exhibition: A Prize of £30, awarded annually in July, founded "for the encouragement of proficiency in Pathological Anatomy."

Medals and Prizes.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, awarded at the end of each Term to Pupils who shall have most distinguished themselves by reports and observations on the Medical cases in the Hospital. The Liston Gold Medal is awarded at the end of each Session to the Pupil who shall have most distinguished himself by reports and observations on the Surgical cases in the Hospital.

Class Medals and Prizes.—Besides the above, Gold and Silver Medals or other Prizes are awarded in each class.

The appointments of Assistant-Curator to the Museum of Anatomy and Pathology, of Demonstrators of Anatomy, and of Resident Medical Officer to the Hospital—all of which have emoluments attached to them—are almost invariably conferred upon Students of the College.

Offices in the Hospital tenable by Students.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants are selected from the Pupils, without additional fees. The Physicians' Assistants, Obstetric Assistant, and House-Surgeons reside in the Hospital, paying for their board.

Further information may be obtained at the office of University College, Gower-street, W.C.

WESTMINSTER HOSPITAL.

The Entry Fee to Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid in three instalments—£36 15s. at the commencement of the first year, £31 10s. at the commencement of the second, and £10 10s. at the commencement of the third year.

Prize Appointments and Prizes.—The offices of House-Physician and House-Surgeon are open to competition amongst Gentlemen who have been educated at the Hospital, and who are qualified to practise under the Medical Registration Act. The House-Physician and House-Surgeon are provided with board and lodging in the Hospital free of expense. Assistant-House-Surgeon: Is appointed from among the Senior Students by Examination. Clinical Clerks and Dressers: These appointments are conferred upon the most diligent students.

Prizes.—A Prize of Books or Instruments for each of the Winter and Summer Courses. A Clinical Medicine Prize of the value of 5 guineas, A Clinical Surgery Prize of similar

value. A special Prize will be given for Clinical Midwifery by the Westminster Maternity Charity. Chadwick Prize for General Proficiency. A sum of 20 guineas will be awarded, in one or more Prizes, to the most meritorious Student or Students who are attending Lectures and Hospital Practice for the second or third year.

Further information may be obtained from the Dean, Mr. Holthouse.

ENGLISH PROVINCIAL SCHOOLS AND HOSPITALS.

QUEEN'S COLLEGE, BIRMINGHAM.

Professors of the Medical Faculty.—Winter Courses: Medicine, Dr. James Russell, Dr. Balthazar W. Foster; Surgery, Mr. Oliver Pemberton, Mr. Furneaux Jordan; Anatomy, Mr. Charles J. Bracey, M.B. Lond.; Physiology, Dr. Richard Norris, Mr. T. H. Bartleet, M.B. Lond.; Chemistry, Dr. Alfred Hill, F.C.S.; Demonstrators of Anatomy, Mr. James Hinds, M.B. Lond., and Mr. William Thomas, M.B. Lond. Summer Courses: Midwifery, Mr. John Clay, Mr. John Bassett; Diseases of Women and Children, Mr. Samuel Berry and Dr. R. C. R. Jordan; Forensic Medicine and Toxicology, Mr. Thomas Swain and Dr. Alfred Hill; Practical Chemistry, Mr. Alfred Anderson, F.C.S.; Botany, Dr. William Hinds; Materia Medica and Therapeutics, Mr. J. St. S. Wilders and Mr. Edward Mackey, M.B. Lond.; Ophthalmic Surgery, Mr. J. Vose Solomon; Dental Surgery, Mr. Thos. Howkins; Comparative Anatomy, Dr. Thomas Savage; Medical Tutor and Registrar, Mr. James Hinds, M.B. Lond.

Admission of Students.—Students may enter—1st, as Matriculated Students; 2nd, as Occasional Students, or those who enter for one or more courses of Lectures; 3rd, as Junior Students to prepare for the Matriculation Examination required by the Licensing Boards.

Resident Students.—Students may reside within the College, where they will be provided with rooms and board, and will be under the supervision of the Warden and Resident Tutors. Resident Students are expected to attend the College Chapel unless specially exempted by the Warden.

Resident Tutors.—Rev. W. H. Poulton, M.A., Rev. H. G. Cundy, M.A., and Dr. James Hinds.

Scholarships and Prizes.—Two Warneford Scholarships, the Sands Cox Prize (gold medals or prizes of the value of £20), the Warden's Prize (of the value of five guineas), the Percy Prize (books of the value of five guineas), and Class Prizes. Silver Medals and Certificates of Honour are awarded annually.

Fees.—Composition Fee for all the Lectures required by the University of London, the Royal College of Physicians, the Royal Colleges of Surgeons, and the Apothecaries' Society, fifty guineas, payable by two equal instalments: the first on entrance, and the second at the commencement of the second year. Fees for the Winter Courses are £5; for the Summer (with the exception of Midwifery, £5), £4 or £3 3s. Fees for Resident Students, for rooms and commons, £50 per annum.

Further particulars may be obtained from the Reverend the Warden, at the College; or from Professor Bracey, Priory House, Old-square.

QUEEN'S HOSPITAL, BIRMINGHAM.

Physicians, Dr. Fleming, Dr. Foster. Surgeons, Messrs. West, Gamgee, Furneaux Jordan, J. St. S. Wilders. Surgeon Accoucheurs, Dr. Suckling, Dr. Earle. Dental Surgeon, Mr. S. A. Parker. Resident Physician, Dr. Sawyer. Resident Surgeon, Dr. Jolly.

Fees.—Medical and Surgical Practice, for six months, £6 6s.; one year, £10 10s.; three years, £21.

The respective offices of Resident Pupil (with Board and Lodging), Physicians' Clerks and Surgeons' Dressers, Obstetric Clerks, and Dental Assistants, are filled up by the Physicians and Surgeons from among the Students without extra fee. Clinical Lectures and Instruction are delivered daily at the Hospital by the Physicians and Surgeons.

GENERAL HOSPITAL, BIRMINGHAM.

Physicians, Dr. Evans, Dr. Bell Fletcher, Dr. Russell, Dr. Wade. Surgeons, Mr. Crompton, Mr. Alfred Baker, Mr. Oliver Pemberton, Mr. T. H. Bartleet. Resident Physician and Tutor, Dr. Wyllie. Resident Surgeon, Mr. Addenbrooke.

Fees.—Medical Practice, six months, £7 7s.; twelve months, £10 10s.; eighteen months, the term required for the Licence of the College of Physicians and the Society of Apothecaries, £12 12s. Surgical Practice, six months, £10 10s.; twelve months, £12 12s.; eighteen months, £17 17s.; three years, or the period required by the College of Surgeons, £26 5s. No Extra Fees for Clerkships and Dresserships.

Clinical Lectures are delivered by the Physicians and Surgeons every week during the Session.

BRISTOL MEDICAL SCHOOL, SESSION 1868-69.

The Winter Session will commence on Thursday, October 1, 1868. Medicine, Dr. Brittan and Dr. Martyn. Surgery, Mr. Coe and Mr. Clark. General Anatomy and Physiology, Drs. Fripp and Beddoe. Descriptive and Surgical Anatomy, Mr. Lansdown and Mr. Tibbits. Superintendence of Dissections, Messrs. Tibbits, Wintle, and Ludlow. Chemistry, Mr. Coomber.

The Summer Session will commence on May 1, 1869. Midwifery and Diseases of Women, Dr. J. G. Swayne. Forensic Medicine, Dr. H. Marshall. Materia Medica and Therapeutics, Dr. G. F. Burder. Botany, Mr. A. Leipner. Practical Chemistry, Mr. Coomber.

Fee for perpetual attendance on all the above Courses, excepting Practical Chemistry, £47 5s.

Competitive Examinations are held amongst students of the first, second, and third years respectively; and prizes of money, instruments, and books, are annually awarded.

Medical and Surgical Hospital Practice and Clinical Lectures are attended at the Royal Infirmary or at the General Hospital.

Further information may be obtained on application to the Honorary Secretary, Dr. G. F. Burder.

BRISTOL ROYAL INFIRMARY.

The Infirmary contains 242 beds. Physicians, Dr. Brittan, Dr. Fairbrother, Dr. Fox, Dr. Beddoe. Surgeons, Mr. Prichard, Mr. Bernard, Mr. Leonard, Mr. Clark, and Mr. Tibbits.

Fees.—For one year, Surgeon's pupil, £12 12s.; Dresser (extra fee), £12 12s. For two years (at one payment), Surgeon's pupil, £21; Dresser (extra fee), £21. For three years (at one payment), Surgeon's pupil, £26 5s.; Dresser, (extra fee), £26 5s. Dressers reside in the House in weekly rotation. Physician's pupil, for six months, £8; one year, £15; eighteen months, £20; perpetual, £25. Clinical Clerks are appointed without extra fee. A Gold Medal and other Prizes are awarded annually. Patients admitted in 1867: In-patients, 2572; out-patients, 21,033; total, 23,605.

BRISTOL GENERAL HOSPITAL.

The Hospital contains 130 beds. Physicians, Dr. Martyn, Dr. Burder, Dr. Fripp. Surgeons, Mr. Coe, Mr. W. M. Clarke, Mr. Lansdown, Dr. H. Marshall. Physician-Accoucheur, Dr. Swayne. Two Scholarships of £15 each are awarded annually, and a Prize of Twenty Guineas is given to the Hospital Student who is successful in the third year's Competition at the School.

Fees.—Medical or Surgical Practice, for six months, £6; one year, £10; perpetual, 20. Extra fee for Clinical Clerk or Dresser, £5 5s. for six months. Library fee, £1 1s. per annum. Dressers reside in the Hospital by rotation and free of expense.

Resident Pupils (including Board, Lodging, and Washing), £100 for the first year, £60 for each subsequent year. Or for five years, with apprenticeship to the Hospital, £260.

Further information will be afforded by Mr. Marshall, on application being made to him at the Hospital.

HULL AND EAST-RIDING SCHOOL OF MEDICINE AND ANATOMY, KINGSTON-SQUARE, SESSION 1868-69.

The Winter Session will commence on Thursday, October 1, 1868. Anatomy, Physiology, and Pathology, by Mr. R. M. Craven and Mr. Rudd. Anatomy and Anatomical Demonstrations, by Mr. Nicholson. Principles and Practice of Medicine, by Dr. Elliott. Principles and Practice of Surgery, by Dr. King. Chemistry, by Mr. Walton.

The Summer Session commences May 1, 1869. Midwifery and Diseases of Women and Children, by Mr. Henry Gibson. Materia Medica and Therapeutics, by Mr. Holden and Mr. Henson. Forensic Medicine, by Dr. Munroe, F.L.S. Botany, by Mr. Niven. Chemistry, by Mr. Walton. Perpetual fee to all the Lectures except Chemistry, £42.

The Hospital contains 152 beds, and is recognised by all the Examining Boards. Clinical Lectures are given at the Hospital twice a week: on Medicine, by Sir H. Cooper, Dr. Daly, and Dr. Elliott; on Surgery, by Dr. Lunn, Mr. Craven, and Dr. King. Perpetual Fee for attendance on the Medical and Surgical Practice, £21. Clinical Lectures, £1 1s. Application for Tickets may be made to Mr. R. M. Craven.

LEEDS SCHOOL OF MEDICINE.

The Winter Session will commence on Thursday, October 1, 1868. Physiology, General Anatomy, and Pathology, by Messrs. W. Hall and T. R. Jessop. Anatomy, by Messrs. J. Seaton, R. T. Land, and J. A. Nunneley. Demonstrators of Anatomy, Messrs. Seaton, Land, and Nunneley. Assistant Demonstrators, Messrs. Oglesby and Wright. Demonstrator of Pathology, Mr. Jessop. Surgery, by Messrs. Hey, Wheelhouse, and T. P. Teale, jun. Chemistry, by Mr. J. C. Wilson. Principles and Practice of Physic, by Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Medicine, by Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Surgery, by Mr. S. Hey, Mr. Nunneley, Mr. Wheelhouse, and Mr. T. P. Teale, jun. Summer Session, 1869, commencing May 1.—Materia Medica and Therapeutics, by Dr. Eddison. Midwifery, by Mr. Price and Mr. W. Hall. Forensic Medicine and Toxicology, by Mr. Scattergood. Botany, by Mr. Atkinson. Practical Chemistry, by Mr. J. C. Wilson. Comparative Anatomy, by Mr. Wheelhouse and Dr. Allbutt. Operative Surgery, by Messrs. Hey, Wheelhouse, and Teale, jun. Fee to all the Courses required by the Examining Bodies, except Practical Chemistry and Comparative Anatomy, £42. Silver and Bronze Medals, Books, and Certificates of Honour are awarded. Clinical Lectures will be given at the General Infirmary.

Two Clinical Prizes of £10 each, a Forensic Medicine Prize of £10, and two Chemical Scholarships, are awarded to Students.

Clinical Clerkships and Dresserships.—Two Resident Medical Officerships, six Clinical Clerkships, and eight Dresserships are awarded by the Physicians and Surgeons to the General Infirmary.

The fees for attendance upon the Medical Practice of the Infirmary, or upon the Surgical Practice, are as follows, being the same in each case:—One Winter Session, £7 7s.; one Summer Session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21; perpetual, £26 5s.

Further information may be obtained from the Secretary of the School, Mr. Atkinson.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The Introductory Address will be delivered on October 1, 1867, at 3 p.m., by Dr. Roberts.

Hospital Practice, Royal Infirmary.—Physicians, Dr. Vose, Dr. Turnbull, Dr. Inman. Surgeons, Mr. Stubbs, Mr. Bickersteth, Mr. Hakes. Assistant-Surgeon, Mr. Harrison. House-Surgeons, Mr. Pusey and Dr. Orton. Pathologist, Dr. Rawdon. Dental Surgeon, Mr. Snape.

Terms for Hospital Attendance and Clinical Lectures:—

	Medical Practice.	Surgical Practice.
For Six Months . .	£5 5 0	£5 5 0
One year . .	6 6 0	6 6 0

Lectures, Winter Session.—Medicine, Dr. Cameron. Surgery, Mr. Bickersteth. Physiology, Dr. Waters. Anatomy, Mr. Harrison. Dissections, Dr. Roberts and Dr. Glynn. Chemistry, Mr. Brown.

Lecturers, Summer Session.—Midwifery, Mr. Steele. Diseases of Children, Dr. Gee. Materia Medica, Dr. Nevins. Medical Jurisprudence, Dr. E. Whittle. Toxicology and Practical Chemistry, Mr. Brown. Botany, Dr. Roberts. Ophthalmic Medicine and Surgery, Dr. Hibbert Taylor. Pathological Anatomy, Dr. Rawdon. Comparative Anatomy and Zoology, Dr. Davidson.

Exhibitions.—Royal Infirmary Medical Scholarship—value £42—consisting of Gold Medal, value £10 10s., and Six Months' Free Board and Residence, with Clerkship and Dressership, in the Royal Infirmary.—Four Exhibitions—value £31 10s. each—consisting of Six Months' Free Board and Residence in the Royal Infirmary.

The Fee for all the Lectures required by the Colleges of Surgeons and Physicians and the Apothecaries' Hall is £42, payable in advance.

THE LIVERPOOL NORTHERN HOSPITAL.

Physicians: Dr. Waters and Dr. Roberts. Surgeons: Mr. Manifold, Mr. Lowndes, and Mr. Branston Nash. Junior Surgeon: Mr. John Bradley. House-Surgeon: Mr. Orfeur. Junior House-Surgeon: Mr. Llewellyn Williams.

The Hospital contains 134 beds, and attendance on the practice qualifies for all the Examining Boards. Clinical Lectures are regularly delivered by the Physicians and Surgeons during the Winter and Summer Sessions. Clinical Clerkships and Dresserships are open to all the students. Clinical Prizes will be awarded at the termination of the Winter Session.

Fees for Hospital Practice and Clinical Lectures.—Perpetual, 30 guineas; one year, 12 guineas; six months, 9 guineas; three months, 6 guineas. Students can enter to the Medical or Surgical practice separately, on payment of half the above fees. The Hospital receives one resident Pupil, fee 60 guineas per annum.

For further particulars apply to the House-Surgeon, Mr. Orfeur.

MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY, FAULKNER-STREET.

The Winter Session will commence October 1, with an Introductory Address by Dr. H. Simpson.

Winter Session, 1868-69.—Physiology, by Mr. Smith. Descriptive Anatomy, by Mr. Lund and Mr. Bradley. Practical Anatomy, by Mr. S. M. Bradley. Chemistry, by Mr. Stone. Principles and Practice of Medicine, by Dr. Roberts and Dr. Morgan. Principles, Practice, and Operations of Surgery, by Mr. Southam. Anatomy, Physiology, and Pathology of the Eye, by Mr. Hunt.

Summer Session.—Midwifery and Diseases of Women and Children, Dr. Thorburn. General Pathology and Morbid Anatomy, by Dr. Simpson. Materia Medica, Medical Botany, and Therapeutics, by Mr. Somers. Forensic Medicine, by Mr. Harrison. Botany, by Mr. Grindon. Practical Chemistry, by Mr. Stone. Comparative Anatomy, by Mr. Bradley.

Perpetual fee to the whole of the Lectures required to qualify for Examination at the London University, the Royal Colleges of Physicians and Surgeons, and the Apothecaries' Company, £42.

Hospital Practice at the Royal Infirmary, where Clinical Lectures are regularly delivered by the Physicians and Surgeons of the Institution.

Scholarships.—In addition to prizes, amounting to 33 guineas, for general proficiency, Three Scholarships for perpetual Students will be offered for competition—one of £20 for third year's Students; one of £15 for second year's Students; one of £10 for first year's Students.

Further particulars may be obtained from Mr. Southam; or from the Vice-Registrar, Mr. Stone, at the school.

COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

Winter Session, commencing October 1, 1868.—Anatomy and Physiology, Dr. Murray. Anatomy, Dr. Nesham, Mr. Armstrong, and Mr. Russell. Medicine, Dr. Charlton and Dr. Embleton. Surgery, Dr. Heath. Chemistry, Mr. Marreco.

Summer Session.—Midwifery, Dr. Gibson. Botany, Mr. Thornhill and Dr. Arnison. Medical Jurisprudence, Dr. Donkin. Materia Medica, Dr. Humble. Practical Chemistry, Mr. Marreco. Operative Surgery, Dr. Heath. Military Surgery, Sir John Fife. Pathological Anatomy, Dr. Gibb and Dr. Philipson.

Fees for Lectures.—Perpetual Fee for all the Lectures qualifying for the Licence in Medicine, and the Mastership in Surgery, of the University of Durham, the Licence and Membership of the Royal College of Physicians, the Diploma of the College of Surgeons, and the Licence of the Apothecaries' Society, and payable on entering to the first Winter Session, £46 4s.

Hospital Practice.—This can be attended at the Newcastle Infirmary, which contains 230 beds. Midwifery at the Newcastle Lying-in Hospital.

Fees for Hospital Practice.—Twelve months, £7 7s.; Six Months, £5 5s.; Three Months, £4 4s.; Perpetual Fee, £17 17s.; or, if paid by instalments, first year £7 7s., second year £6 6s., third year £5 5s. These fees also are payable in advance.

Medical Scholarships in the University of Durham.—Four Scholarships, of £25 a year each, tenable each for four years. Two non-resident Clinical Clerkships and four Dresserships are conferred for merit. Dickinson Memorial Scholarship, one, £15, for general proficiency.

College Medals.—At the end of each Session a Silver Medal and Certificates of Honour will be awarded in each of the required classes.

Further particulars may be obtained from Dr. Embleton, Registrar, or Dr. Philipson, Secretary.

SHEFFIELD SCHOOL OF MEDICINE.

The Winter Session will commence October 1, 1868. Lectures.—Anatomy, Descriptive and Surgical, Mr. Skinner and Mr. W. J. Le Tall; Demonstrations on Anatomy, Mr. Skinner, Mr. A. Jackson, and Mr. Woolhouse; Physiology, Mr. Leeds; Principles and Practice of Medicine, Dr. Frank-Smith; Principles and Practice of Surgery, Mr. W. F. Favell and Mr. Parker; Chemistry, Mr. Allen; Dental Mechanics, Mr. G. Mosely; Clinical Medicine, Dr. de Bartolomé, Dr. Law, and Dr. Frank-Smith; Clinical Surgery, Mr. Barber, Mr. W. F. Favell, and Mr. Parker. The Summer Session will commence May 1, 1869. Lectures.—Midwifery and Diseases of Women, Dr. Keeling and Dr. Hime; Materia Medica and Therapeutics, Dr. Young; Medical Jurisprudence and Toxicology, Mr. A. Jackson and Mr. Baker; Botany, Mr. Birks: Practical Chemistry, Mr. Allen; Dental Surgery, Mr. Merryweather; Demonstrations of Pathology and Microscopy, Mr. Hardy Smith (at the Infirmary); Demonstrations of Operative Surgery, Mr. Favell and Mr. Parker.

Fees.—Anatomy and Physiology, First Course, £6 6s.; Second Course, £4 4s. Practice of Medicine, Practice of Surgery, First Course, £4 4s.; Second Course, £2 2s. each. Chemistry, First Course, £4 4s. Midwifery and Diseases of Women, Materia Medica, Medical Jurisprudence, Botany, Practical Chemistry, First Course, £3 3s. each. Perpetual Fee for attendance on all the Lectures required by the Royal College of Surgeons and Apothecaries' Hall, £40.

All further information may be obtained upon application to the Honorary Secretary, Dr. W. Frank-Smith.

Sheffield General Infirmary.—Physicians, Dr. de Bartolomé, Dr. Elam, Dr. Law. Surgeons, Mr. Barber, Mr. Favell, Mr. Parker. House-Surgeon, Mr. G. A. Brown.

The Infirmary contains 150 beds for in-patients.

The Fees for Perpetual attendance at the Infirmary are £15 15s. for Medical, £21 for Surgical Practice. For twelve months' Practice, £12 12s.

MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

The Session will commence on Monday, November 2, 1868.

The Classes for Medicine will be opened as follows:—Dietetics, Materia Medica, and Pharmacy, on Monday, November 2, at 9 o'clock, Professor Christison, M.D., £4 4s.; Chemistry, on Monday, November 2, at 10 o'clock, Professor Lyon Playfair, £4 4s.; Surgery, on Monday, November 2, at 10 o'clock, Professor Spence, £4 4s.; Institutes of Medicine, on Monday, November 2, at 11 o'clock, Professor Bennett, M.D., £4 4s.; Midwifery and Diseases of Women and Children, on Monday, November 2, at 11 o'clock, Professor Sir James Y. Simpson, Bart., M.D., £4 4s.; Clinical Surgery (Monday and Thursday), on Monday, November 2, at 12 o'clock, Professor Syme, £4 4s.; Clinical Medicine (Tuesday and Friday), on Tuesday, November 3, from 12 to 2 o'clock, Professors Bennett, Laycock, and Maclagan, £4 4s.; Anatomy, on Monday, November 2, at 1 o'clock, Professor Turner, M.B., £4 4s.; Natural History, on Monday, November 2, at 2 o'clock, Professor Allman, M.D., £4 4s.; Practice of Physic, on Monday, November 2, at 3 o'clock, Professor Laycock, M.D., £4 4s.; General Pathology, Monday, November 2, at 4 o'clock, Professor Henderson, M.D., £4 4s.; Anatomical Demonstrations, on Monday, November 2, at 4 o'clock, Professor Turner, £1 1s.; Royal Infirmary, at noon daily, Perpetual, £10; Practical Anatomy, under the superintendence of Professor Turner, £3 3s.; Practical Chemistry, under the superintendence of Professor Lyon Playfair, £3 3s.; Analytical Chemistry, under the superintendence of Professor Lyon Playfair; Practical Physiology, under the superintendence of Professor Bennett.

During the Summer Session Lectures will be given on the following subjects:—Botany, by Professor Balfour, M.D., £4 4s.; Practical Physiology, including Histology, by Professor Bennett; Medical Jurisprudence for Medical and Law Students, by Professor Maclagan, M.D., £4 4s.; Clinical Medicine; Clinical Surgery, by Professor Syme; Comparative Anatomy, by Professor Turner; Anatomical Demonstrations, by Professor Turner; Practical Chemistry and Pharmacy, under the direction of Professor Lyon Playfair; Practical Anatomy, under the superintendence of Professor Turner; Natural History, by Professor Allman; Medical Psychology, with practical instruction at an Asylum, by Professor Laycock.

Matriculation.—Every Student, before entering with any Professor, must produce a Matriculation Ticket for the ensuing Session. Tickets will be issued at the Matriculation Office at the College, every lawful day on and after 5th Oct., from 10 till 4 o'clock. Enrolment in the General Album is the only legal Record of attendance in the University.

For further information apply to the Secretary at the College.

The total minimum expense for M.B. and C.M. degrees, including Examination Fees, is £104 8s.

A Table of Fees may be seen in the Matriculation Office, and in the Reading-room of the Library.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

WINTER SESSION, 1868-69.

The following Courses of Lectures on Medical and Surgical Science, and also those delivered in the University, qualify for Examination for the Diplomas of the Royal Colleges of Physicians and Surgeons. Classes open on Tuesday, November 3:—Surgery, Dr. P. H. Watson. Surgery (1, Surgeons'-square), Dr. Joseph Bell. Surgery (Minto House), Mr. Annandale. Chemistry (School of Arts, Adam-square), Dr. Stevenson Macadam. Practical Chemistry and Analytical Chemistry, Dr. Stevenson Macadam (at Surgeons'-hall). Chemistry (Minto House), Dr. A. Crum Brown. Practical Chemistry and Analytical Chemistry, Dr. A. Crum Brown (Minto House). Physiology, Dr. Sanders. Medical Jurisprudence (course commences on Monday, November 9), Dr. Littlejohn. Clinical Medicine (Royal Infirmary), Drs. Sanders, Rutherford Haldane, and George W. Balfour; Dr. J. Matthews Duncan (for Diseases of Women). Clinical Surgery (Royal Infirmary), Dr. Gillespie. Anatomy: Anatomical Demonstrations, Dr. P. D. Handyside. Practical Anatomy (will be commenced October 1), Dr. P. D. Handyside. Practice of Physic, Dr. Rutherford Haldane. Practice of Physic (Minto House), Dr. George W. Balfour. General Pathology, Dr. Grainger Stewart.

Practical Instruction.—Royal Infirmary, 12 noon: Perpetual Ticket, at one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

Fees.—For the first of each of the above Courses, £3 5s.; for the second £2 4s.; perpetual, £5 5s. To those who have already attended a First Course in Edinburgh, the perpetual fee for that Class is £2 4s. The fees for the following Courses are:—Practical Chemistry and Practical Anatomy, £3 3s. Anatomical Demonstrations, £2 2s.; when taken along with Practical Anatomy, £1 1s.; perpetual, £4 4s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for the Session of six months.

During the Summer Session, 1869, the following Three Months' Courses will be delivered:—Midwifery, Dr. Keiller. Midwifery (Minto House), Dr. J. Matthews Duncan. Practical and Analytical Chemistry (Surgeons'-hall), Dr. Stevenson Macadam. Practical and Analytical Chemistry (Minto House), Dr. A. Crum Brown. Medical Jurisprudence, Dr. Littlejohn. Materia Medica and Therapeutics, Dr. Angus Macdonald. Clinical Medicine and Clinical Surgery. Practical Anatomy, Elementary and Microscopic Anatomy, and Anatomical Demonstrations, Dr. P. D. Handyside. Pathological Anatomy and Histology, Dr. Grainger Stewart.

The minimum cost of education in the above School for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, including the fees for the Joint Examinations, is £90 4s., which is payable by yearly instalments during the period of study; while the minimum cost for the single qualification of either Physician or Surgeon, including fee for Examination, is £80.

For further information apply to Dr. Stevenson Macadam, Secretary to the Medical and Surgical Schools.

ROYAL INFIRMARY, EDINBURGH.

In this Hospital a portion of the beds is set apart for Clinical Instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons.

Medical Department.—Professors of Clinical Medicine: Dr. Bennett, Dr. Laycock, and Dr. Maclagan. Extra Physicians and Lecturers on Diseases peculiar to Women: Dr. Simpson and Dr. J. Matthews Duncan. Ordinary Physicians and Lecturers on Clinical Medicine: Dr. Sanders, Dr. Rutherford Haldane, and Dr. G. W. Balfour. Pathologist and Extra Physician: Dr. T. Grainger Stewart.

Surgical Department.—Professor of Clinical Surgery: Mr. Syme. Consulting Surgeon: Dr. Dunsmure. Ordinary Acting Surgeons: Mr. Spence, Dr. J. D. Gillespie (Lecturer on Clinical Surgery), and Dr. P. H. Watson. Ophthalmic Surgeon: Mr. Walker. Assistant-Surgeon: Mr. Thomas Annandale. Assistant to Mr. Syme: Dr. Joseph Bell. Assistant to Mr. Walker: Dr. D. A. Robertson. Dental Surgeon: Dr. John Smith.

Hospital Tickets: Perpetual, in one payment, £10; Annual, £5 5s.; Half-yearly, £3 3s.; Quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

UNIVERSITY OF ABERDEEN.

Faculty of Medicine—Session 1868-69.

Winter Session, commencing on Wednesday, October 28.—Anatomy, Professor Struthers, M.D., £3 3s. Anatomical Demonstrations and Practical Anatomy, Professor Struthers and the Demonstrator, £2 2s. Chemistry, Professor Brazier, £3 3s. Institutes of Medicine, Professor Ogilvie, £3 3s. Surgery, Professor Pirrie, £3 3s. Practice of Medicine, Professor Macrobin, M.D., £3 3s. Midwifery and Diseases of Women and Children, Professor Dyce, £3 3s. Zoology, with Comparative Anatomy, Professor Nicol, £3 3s. Medical Jurisprudence, Professor Ogston, £3 3s.

Summer Session, commencing on the first Monday in May.—Botany, Professor Dickie, £3 3s. Materia Medica (100 Lectures), Professor Harvey, £3 3s. Anatomical Demonstrations and Practical Anatomy, Professor Struthers and the Demonstrator, £2 2s. Practical Chemistry, Professor Brazier, £3 3s. Zoology, with Comparative Anatomy, Professor Nicol, £3 3s.

Matriculation Fee for the Winter and Summer Sessions, £1. For the Summer Session alone, 10s.

Royal Infirmary.—Perpetual Fee to Hospital Practice, £6; or First Year, £3 10s.; Second Year, £3. Clinical Medicine, Drs. Harvey and Smith, £3 3s. Clinical Surgery, Drs. Keith and Pirrie, £3 3s.

For further information, apply to Dr. Macrobin, Dean of the Faculty of Medicine.

UNIVERSITY OF GLASGOW.

Faculty of Medicine.—The Classes open for the Winter Session on Tuesday, October 27, 1868.

Chemistry, Practical Chemistry, and Chemical Laboratory, Dr. Anderson, £3 3s. Practice of Physic, Dr. Gairdner, £3 3s. Anatomy, Anatomical Demonstrations, and Practical Anatomy, Dr. Allen Thomson and Demonstrator, £3 3s. Materia Medica, Dr. Cowan, £3 3s. Forensic Medicine, Dr. Rainy, £3 3s. Surgery, Mr. Lister, £3 3s. Midwifery, Dr. Leishman, £3 3s. Institutes of Medicine, Dr. A. Buchanan, £3 3s. Clinical Medicine and Clinical Surgery, Physicians and Surgeons of Royal Infirmary.

Further information may be obtained from the Registrar of the University.

ANDERSON'S UNIVERSITY, GEORGE-STREET, GLASGOW.

Winter Session 1868 opens October 27.

Chemistry, Practical Chemistry, and Laboratory, Dr. Penny; Surgery, D. G. H. B. Macleod; Institutes of Medicine (Physiology), Dr. Watson; Anatomy, Anatomical Demonstrations, Practical Anatomy, or Dissection, Dr. G. Buchanan; Practice of Medicine, Dr. M'Call Anderson; Materia Medica, Dr. Morton; Hospital Practice in Royal Infirmary; Clinical Lectures in Royal Infirmary.

Summer Session.

Midwifery, Dr. J. G. Wilson; Medical Jurisprudence, Dr. Leishman; Surgical Anatomy, Practical Anatomy, Osteology for beginners, Dr. George Buchanan; Practical Chemistry, Dr. Penny.

Class Fees.—For each of the above Courses of Lectures, first Session, £2 2s.; second Session, £1 1s.: afterwards free.

Anatomy Class Fees.—For both Courses (Lectures and Demonstrations), first Session, £4 4s.; second Session, £4 4s.; afterwards free.

Practical Anatomy.—The Dissecting-room is free for two Sessions to those who attend both Courses of Anatomy. After the second year the fee for Practical Anatomy is £1 1s. per Session.

The Fees for all the Lectures and Hospital Practice required of Candidates for the Diplomas of Physician and Surgeon amount to £40.

GLASGOW ROYAL INFIRMARY.

Number of beds, 547.

Physicians, Dr. Gairdner, Dr. Leishman, Dr. Steven, Dr. Perry; Surgeons, Mr. Lister, Dr. E. Watson, Dr. Donald Dewar, and Dr. George H. B. McLeod.

Besides the Clinical instruction given at the bedside, Lectures on the Cases are given four times weekly, at Nine a.m., during the Winter and Summer Sessions. Clinical Medical Lectures on Mondays and Thursday. Clinical Surgical Lectures on Tuesdays and Fridays.

Fees, admitting to the Medical and Surgical Practice and the Clinical Lectures—Perpetual, £10 10s.; or, for one year, £5 5s.; for second, £5 5s.; for third, £1 1s.; and afterwards free.

Dispensary.—Physicians, Dr. M'Laren and Dr. J. Stewart. Surgeons, Dr. J. Dunlop and one vacant.

Superintendent, Dr. Moses Thomas.

SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC, UNIVERSITY OF DUBLIN.

The School was established by Act of the Irish Parliament 40th George III. cap. 84, and is under the joint government of the Board of Trinity College and the King and Queen's College of Physicians.

Institutes of Medicine, Professor Law. Materia Medica and Pharmacy, Professor A. Smith. Surgery, Professor R. Smith. Anatomy and Chirurgery, Professor Macdowel. Practical Anatomy, Dr. Bennett. Chemistry, Professor Apjohn. Practice of Medicine, Professor Moore. Midwifery, Professor Sinclair. Botany, Dr. Alexander Dickson. Medical Jurisprudence, Professor Travers. Hospital Practice and Clinical Lectures at Sir Patrick Dun's Hospital.

SIR PATRICK DUN'S HOSPITAL.

Consulting Physician, William Stokes, M.D., Regius Professor of Physic. Consulting Surgeon, Robert Adams, M.D., M.Ch., Regius Professor of Surgery. The Clinical Lectures in Medicine and Surgery are delivered by Physicians Robert Law, M.D., King's Professor of the Institutes of Medicine; William Moore, M.D., King's Professor of the Practice of Medicine; Aquilla Smith, M.D., King's Professor of Materia Medica and Pharmacy; Edward B. Sinclair, M.D., King's Professor of Midwifery. Surgeons, Benjamin G. M'Dowel, M.D., M.Ch., University Professor of Anatomy and Chirurgery; Robert W. Smith, M.D., and M.Ch., Trinity College Professor of Surgery; Edward H. Bennett, M.D.,

M.Ch., University Anatomist; Richard G. Butcher, M.D., University Lecturer in Practical Surgery. The Physicians and Surgeons attend for Clinical Instruction on alternate days. An attendance of nine months in this Hospital is required for the degree of M.B., in the University of Dublin, together with six months' instruction in Practical Midwifery—in connexion with Sir P. Dun's Maternity.

Hospital Fee for twelve months, including nine months' Clinical Lectures:—First year, 12 guineas; second year, 9 guineas; third year, 6 guineas. Attendance on this Hospital is recognised by all Licensing Bodies.

THE QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, BELFAST, FACULTY OF MEDICINE.

The Lectures will commence on Monday, November 2. Anatomy and Physiology, Dr. P. Redfern. Chemistry, Dr. Thomas Andrews. Practice of Medicine, Dr. James Cuming. Practice of Surgery, Dr. A. Gordon. Materia Medica, Dr. J. S. Reid. Midwifery, Dr. W. Burden. Medical Jurisprudence, Dr. J. F. Hodges. Natural Philosophy, Dr. Everett. Zoology and Botany, Dr. Wyville Thomson. The Demonstrations in Anatomy are delivered by Dr. Burden. The Courses of Botany and Practical Chemistry, and a Second Course of Experimental Physics will commence in May.

Fees.—Anatomy and Physiology—First Course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy—Each Course, £3. Practical Chemistry £3. Other Medical Lectures—First Course, £2; each subsequent Course, £1.

Two Medical Scholarships are awarded to the Students of each year of the Medical course. The Examinations commence on October 22.

Belfast General Hospital.—Fees for Clinical Instruction—First year, £4 4s.; second year, £3 3s.; third year, £2 2s.; for two years in advance, £6 6s. Hospital Fee, £1 1s. per annum. Three resident pupils are appointed by examination.

Belfast Lying-in Hospital.—Fee for the Session, £3 3s.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.—Session 1868-69.

Anatomy, Physiology, and Practical Anatomy, Dr. J. H. Corbett. Practice of Medicine, Dr. C. O'Connor. Practice of Surgery, Dr. W. Tanner. Materia Medica, Dr. P. O'Leary. Midwifery, Dr. J. R. Harvey. Natural Philosophy, Mr. John England. Chemistry and Practical Chemistry, Dr. J. Blyth. Zoology and Botany, Dr. J. R Greene. Modern Languages, Mr. R. De Vericour. Clinical Medicine and Clinical Surgery, at the North and South Infirmaries, by the Physicians and Surgeons of these Institutions. Clinical Midwifery, at the Lying-in Hospital. The Medical Session will be opened on Monday, November 2, 1868, and the Lectures will commence on the same day.

Eight Scholarships, value £25 each, are awarded to Students of Medicine.

For further information apply to Mr. Robert John Kenny, Registrar.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

Anatomy and Physiology, and Practical Anatomy, Dr. Cleland. Practice of Medicine, Dr. N. Colahan. Practice of Surgery, Dr. J. V. Brown. Demonstrator, Dr. Brereton. Materia Medica and Medical Jurisprudence, Mr. S. M'Coy. Midwifery and Diseases of Women and Children, Dr. R. Doherty. Chemistry, Dr. T. H. Rowney. Natural Philosophy, Dr. A. H. Curtis. Botany and Zoology, Dr. A. G. Melville. Logic and Mental Philosophy, Dr. T. W. Moffett. The County Galway Infirmary, Town, and Union Hospitals are in the immediate vicinity of the Queen's College. They are visited every morning by Professors of the College, who deliver Clinical Lectures.

Eight Scholarships of the value of £25 each, and Exhibitions varying in value from £10 to £18, are appropriated to Students pursuing the Course for the Degree of M.D.

Fees.—Anatomy and Physiology, £3, First Session; afterwards, £2. Practical Anatomy, £3—Practical Chemistry, £3—Operative Surgery, £3—Other Classes, £1 for each Course extending over one Term only—£2 for each Course extending over more than one Term—and £1 for each reattendance on the same. The College Session is divided into three Terms. The first Term commences on October 15, 1868, and ends on December 23, 1868.

For further information, apply to the Registrar, W. Lupton, M.A.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—SCHOOL OF SURGERY.—Session 1868-69.

The public Lectures and the usual Winter Course will commence on Monday, October 26. Anatomy and Physiology, Dr. Mapother. Descriptive Anatomy, Dr. Bevan and Mr. Morgan. Surgery, Mr. Hargrave and Dr. J. S. Hughes. Practice of Medicine, Dr. Benson. Chemistry, Dr. Barker. Materia Medica, Dr. Macnamara. Midwifery, Dr. Sawyer. Medical Jurisprudence, Dr. Geoghegan. Practical Chemistry, Dr. Barker. Botany, Dr. Minchin. Hygiene, Dr. Cameron. Dissections under the direction of the Professors of Anatomy, and the Demonstrators, Drs. Croly, Stoney, MacAlister, Hewitt, Knox, and Roe, commence on Thursday, October 1.

The Summer Session commences in April and terminates in July, including Materia Medica, Medical Jurisprudence, Botany, Practical Chemistry, Midwifery, and Hygiene.

The fee for each of the above Courses is £3 3s., except Comparative Anatomy, which is free. Practical Instruction in Operative Surgery is given by the Professors of Surgery, separate from the Surgical Lectures. Fee £5 5s.

For further information application to be made to the Registrar, John Brennen, Esq., at the College.

DR. STEEVENS' HOSPITAL, DUBLIN,

Contains 250 beds, with distinct Wards for Fever, Syphilis, Diseases of the Eye, and Diseases of Females. There is also in connexion with the Hospital a Maternity Department and an extensive Dispensary for Out-Patients. Systematic Courses of Lectures are delivered during the Winter and Summer Sessions on all the subjects required by the Colleges, Halls, and the Public Service. Physicians, Dr. Freke and Dr. Burke. Obstetric Physician, Dr. Hardy. Dental Surgeon, Mr. Baker. Surgeons, Mr. Colles, Mr. Hamilton, Mr. M'Donnell. Professors: Anatomy and Physiology, Mr. Hamilton; Medicine, Dr. Freke; Surgery, Mr. Colles; Midwifery, Dr. Hardy; Chemistry, Dr. Aldridge, Dr. Cameron. Descriptive Anatomy, Mr. M'Donnell. Demonstrations, Drs. Swan, Shortt, and Bookey. Botany, Dr. E. Percival Wright. Medical Jurisprudence, Dr. J. F. Pollock. Materia Medica, Dr. Grimshaw. Natural Philosophy, Dr. J. Aldridge. Clinical Lectures by the Physicians and Surgeons. There is accommodation in the Hospital for two Medical and six Surgical Resident Pupils as dressers. Fee—Winter, six months, £21; Summer, six months, £15 15s. The Sessional Courses of Lectures will commence on the first Monday in November. Fees, each Course—Hospital, £7 7s.; Lectures, £3 3s. Perpetual to both Hospital and School, 75 guineas, payable in two instalments. Two Midwifery Assistantships, salary £30 per annum, are each year awarded by competitive examination.

Further particulars on application to Dr. Swan, at the Hospital; or to Dr. E. Hamilton, Hon. Sec., 120, Stephen's-green West.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

Physicians, Dr. H. H. Head and Dr. James Little. Surgeons, Dr. A. J. Walsh, Dr. J. K. Barton, Mr. B. Wills Richardson, and Dr. A. Macalister. Assistant-Physician, Dr. W. G. Smith. Ophthalmic and Aural-Surgeon, Dr. J. H. Loftie Stoney.

The Winter Session of this Hospital commences the first Monday in October. It contains 100 beds, and two of the wards are devoted to the Special Diseases of Infants and Children. There is a detached Fever Hospital for the treatment of Contagious Diseases.

Clinical Instruction.—Two Medical and Two Surgical Lectures, including Lectures on the Diseases of the Eye, will be delivered in each week. Practical Demonstrations in the use of the Stethoscope, Laryngoscope, and Microscope, as applied to the Diagnosis of Disease, will be given during the Session. Ophthalmoscopic Demonstrations every Saturday.

Fees, for Nine Months' Hospital Attendance, £8 8s.; for Six Months' Hospital Attendance, £6 6s.; for Summer Three

Months' Hospital Attendance, £3 3s.; Perpetual Pupils (paid at entrance), £21.

Prizes.—Two Medical and two Surgical Prizes will be given at the close of the Session.

Further particulars can be obtained from Dr. Little, or any of the other Physicians or Surgeons.

CARMICHAEL (FORMERLY RICHMOND HOSPITAL) SCHOOL OF MEDICINE.(a)

The Winter Courses of Lectures commence in November. The following are the courses of Lectures:—Theory and Practice of Surgery, and Operative Surgery, Mr. W. Stokes; Theory and Practice of Medicine, Dr. Cruise and Dr. Gordon; Anatomy and Physiology, Mr. Curran; Anatomy, Descriptive, Practical, and Surgical, Dr. Corley; Chemistry, Theoretical and Practical, Dr. Davy; Midwifery and Diseases of Women and Children, Dr. Jennings. Dissections are superintended by Messrs. Curran, Corley, Purser, Shaw, and Madden.

Carmichael Premiums.—Premiums to the value of £60, on the foundation of the late Richard Carmichael, Esq., and the "Mayne" Scholarship, value £15, are awarded at the termination of the Session.

Summer Session. — Lecturers: Botany, Dr. Campbell; Materia Medica and Pharmacy, Dr. Frazer; Medical Jurisprudence, Dr. O'Reilly; Practical Chemistry, Dr. Davy.

Fees.—The Fee for each Course of Lectures delivered at this School is £3 3s. The Fees for all the Courses of Lectures required in order to obtain the Diploma of the Dublin College of Surgeons, amount to £63; but, in accordance with the regulations of the Dublin Medical Schools, a discount, amounting to £9 19s. 6d., is allowed in the case of Perpetual Pupils. Perpetual Pupil's Fee to both Hospital and School, £78 0s. 6d.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

Founded 1810.

Anatomy, Physiology, and Pathology, etc., Mr. E. Ledwich and Mr. T. P. Mason. Theory and Practice of Surgery, Mr. Wharton. Surgical and Descriptive Anatomy, Demonstrations and Dissections, Messrs. Bright, Glanville, and O'Leary. Theory and Practice of Medicine, Dr. W. Moore. Midwifery and Diseases of Women and Children, Dr. J. Ringland. Materia Medica and Therapeutics, Dr. M'Dowell. Forensic Medicine and Hygiene, Dr. R. Travers. Theory of Chemistry, Practical Chemistry, and Natural Philosophy, Dr. Cameron. Botany, Dr. Maunsell.

A Course of Operations to be performed by the Student, under the superintendence of the Lecturers (subjects, etc., included), £5 5s.

Certificates of attendance on these Lectures are received by Trinity College, Dublin, and all the Examining Boards.

The Fee for each of the above Courses will be £3 3s.

Further information may be obtained from any of the Lecturers, or from Edward Ledwich, Secretary, 7, Harcourt-street, Dublin.

THE CITY OF DUBLIN HOSPITAL

is situated in Upper Baggot-street, about ten minutes' walk from the Royal College of Surgeons and the Medical School of Trinity College, and twelve from the Ledwich School and School of the Catholic University. The Physicians, Surgeons, and Assistant-Physicians are, with three exceptions, either Professors or Demonstrators in the School of the Royal College of Surgeons in Ireland. The Hospital contains 104 beds, and accommodates about 800 intern patients annually. There are special wards for ophthalmic diseases, on which subject a special course of lectures is delivered by Dr. Jacob, and for diseases of children. A new wing has been lately opened for the reception of fever and other infectious diseases. The "Purser" Studentship of £20 per annum, with apartments, is obtainable by competitive examinations by all Students, and a special certificate is granted. The Fees for Hospital attendance are—nine months, £8 8s.; six months, £6 6s.; summer three months, £3 3s.; perpetual, £21. For further particulars see our advertising columns.

(a) No return has been received from the authorities of this School for the next Session. The above were the arrangements of last year.

DAYS AND HOURS OF INTRODUCTORY LECTURES

TO BE DELIVERED AT THE DIFFERENT MEDICAL SCHOOLS.

IN THE METROPOLIS.

	Days and Hours.	
St. Bartholomew's Hospital and Medical College	Oct. 1, 2	Mr. Thomas Smith.
Charing-cross Hospital and Medical Coll.	,, 1, 3	Dr. A. J. Pollock.
St. George's Hospital Medical School	,, 1, 2	Dr. Acland, F.R.S.
Guy's Hospital Medical School	,, 1, 2	Dr. Moxon.
King's College Medical Department	,, 1, 3	Prof. Guy, M.B., F.R.S
London Hospital Medical College	,, 1, 4	Mr. Cri'chett.
St. Mary's Hospital Medical School	,, 1, 2 30	Mr. J. R. Lane.
Middlesex Hospital Medical College	,, 1, 3	Dr. Burdon-Sanderson, F.R.S.
St. Thomas's Hospital Medical College	,, 1, 3	Dr. Barnes.
University College Faculty of Medicine	,, 1, 4	Professor Erichsen.
Westminster Hospital Medical School	,, 1, 8	Mr. Francis Mason.

IN THE PROVINCES.

	Days and Hours.	
Birmingham—Queen's Coll. Med. School	Oct. 1,	Lord Lyttelton.
Leeds School of Medicine	,, 1,	Mr. Wm. Hall.
Liverpool Royal Infirmary School of Medicine	,, 1, 3	Dr. F. T. Roberts.
Manchester Royal School of Medicine	,, 1, 12	Dr. Simpson.
Newcastle-upon-Tyne Coll. of Medicine	,, 1, 2	Dr. Charles Gibson.
Sheffield School of Medicine	,, 1, 4	Mr. H. C. Sorby, F.R.S.

The Winter Session of the Bristol Medical School and of the Hull Medical School will commence on October 1.

EDUCATIONAL VACCINATING STATIONS.

In order to provide for the granting of those special certificates of proficiency in vaccination which, under the regulations of the Privy Council, are required to be part of the Medical qualification for entering into contracts for the performance of public vaccination, or for acting as deputy to a contractor, the following arrangements are made:—

1. The vaccinating stations enumerated in the subjoined list are open, under conditions appointed by the Privy Council, for the purposes of teaching and examination.

2. The public vaccinators officiating at these stations are authorised by the Privy Council to give the required certificates of proficiency in vaccination to persons whom they have sufficiently instructed therein; and

3. The public vaccinators, whose names in the subjoined list are printed in italic letters, are also authorised to give such certificates, after satisfactory examination, to persons whom they have not themselves instructed.

London.—Principal Station, Surrey Chapel, Blackfriars-road: *Mr James Furness Marson*, who attends on Tuesday and Thursday at 1 p.m. North-west Station, 13, Lisson-grove: Mr. James George Gerrans, on Monday and Thursday, at 10 a.m. West Station, 9, St. George's-road, Pimlico, S.W.: Dr. Edward Lowe Webb, on Monday, at 10 a.m. East Station, 1, Well-street, Wellclose-square: Mr. William Jones Lewis, on Tuesday, at 9 a.m. North Station, Tottenham-court-chapel, Tottenham-court-road: Mr. William Edwin Grindley Pearse, on Monday and Wednesday, at 1 p.m. South-west Station, 46, Marsham-street, Westminster: Mr. William Edwin Grindley Pearse, on Monday and Thursday, at 10 a.m.

Birmingham.—The General Dispensary: *Mr. Patrick Foley John Kenny*, on Monday, at 10 a.m.

Bristol.—The Public Vaccination Station, Peter-street: *Dr. Henry H. P. Robertson*, on Wednesday, at 11 a.m.

Exeter.—Odd Fellows' Hall, Bamfyld-street, *Mr. Charles H. Roper*, on Thursday, at 3 p.m.

Leeds.—22, Burmantofts-street, *Mr. Frederick Holmes*, on Tuesday, at 3 p.m.

Liverpool.—The Ladies' Charity, Parr-street: *Mr. Arthur Browne Steele, Mr. John Henry Wilson*, and *Mr. John Fenton*, acting conjointly, or at least two of them together, on Friday, at 2 p.m.

Manchester.—159, Rochdale-road: *Mr. Ellis Southern Guest*, on Monday, at 2 p.m.

Newcastle-on-Tyne.—11, Pilgrim-street: *Mr. George Cuthbert Gilchrist*, on Tuesday, at 2 p.m.

Edinburgh.—The Royal Dispensary: *Dr. William Husband*, on Wednesday and Saturday, at 12 a.m.

Glasgow.—The Hall of the Faculty of Physicians and Surgeons: *Dr. James Dunlop*, on Monday, at 12 a.m.

By Direction of the Lords of the Council,
Privy Council Office, August, 1868. (Signed) John Simon.

Norfolk and Norwich Hospital.—150 beds. One year's attendance recognised by Examining Boards. Fees: For the Physicians' Practice, £10 10s.; for the Surgeons' Practice—one year, £20; two years, £30; perpetual, £40. Pupils, resident and non-resident. Physicians—Dr. Copeman, Dr. Eade, Dr. Bateman. Surgeons—Mr. Nichols, Mr. Firth, Mr. Cadge. Assistant-Surgeon—Mr. Crosse. Resident Medical Officer—Dr. Beverley.

TABLE OF FEES CHARGED IN THE MEDICAL SCHOOLS OF ENGLAND

FOR ALL LECTURES AND HOSPITAL PRACTICE REQUIRED FOR THE LICENTIATE EXAMINATIONS OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE LONDON SOCIETY OF APOTHECARIES, AND FOR THE MEMBERSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

London.

St. Bartholomew's	£99 15 0
Charing-cross Hospital	74 11 0
St. George's Hospital	94 10 0
Guy's Hospital	
King's College (in one sum)	100 0 0
„ or (in instalments)	105 0 0
London Hospital	88 4 0
St. Mary's Hospital (in one sum)	84 4 0
„ „ or (in instalments)	89 5 0
Middlesex Hospital	90 9 0
St. Thomas's Hospital	90 0 0
University College	93 3 0
Westminster Hospital	78 15 0

The Provinces.

Birmingham—Queen's College and Hospital	£73 10 0
Birmingham—Queen's College and General Hospital	91 7 0
Bristol Medical School and Bristol Royal Infirmary	93 10 0
Bristol Medical School and Bristol General Hospital	87 5 0
Hull Medical School and Hospital	64 1 0
Leeds Medical School and Infirmary	83 2 0
Liverpool Royal Infirmary and School	74 11 0
Liverpool Royal Infirmary School and Northern Hospital	73 10 0
Manchester Medical School (Lectures only)	42 0 0
Newcastle School and Infirmary (in one payment)	64 1 0
Sheffield Medical School and Infirmary	76 15 0

HOSPITALS, ETC., FOR SPECIAL INSTRUCTION.

At Downing College, Cambridge, every alternate year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not vacated by marriage, and the Fellows are not required to reside. The next election will take place in 1869. A Foundation Scholarship(a) of £50 per annum (in some cases with rooms and commons) is awarded annually for distinction in natural science, tenable until the B.A. degree, and in case of special merit for three years longer. Minor Scholarships of £40 per annum, tenable for two years, are offered each year for competition before entrance, and in awarding one of these considerable weight is given to proficiency in Natural Science.

Pharmaceutical Society of Great Britain, 17, Bloomsbury-square, W.C.—School of Pharmacy.—Session 1868-69.—The Session will commence on Thursday, October 1, and extend to the end of July. Lectures on Chemistry and Pharmacy will be delivered by Professor Redwood on Monday, Tuesday, and Wednesday mornings at half-past eight o'clock, commencing on Monday, October 5. Also lectures on Botany and Materia Medica by Professor Bentley. The first and second parts of this course, extending over the winter months, will be delivered at 17, Bloomsbury-square on Friday and Saturday mornings, at half past eight o'clock, commencing Friday, October 2. The third part of the course, on Systematic Botany, will be delivered at the Royal Botanic Gardens, Regent's-park. Fees: For Registered Apprentices and Associates of the Society, for either of the above courses, One Guinea; for either part separately, Half-a-Guinea. For those not connected with the Society, Two Guineas for either of the above courses; One Guinea for either part separately. Laboratory: The suite of Laboratories for Practical Instruction in General and Pharmaceutical Chemistry will be opened on Thursday, October 1, under the direction of Professor Attfield. Fee for the entire Session of ten months, Twenty-five Guineas. The Laboratories are open from half-past nine a.m. till five p.m. Students can enter at any period during the Session. Two Scholarships (the Jacob Bell Memorial Scholarships) of Thirty Pounds a year each are open to competition annually in July. The Board of Examiners meet monthly to grant certificates of competency. For further information, apply to Mr. Bremridge, Secretary and Registrar.

City of London Hospital for Diseases of the Chest, Victoria park.—Office, 3, Finsbury-circus, E.C.—Physicians—T. B. Peacock, M.D., J. R. Bennett, M.D., E. L. Birkett, M.D., G. N. Edwards, M.D., S. H. Ward, M.D. Consulting-Surgeon—J. Hilton, F.R.S. Assistant-Physicians—J. Andrew, M.D., J. C. Thorowgood, M.D., H. G. Sutton, M.B., S. Fenwick, M.D., A. B. Shepherd, M.B. Junior Assistant-Physicians—C. Bäumler, M.D., W. Rickards, M.D. Resident Medical Officer—Mr. W. H. Power. The Hospital affords accommodation for 120 in-patients. During the last year 582 cases were under treatment in the wards, and 14,210 were relieved as out-patients. In-patients admitted since the wards were opened in 1855, 5500, out-patients admitted since the establishment of the Institution in 1848, 152,000. Information respecting Medical instruction at the Hospital may be obtained on application to the Physicians.

(a) A Scholarship was last year thrown open to undergraduates of the University, and awarded to Clement Higgins, of Sydney, Sussex College.

Great Northern Hospital, Caledonian-road, N.—Consulting-Physician—Dr. Copland, F.R.S. Consulting-Surgeon—Mr. Skey, F.R.S. Physicians—Dr. Leared, Dr. Hardinge, Dr. Cholmeley, Dr. F. C. Webb, Dr. Jephson, Dr. Crucknell. Surgeons—Mr. Gay, Mr. W. Adams, Mr. T. Carr Jackson, Mr. E. C. Hulme, Mr. W. Allingham, Mr. B. Shillitoe. Obstetric-Physician—Dr. G. C. P. Murray. Diseases of the Eye—Dr. Lawrence. Aural-Surgeon—Mr. Harvey. Dentists—Mr. Statham, Mr. C. J. Fox. House-Surgeon—Mr. P. Hopgood. Operations on Wednesdays at Two o'clock. Medical Practitioners admitted to see the practice of the Hospital on presenting their cards. Cards of admission to the practice of the Hospital will be granted to certified Medical Students on application to the Secretary at the Hospital.

Royal Orthopædic Hospital, 315, Oxford-street.—Operations, Thursdays, 2 p.m. Lectures are regularly given to Medical Practitioners and Students.

National Hospital for the Paralysed and Epileptic, 23 and 24, Queen-square, Bloomsbury.—The Hospital contains 60 beds. The Physicians attend every Monday, Tuesday, Wednesday, and Friday. Physicians—Drs. Ramskill, Radcliffe, Russell Reynolds, and Hughlings Jackson. Assistant-Physicians—Dr. Buzzard, Dr. Charlton Bastian. Medical Superintendent—J. N. Radcliffe, Esq. Medical Practitioners and Students will be admitted on showing their cards.

Queen Charlotte's Lying-in Hospital, Marylebone-road.—Instituted 1752. Rebuilt 1856.—Consulting-Physician—Dr. Roget. Consulting-Surgeon—Henry Lee, Esq. Medical Officers for the In-patients—Dr. Blakely Brown, Dr. Brodie. Medical Officers for Out-patients—J. Cholmondely, Esq., Dr. Parson. Secretary—Mr. A. S. Boodle, who attends at the Hospital on Monday from ten to two. Pupils are admitted to reside and board in the Hospital (after having been examined by the Physicians) for periods of not less than six weeks. In 1867, in-patients delivered, 412; out-patients delivered, 438; total 510. Terms on application at the Hospital.

The Hospital for Sick Children, 48 and 49, Great Ormond-street, W.C.—Physicians—Dr. West and Dr. Hillier. Assistant-Physicians—Dr. Buchanan, Dr. Dickinson, Dr. Sidney Ringer, Dr. Samuel Gee. Surgeon—Mr. Thomas Smith. Assistant-Surgeon—Mr. F. Howard Marsh. Surgeon-Dentist—Mr. Samuel Cartwright. 75 beds. In-patients—1866, 786; Out-patients—attending, 11,580. Clinical Lectures on cases attending or in the Hospital are delivered by the Medical Officers before their visit to the patients during the Winter and Summer Sessions. The Lectures are free to Practitioners on presenting their cards, and to Students after their first year by tickets, to be obtained on application, by letter, to the Secretary, at the Hospital. The practice of the Hospital, in both In- and Out-patient Departments, is open at 9 every morning. Fee for Six Months' Attendance, £3 3s.; Perpetual, £5 5s.

St. Luke's Hospital for Lunatics, Old-street, E.C.—Resident Medical Superintendent, Dr. James Ellis, who will admit gentlemen to the Medical Practice of the Hospital, and give any information respecting the admission of patients. Fee for the Session of three months, £2 2s.; perpetual, £5 5s.

Hospital Ship "Dreadnought," off Greenwich.—Office, 86, King-William-street, E.C.—This institution contains 200 beds, and is established for the relief of seamen of all nations. Casualties from the shore are also received. Residence is provided on board for Students and others who may be desirous of studying diseases incidental to tropical climates before entering the service or going abroad. Constant opportunities also occur for the performance of Surgical operations.

London School of Dental Surgery, and Dental Hospital of London, 32, Soho-square, W.—The Winter Session will commence on Wednesday, October 2. Mechanical Dentistry, Mr. R. Hepburn; Metallurgy, Mr. G. H. Makins; Dental Surgery and Pathology, Mr. Cartwright; Dental Anatomy and Physiology, Mr. Ibbetson. Surgeons to the Hospital, Messrs. Ibbetson, Underwood, Gregson, Coleman, Rogers, and Hepburn. Assistant-Surgeons, Messrs. Fox, Harding, Lane, Bartlett, and Hill. Treasurer, Mr. Cartwright.

Metropolitan School of Dental Science and National Dental Hospital, 149, Great Portland-street, W.—The Winter Session will commence on Wednesday, October 7. Dental Surgery, Mr. Hulme; Mechanical Dentistry, Mr. Hockley; Dental Anatomy and Physiology, Mr. Fuller; Metallurgy, Mr. Tribe; Dental Surgeons, Messrs. Hockley, Hulme-Williams, Perkins, Kempton, and Vidler; Hon. Sec., Mr. Hulme.

Queen's College, Liverpool.—The Session will commence on Monday, October 7. The College is in connexion with the University of London, and its classes comprise the subjects required for the Matriculation, B.A., B. Sc., and preliminary scientific M.B examinations of that University. Instruction in Practical Chemistry is given in the College Laboratory by Professor Hamilton. Provincial Examinations of the London University are held at Queen's College. Fees: Separate classes, £2 2s. to £4 4s. per Session; Practical Chemistry, £5 5s.; course students, £20 per Session.

PRIVATE TEACHERS IN LONDON.

Dr. Barron gives courses of Medical and Surgical tuition adapted to Students for Professional Examination at his Class-rooms, Millikin's Chambers, 12, Southwark-street, Borough.

Dr. Robert Coales, LL.D., M.A., 10, Trinity-square, Borough, prepares Students for the Matriculation, 1st B Sc. (Mathematics and Mech. Phil.) and B.A. Examinations of the University of London, and for the Examination in Arts at the Royal College of Surgeons, Apothecaries' Hall, etc.

Mr. E. B. Goodwin, of Trinity College, Dublin, prepares gentlemen for the Preliminary Examinations at the College of Surgeons, Apothecaries' Hall, etc., at 8, Tyndale-terrace, Canonbury-square, N.

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Delirium Tremens.

Now, after speaking to you of the slow destruction of the brain-tissue by a chronic inflammatory process, let us look at the case of a more simple atrophy. In the disease we have just left—the general paralysis of the insane—there is not only loss of bodily and mental power, but the manifestations of the latter are peculiar. In simple wasting of the brain, however, there appears to be only a gradual failing of the physical and intellectual functions. See a man, for example, tottering along, scarcely able to support himself, or "all of a tremble," and his mind at the same time impaired—that man, if the symptoms have existed for any period, has an atrophic brain. This may have been the result of age, and he may be approaching a second childishness or mere oblivion; but if he be a young man, it arises from disease and, in all probability, from intemperance. Certainly one of the causes most frequently instrumental in the production of an atrophy of the brain is drunkenness, or the excessive use of alcoholic drinks. Alcohol, as you know, causes a degeneration of all the tissues of the body. By its direct effect on particular organs, you may find an increase of the connective or fibrous tissues, and then a cirrhosis of the liver, a Bright's kidney, or a so-called chronic pneumonia may arise; in other instances a fatty degeneration of the tissues occurs, and thus death by diseased heart is very frequent in the drunkard. These two morbid processes are, however, often combined; but, whatever may be the exact pathological change, the result is a decay of all the tissues and organs of the body. It is remarkable how many morbid processes resemble those which naturally take place in advancing age, and thus a disease will, by its effects, add so many years to a person's life. A drunken man is literally living too fast.

There are, of course, other circumstances which tend to this general and nervous decay; but I think in most instances, as you have often heard me say, if you see a man come staggering in amongst our out-patients, the probability is that he has been taking too many so-called "strengthening things" all his life. If you find this so, and he is bodily and mentally incapacitated, that man has assuredly an atrophied brain. If you examine the body of a man who has died of delirium tremens, you find the effects of the long-continued stimulus on his organs; and, as regards his brain, that has a very striking appearance—the membranes are thickened, and the convolutions are much shrunken, so that there are deep sulci on the surface, and in these a quantity of fluid. Sometimes three or four ounces of serum are seen, taking the place of so much good brain which has disappeared. The figurative expression which Cassio makes use of when speaking to Iago contains a solid and substantial fact—"O God! that men should put an enemy in their mouths to steal away their brains!" The brain, then, of a confirmed drunkard is an organ which is shrunken, and weighs so many ounces less than it did when healthy. All its functions, also, are becoming enfeebled, and those qualifications which should have preserved to its owner the name of lord of the creation have disappeared, and he has become, in common parlance, a good-natured fool. Call such a man a brainless sot, and you have his exact condition—the sot implying a man stupid with drink, and the "brainless" imparting to the term his true pathological condition. It is such a brain as I have mentioned that you find in those who have died of delirium tremens. The earlier attacks of the drunkard are recovered from; but there comes a time when the last and fatal one arises. But then his death is really due to the degeneration of tissues which long-continued habits of intemperance have entailed.

Take a man who, from his addiction to alcoholic drinks, has the weakened brain that I have described, and let any unusual stimulus act upon it, he loses his balance, and he is thrown into the state known as delirium tremens. This is my idea of the disease. I believe some Medical books state that delirium tremens is a train of morbid phenomena produced by the slow and cumulative action of alcohol. This, however, I cannot admit without some modification, for it might imply that delirium tremens was due directly to stimulation of the brain. There is, no doubt, a morbid condition set up by alcohol, but this would be *delirium è potu*, or simply intoxication, or poisoning by spirit. I believe, however, that such an opinion as I have mentioned does largely prevail—*i.e.*, that the brain is over-stimulated by the artificial excitement, and that a sudden deprivation of this starts the disease into life. My own strong conviction is, that such an opinion is highly erroneous, as well as the treatment which it necessarily involves—viz., that the stimulus must be restored, and the excitement abated by opium. I believe firmly that such opinion and the conclusions which flow from it are erroneous and mischievous.

My own idea is that the brain has been previously brought into an impoverished state by the continued debauchery, and that, thus weakened, it is ready to be further disturbed by any fresh excitant, whether this be a mental trouble, an accident, or, more probably, an extra amount of the alcoholic stimulus. I am led to this opinion because, in the intervals of the attacks of delirium tremens, the patients present the symptoms I have before mentioned, a mental and physical weakness as a result of the chronic pernicious effects which are being produced on the brain, and also because I observe the circumstances which excite the attack. The cause may be an accident or an acute disease suddenly set up, but more generally we find that the patient has been out with his friends drinking for two or three days in succession, and if he has had any troubles in business this would only be a still further excitant cause. On the other hand, I never hear of a man suffering delirium tremens from having got drunk only once, nor do I hear of it in the habitual drunkard from his having left off the accustomed stimulus. I have never witnessed such a case myself, and I have taken the trouble of inquiring of those who have had an opportunity of seeing persons habitually intemperate, and who have been placed on a bread-and-water diet, and I am informed that such persons do not have delirium tremens. I have myself on several occasions recommended or insisted upon the withdrawal of ale, wine, and spirits from those who had been endeavouring to live upon these stimulants, but never witnessed anything like delirium tremens result. Why I insist more especially upon the importance of having a true conception of the disease is that an erroneous one carries with it a very harmful treatment. The one theory suggests a continuance of the accustomed stimulus; the other its withdrawal and repose for the excited and wearied brain. Delirium tremens is not so simple a disorder as you may imagine; each case requires a study and its appropriate remedies.

Having given you a clue to its pathology and treatment, I have said all that is important. As regards the symptoms several very graphic accounts have been written, and some by those who have suffered all its horrors. I might say in a few words that a man suffering from delirium tremens has generally already shown symptoms of a weakened brain by his tremor and want of mental vigour. When you are called to see him in the attack, you generally at once see the nature of the case; he is probably up and dressed; he may indeed be attempting to conduct his usual business—in fact, he generally has a great desire to be about his accustomed avocations; he is constantly moving and wanting to go somewhere or do something which his friends are as constantly desirous of preventing. As you speak to him he is sufficiently intelligent to know you and sit down for a moment and converse, but it is only for a moment; his restlessness prevents him remaining quiet, and his mind then rambles on all kinds of subjects. If you place him in bed, he constantly jumps up, and is suspicious of those around him, or fancies that he sees objects in the corners of the room; if the bed be surrounded by a screen, then he sees imaginary cats and dogs on the bedclothes, and will attempt to stroke them, or sees creeping things like spiders; or he stretches out of bed to look beneath, fearing there are persons hidden there. All this time he is constantly fidgetting his hands, and perpetually jumping up and lying down again; his pulse is quick, his tongue is furred, and he is bathed in perspiration.

When I say such a case is easily recognised, I mean with care, for I have constantly seen mistakes made with reference to diagnosis. I have seen general paralysis of the insane styled delirium tremens by the same Physician on two different occasions. In the surgical ward of a Hospital, cases of injury to the head, followed by arachnitis, or effusion of blood on the surface of the brain, are extremely likely to be called by this

name. Acute disease, as pneumonia, occurring in a person of intemperate habits, is masked by the delirium, and the primary disease may be overlooked. Typhus fever I have seen styled delirium tremens; and there is one disease which certainly puts on an outward form very like it—I allude to the case where cerebral symptoms accompany pericarditis. A patient, for example, has acute rheumatism, followed by inflammation of the heart, and, in some cases, most remarkable nervous symptoms ensue—the patient is delirious, is in constant movement, and bathed in perspiration—he resembles exactly, indeed, the case of delirium tremens. In this case the stethoscope placed over the heart would insure to the listener a true knowledge of its nature.

It is important also to know what is the condition of the patient generally who suffers from delirium tremens, for on the state of the organs the prognosis mainly depends. He may have cirrhosis of the liver, or, what is not uncommon, Bright's disease of the kidney. If the patient have convulsions, you may find that the urine is albuminous, and this of course must endanger the case. Convulsions, I might say, however, often occur independently: they may be due to the wasted brain, or be temporary and due to the recent debauch.

Now, as regards treatment, the most important instruction I can give you is what *not* to do. Do not, in the first place, regard delirium tremens as a disease due to the sudden withdrawal of an accustomed stimulus, and therefore commence the treatment with the administration of wine or spirits—you will by so doing add fuel to the fire—but look upon the attack as due to excitement acting on a previously weakened brain. Then your mode of treatment is obvious and rational. In one word, get your patient repose. Now I do not mean by this that your remedy is simply opium to procure sleep, but I use repose in a much larger sense. I have frequently seen a patient, probably a publican, sitting in a large room surrounded by a dozen friends, male and female, who are talking to him or holding him in restraint. He is bathed in perspiration, his pulse is very quick and feeble; the Doctor says he has not slept for two or three nights, and he dare not give any more opium, as the pupils are already contracted. His fears that the man will die seem not ill-grounded, since it is impossible to suppose that any mortal man could go to sleep under such circumstances. I have seen such a patient then removed to a small room, put to bed, and go off to sleep in half an hour. Therefore I say that the most judicious treatment is required for delirium tremens, and do not go away with the notion that all you have to do is to give opium to procure sleep. I have many times seen the last sleep produced by it. And do not, as I before said, continually give stimulants to "keep up" the patient, for I have constantly seen the complaint strengthened by these means. I do not wish to reflect on the opinion of others, because I state strongly my impression that the disease is not to be cured offhand by medicine. I see a great deal of this disease, and the time at which I am called in is about the third day, when, all means having been found unavailing in checking the complaint, another opinion is sought; after this time the patient usually sleeps and does well. I think then, except in very slight cases where a single dose of opium procures rest, that a certain interval must elapse before the commotion subsides; that in a bad example of the complaint the symptoms will continue without abatement for three days at least. This is my experience under all modes of treatment. I have no objection to opium, but it should be administered judiciously; if you act on the principle that sleep must be procured at all hazards and as soon as possible, you will without doubt kill many of your patients. In the first instance you should place your patient in a small quiet room, and get rid of a number of officious friends.

As regards medicines, you must be guided by circumstances. I have often prescribed with advantage the well-known mixture of twenty drops of antimony wine and tincture of opium every four hours, keeping up the patient's strength by beef-tea. If you can give a glass of wine or beer in the form of nourishment without its producing any injurious stimulating effects, I have no objection; but, as a rule, I advocate the plan of giving none. Instead of administering antimony, you might give the laudanum, or small doses of morphia with ether or ammonia, and, at the same time, support the strength of the patient. By judicious management of this kind you will find your patient recover in three or four days, unless, indeed, he be extremely diseased in consequence of his former dissipations. As regards restraint, I have often heard objections made to it, but I believe it is often necessary, and its adoption is a real kindness to the patient. He may wander about his house until he drops dead from exhaustion, when a forcible restraint in bed by a sheet across the chest might procure rest for the body, and often for the brain. Remember, then, your patient wants repose; do not be content with administering opium and neglecting every measure which common sense would say was necessary to give any man a night's rest. As regards chloroform, you may quiet the patient by it for a time, but you do not in any way influence the disease. Other remedies are advocated. When digitalis was first proposed, I gave it to a man in large doses, and, he having unfortunately died, I have never felt myself justified in administering it again. I have seen enough of the sedative effects of the wet sheet to fully believe the statements which have been made as to its efficacy. You strip the patient naked, roll around him a wet sheet until he looks like a mummy, then a blanket around this again. In many cases of delirious excitement, you will find that, as soon as a hot vapour surrounds the patient, he sinks into a quiet sleep.

TWO LECTURES
ON
PARASITIC FUNGI AFFECTING PLANTS.

DELIVERED AT THE

Hospital for Skin Diseases, Blackfriars,

By TUFFEN WEST, F.L.S., F.R.M.S.

Lecture II.

Gentlemen,—A number of questions have been forwarded to me by a Surgeon well conversant with the clinical history of the cryptogams which grow on the human skin, but less so with those which attack plants. It will perhaps give definiteness to our inquiry if I read to you *seriatim* his queries, and then attempt an answer to each. You will easily see that he was especially anxious for information as to whether in the vegetable world there can be traced any influences which predispose to the attacks of cryptogams, or whether their aggressions are to be regarded rather as an affair of accidental contagion. There has been, as you are aware, great discussion on this point amongst dermatologists—some holding that favus, ringworm, and tinea versicolor occur only to persons in peculiar states of ill-health, others that they affect the robust and delicate alike, and that the conditions which render a host suitable or otherwise concern the youth and succulency of its tissues rather than its state of health.

The first question which I find is one in reference to this point.

I. *Are plants liable to be attacked by fungi irrespective of their state of health?*

The epiphyllous fungi attack plants apparently entirely irrespective of the health of their hosts, which, however, when attacked, manifest symptoms of irritation and ill-health in various ways, due to the chemical changes set up in them by the parasite.

II. *Is it not common enough to find some leaves with fungi on them on plants which appear quite vigorous?*

The parts of plants are not always invaded alike, or to the same extent; in some cases, on the same plant we shall find the fungus flourishing vigorously, whilst no trace of the invader can be found on others of the leaves, and observations of my own prove that parts of the leaf will be perfectly healthy, whilst the parasite will be in full fruit, and with mycelium present in the neighbouring tissues. But this is just a work of time, the sap-drainage and deterioration eventually destroying the host in most cases, unless, by vigour of constitution and timely decay of the fungus, relief be obtained.

III. *At what age of the leaf is it most likely to be attacked?*

The epiphyllous fungi are found in the mature condition upon leaves at different ages, according to the genus, and in some cases the species; *Æcidium* in its different forms almost always on the young leaves; the *Uredo-forms* mostly on somewhat older leaves; the *Puccinia* when the turning-point in their life is passed, and in two species (attacking respectively the stems of hemlock and asparagus) the mature fruit is not found till early winter, when the stems are quite dead.

IV. *Of course, very young leaves, from the mere fact that they are only just out, can scarcely have been attacked; but, allowing for this, are not soft succulent young leaves more likely to be attacked than those which are old?*

The leaves are outgrowths from the stem. If the parasite make its entry by way of the roots, so ascend through the

stem, and pass thence to the leaves, the state of maturity of the latter will probably little affect its progress. The Erysiphei, which are not certainly known to pass into the tissues, appear in their first or oïdial condition on the most vigorous leaves, and frequently pass to the state of mature fruit, with very slight, if any, apparent disturbance to the tissues of their host.

V. *Do you not frequently find many plants in one place all suffering as if the fungus had spread by contagion from one to another?*

It is a usual thing to find many plants growing near together attacked by the same species of fungus. Is it difficult to explain the fact? The spores from an infected plant of some previous year, whether they find entry by mycelium through the roots (as with some is certainly the case), are lodged, as dust, by wind and rain, or are carried by insect agency, do spread in the way of a contagion induced by pre-existing germs. So completely is this the case that, having once found a spot for a particular kind, I have been able to go year after year for it to the same place—at Forest Hill, before it was so covered with houses as is now the case. I found on a dungheap three years successively the *Peronospora* which attacks Compositæ (*P. gangliformis*), nestling with the Scotch thistle growing thereupon. It was the first I found on beginning to pay particular attention to the subject, and great was my delight on meeting with it again forty-five miles away on the same kind of plant, not having seen it again in the interval of twelve years. The *Erysiphe* of the maple occurred near by, and was not found again till after the same lapse of time, and at an equal distance away. Near my present residence I can go to spots where I shall be certain, at the proper season, to meet with *Æcidium ranunculacearum*, *Æ. albescens*, *Puccinia menthæ*, and its uredo-form, *P. anemones*, *P. saxifragarum*, the *Peronospora* of Ficaria, and so on; in some cases undoubtedly on the same plants. It may suffice here simply to state the fact that different aspects of disease are produced by different parasites attacking the same kinds of plants.

VI. *Some fungi attack dead or dying vegetable matter, but they are, I believe, quite different from those which attack living plants?*

They are quite different; the parasites grow with the growth of their hosts, and, *in their vegetative system*, die at and through the death of the latter. Offshoots, by whatever name they may be called, are not, if of a reproductive nature, here under consideration. The two Pucciniæ just mentioned as occurring on dead stems unquestionably pass through their earlier stages within and at the expense of the *living* tissues of their *living* host.

Not so with the fungi which attack dead or dying vegetable matter.

VII. *Whatever may be your general impression as to the more delicate and sickly plants being likely to have their leaves attacked by fungi, is it not the fact that you often find fungi on the healthy-looking leaves of healthy-looking plants?*

I have just stated that the presence of fungi may be readily demonstrated in the apparently healthy tissues of healthy-looking plants. In the leaves of the moschatel, for instance, I have failed to find any trace of mycelium, even in the early stages of disturbance caused thereby, where Æcidium and Puccinia were luxuriating on a closely adjacent part of the leaf.

VIII. *Does season much influence the prevalence of fungi? I believe a damp season favours their growth, but that they are met with also in the driest.*

Seasons have a great influence on the prevalence of fungi. A superabundance of moisture is unquestionably favourable to their growth; and yet in the hot dry summer now present more have occurred to me than on any previous occasion, and some which I have met with but sparingly hitherto have been, even through the heat and drought, abundant. It is very difficult, in the present state of our knowledge, to account for all the facts under this head. Meteorological conditions certainly have a large, perhaps the largest, share in favouring their growth. A close still air has much to do with it; hence I think we may explain their luxuriance in many cases under the shade of trees, amongst rank undergrowth, and on hedge-banks where the vegetation is profuse and the plants much crowded together—jostling each other for room, in fact.

IX. *Are not the forms of mould which attack plants placed in (for them) unusually damp positions (say ferns in a wet fern-case or plants in a damp greenhouse) different from the fungi to which the same plants would have been liable under natural conditions?*

They are so. In the case supposed, species of *Fusarium* are especially found. There is every reason to suppose that these are only stages in the life-history of other and better known plants—probably of Botrytis and allied moulds. Mosses of various kinds have this year been much destroyed by *Fusarium*. I have several examples of species of *Hypnum*, *Tortula*, and *Polytrichum* thus killed, sometimes over extensive patches. No epiphyllous fungi are recorded as living upon mosses, which, however, are known to suffer from the attacks of species of *Fusarium*.

X. *Do any of the cryptogams in question flourish in winter?*

Few are to be found during this period of the year, which is for the most part, outwardly, one of general repose in vegetable life. I can call to mind but one example—that of the Puccinia attached to caryophyllaceous plants, which I note finding (most conveniently for some examinations on its development which I was making at the time), all through the last winter, on the *Arenaria trinervis*, a small chickweed. Soon, however, as spring, with its bright skies and balmy air, brings forth the welcome early flowers, do we find the ficaria, violets, primroses, wakerobin, each with its own *Æcidium*; wood-anemone, moschatel, thistle, barren strawberry, with their special forms of *Pucciniæ*; whilst the bee-loved purple dead-nettle will show abundance of its Oïdium, looking just as if flour had been dusted over its leaves and stems. With the leaves they come, and with them they go. The species of the genus *Melampsora*, however, which appear as rusts in the summer on the poplar, the willow, and a few other plants, during the winter time attain on the fallen leaves to a higher type.

XI. *Are evergreens liable to them?*

Few of the epiphyllous fungi are recorded as attacking evergreens. In Britain two species of fir-tree have each their own *Æcidium*; the box has a Puccinia peculiar to it; juniper and savine sustain three forms related to Puccinia—six out of 235 species recorded as British, which may fairly be considered a small proportion of the whole number. (Whilst these columns are passing through the press, I observe with great interest that the young leaves of a laurel in my garden have been attacked by, and are suffering severely from, Oïdium.)

XII. *I believe each species of plant has its own parasitic fungus?*

In general terms this may be stated to be the case. In some of the large natural orders, however, the same fungus will occur on many species in the same genus, and even in different genera contained therein. (An analytical table was referred to, which is too long to give here.)

XIII. *Do any of these fungi attack many different species and even different genera of plants?*

Some instances are known of the same fungus attacking plants in different natural orders, but they are very few. On an analysis of all the known British forms, I find such different plants as the dock and Dutch clover reported to nourish the same species of Uromyces; the great plantain, meadow sweet, and hop to bear the same Erysiphe; the elm, alder, beech, birch, oak, hornbeam, hawthorn, and ash support another form of Erysiphe (*Phyllactinia guttata*); whilst some species of *Peronospora* are even more indiscriminate in their appetites, attacking dead-nettles, buttercups, and other plants equally remote.

XIV. *Are there many species (or even genera) of plants which have not as yet been ascertained to be liable to parasitic fungi?*

There are.

XV. *If so, what are their peculiarities?*

It is difficult to assign any reason for such exemption, unless we take shelter in the vague phrase that they are not constitutionally liable to such attacks. Hairy leaves, however, do seem to yield a preponderance; as instances may be named wormwood, cow-parsley, gallows, dead-nettles, burdock, etc. A few do occur on smooth shining leaves nevertheless.

XVI. *Galls are formed almost solely on young succulent wood, not on diseased wood, nor on young wood because it is weak, but because it is juicy and in a state of active sap-circulation. If there were not plenty of sap, the gall could not be formed, and this is the only reason for preference of young trees, leaves, etc.*

Probably it is so.

XVII. *So with cryptogams; they grow where the soil is favourable, the epidermis of the leaf thin, and the juices tolerably abundant?*

I see no present reason to doubt this.

XVIII. *If I gather the leaves of twenty different species of plants, and leave them in a moist place to decay, they will all be attacked by the same kind of fungus, and suffer alike—is it not so?*

At first it is so, during the earlier stages of decay of the lax cellular tissues; when, however, these have been removed or thoroughly exhausted of nutritive elements, fresh fungi of very different types—*Sphæriæ* (ascigerous fungi with corneous envelopes) and *Peziæ* (naked ascigerous fungi)—make their appearance. It may be worth while in passing to note as a point of interest the simplicity in structure of the cellular tissues, and equally of the fungi which after death reduce them to their elements, whilst the complex structure of the harder parts, so individualised as to enable us generally to diagnose at once the plant from which the merest fragment has been taken, accords with a much higher degree of specialisation in the fungi they nourish.

XIX. *Is it not quite different during life of the leaves?*

It is entirely different, each kind of plant then supporting its own form of fungal parasite.

XX. *Is it not very possible that many of the epiphyllous cryptogams, which bear different names, are not really distinct, but rather transmutable forms of the same?*

There is no doubt that their number will eventually be much reduced, and already this desirable work of reduction has begun. By some competent botanists whole genera have, for the reason suggested, been wiped out; but the task of reduction must necessarily be a slow one. It requires great circumspection; experiments of the kind require time, and have to be often repeated ere certainty can be arrived at. Unfavourable conditions of weather may greatly retard the progress of discovery in such direction, even for several seasons running, as the almond-tree, though flowering regularly every year in this country, rarely finds a hot enough summer in Britain to perfect its fruit.

XXI. *What are the best characters by which to distinguish fungi of the kind met with on human skin?*

Here we are stopped as by a dead wall for the want of complete knowledge of their life-history. Speaking as a botanist, there are blanks in our knowledge of them which are at present insurmountable, and which must remain so until we are acquainted with all the various phases they may assume under different conditions. What do we find on the skin? Portions of mycelium, giving rise by their presence to irritation. Now what is mycelium? Simply cell growth of plants of a humble order. Should we expect to succeed in an attempt to name individual portions of cellular tissue from the leaves of any half-dozen ordinary plants, say potato, stock, poplar, geranium, cabbage, and dahlia? I doubt it very much. Still less difference is present in the root-fibres of these plants, the homologues of mycelium. From whatever kind of fungus it proceed, mycelium is alike, with a very small number of exceptions indeed. I could name four. We cannot expect, then, to find any constantly appreciable distinctions in this part of their structure. The mature fruits alone can enable us to say positively whether the different plants found in different skin affections belong to the same species or not. And the evidence on this head is as yet of the most fragmentary nature. It is true that so-called "spores" occur along with the different forms, but these are rather to be considered as "buds," like those met with in some of the higher plants—tiger lily and species of allium, to wit. Certain of the mosses rarely produce true fruit, propagating for the most part by gemmæ, which are not unfrequent also amongst the Jungermanniæ. The life-history of any organism comprises a knowledge of its birth, its maturity, sexual characters, decline, and decay. Respecting these points, as regards the fungal parasites of the skin, nearly all has yet to be learnt. It is true that a *puccinia* (a mature form of fruit) has been described as occurring in favus, respecting which I will read you a translation, as quoted by Robin, from the account given by its discoverer:—

"Towards the end of last year [1850], under the direction of M. C. Boeck, Professor in the University of Christiania, I devoted my attention to the examination of some scales from the head in a case of favus, when the Professor drew my attention to a plant entirely different from that usually met with in this disease, both in size and outline. It resembled closely in its microscopic characters species of the genus Puccinia, elsewhere common and well recognised. I found the same form of plant on the same patient repeatedly, and that for a long time, so that, in fact, I could not put a scale or crust under the microscope without meeting with at least one specimen of the new plant. Since then I have paid repeated visits to this patient, and almost always found the puccinia. Furthermore, in six other favus cases it occurred so clearly that a mistake was impossible. It was not, however, present in the latter cases so abundantly as in the first-named, nor with the same constancy. And it should be mentioned that I have repeatedly found the puccinia favi in a private patient, who has not been treated at the Hospital. From the above remarks it will be seen that the puccinia is present, if not constantly, at least very frequently, in favus. It must in justice be added that I have examined several other favus patients without finding puccinia, but not having seen them many times, too much stress must not be laid on this negative result. Besides, a very long and fatiguing examination is often required before puccinia will be found in favus, for I have several times worked for two whole hours at a single scale before my efforts were crowned with success." A lengthy description of the form, outline, two membranes, and contained substance is given; Corda's "Icones Fungorum" is searched through in the attempt, from the figures there given, to find its nearest allies, which are considered to be *P. alliorum*, *virga-aurea*, and *polygonorum*, and it is decided that the latter makes the nearest approach. Ardsten says he has found it in two cases of pityriasis. On the site of its growth (a point of real importance) he says—"It may be more readily found in the thin, small, white scales, with a crust beginning to form beneath, than in the large yellow crusts so specially characteristic of the disease. There are, however, exceptions to this rule, for, if puccinia occur both in a small scale and a large crust, it would more easily be found in the latter than in the former. I have not been able to ascertain exactly if the puccinia grow on the outer or the inner surface of the scale, but am inclined to think that it occurs in the midst, having repeatedly seen it apparently *in situ*, on the epithelial cells composing the greater part of the favus scale, and have only removed it thence with difficulty by a strong motion of the covering-glass on the slide." Robin himself admits that he never found puccinia favi. M. Cazenave politely ignores the newcomer, ascribing it to an error caused by the use of the microscope, and thinks it a degeneration of the tissues, as indeed has been done by an authority nearer home. The late Professor Henfrey was disposed to regard its title valid, and thought the achorion might be the spermogonial condition found with some puccinia, but the rarity of such a state in the latter (where known to exist), its universal prevalence as the entire constituent in the former, with other reasons, do not favour such an idea. The composition of *achorion* spores and mycelium rather resembles the state of matters in oïdium; but we do not know that an analogous condition occurs with puccinia. Some British writers speak of their having found puccinia favi, but the botanical evidence is not satisfactory, either in the descriptions or the figures accompanying them. Is it not likely that "alternation of generations" may explain the difficulties? There is much to say for the probability of this, and a belief is gaining ground with men of science that such may be the case; but, in the absence of facts, further speculation can have no good result. According to farmers' traditions it is unlucky to allow the berberry to grow in hedges near cornfields, because "mildew comes to the corn from it." The notion was classed by scientfic men with the absurdities current on "varmint" in general; but De Bary, a Prussian mycologist of the highest rank, states that he has succeeded in communicating mildew to corn by direct inoculation with the berberry *æcidium*. And still more recently Oersted, a Danish observer of repute, has published similar statements on two instances in which the reputed hosts were equally widely removed.

Now one positive result is worth any number of negatives; but the thing seems so improbable that, in the interests of science, repeated confirmation will be needed before these results can be accepted, and numerous examinations convince me that the possibility of mycelium being already present in the tissues has been overlooked.

The bearing of what I have laid before you on epiphytal fungi and their direct causation of skin diseases in plants, will be best seen by a brief review (which has been kindly furnished to me for this purpose) of our present knowledge of the fungi found in human skin diseases:—

"We have four of six different forms of fungi which grow on human skin, and which produce results that are to all appearance very different. 1. *Favus.* A thick yellow crust, often a quarter of an inch thick, and consisting wholly of cryptogam. Hairs infiltrated, but not much, and do not break, but sooner or later fall out. 2. *Ringworm.* A thin branny desquamation, but no thick crust. Hairs infiltrated and made to break off. 3. *Liver-spots.* Brown stains, or yellow or greenish-brown stains; very little desquamation, no crust at all; hairs do not fall. 4. *Alopecia areata.* Hairs

come out, and leave the skin thin, smooth, and bald. All these prefer young subjects, and none of them ever occur in the very aged.

"*Ringworm* in the scalp is never seen except in children.

"*Favus* never begins except in children, but may be continued.

"*Alopecia* is much more common in children, but may occur in adults, not in the old.

"*Liver-spots* are never seen in children, and never in the old; always in young adults.

"*Liver-spots and ringworm are transmutable diseases. 'Homologous' in children and adults.*

"Liver-spots and ringworm are never met with together on the same skin. They appear, however, to be capable of producing each other by contagion. Sydney Smith said that Quakers were developed Bluecoat boys. No one ever heard of a Quaker boy or a Bluecoat man. At the age that Bluecoat boys ceased to be observed, Quaker young men were found, and he had no doubt that transformation occurred. It is just so with ringworm and liver-spots—the one ceases at the age when the other begins. We have, however, the additional evidence, that *ringworm in a child often appears to produce liver-spots in a young adult;* so often, that I have myself no doubt whatever as to the fact of transference.

"*Favus is not known to be transmutable.*

"There is no evidence as to the transmutability of favus with any other disease. At one time it was thought that ringworm prepared the skin for favus, but it is now, I think, well recognised that what was taken for ringworm is really the first stage of favus.

"*Favus has two kinds of crust, very different in appearance from each other.*

"We must, then, note one important fact, that in addition to the common and characteristic yellow crust of favus, there occurs in that disease a scaly inflammation of the skin, in considerable patches around the other crusts.

"There is no evidence as to the transmutability of the fungus of alopecia areata. In a few cases, however, ringworm is met with in one member of a family of children, and alopecia in another.

"Alopecia is rare under the age of 10, and most common from 12 to 25. Ringworm is commonest under 10.

"Ringworm gets well of itself as age advances, as if the hairs, having got stronger and harder, no longer afforded good food for its fungus.

"Favus, on the contrary, although it never originates in elderly persons, may be prolonged indefinitely from youth to adult age, and possibly even to old age. If it has once got implanted, it maintains its growth in spite of the change of soil induced by progressing age.

"Liver-spots are never seen in old people. Those, then, who believe that the fungus of liver-spots is the same as that of ringworm, would put their creed thus:—In childhood the hairs of the scalp, and the hairs and epidermis, afford fit pabulum for the trichophyton tonsurans. At the age of 10 to 15 the hairs of the scalp cease to be liable to to its attacks, and a little later the hairs and epidermis of the rest of the skin also cease to be liable to it, with the same results as formerly, but become liable to the production by the same fungus of different results—*i. e.*, liver-spots.

"Ten or fifteen years later, and the epidermis of the trunk, which had nourished this fungus, ceases to be suitable for it, and the individual is no longer liable to it in any form.

"Probably ringworm on a 'naked' surface is, after all, a disease of the minute hairs found there, rather than of the epidermis itself.

"'Liver-spots' is a disease of the epidermis.

"Another difference between ringworm of the naked surface and liver-spots is that the latter occurs only on the trunk and upper part of the limbs, whilst the former may occur on face, forearms, hands, legs, and feet.

"All these facts support the hypothesis that the trichophyton is dainty as to its food, and refuses it if the subject be *too old*, and is, even in those of suitable youth, particular as to *locality*.

"There is, in my opinion, not the least reason to believe that the cryptogamic skin diseases prefer those out of health.

"*Liver-spots* certainly occur in the most robust.

"*Favus* is scarcely ever associated with ill-health. In this the French observers, who have a far better chance of knowing, fully agree.

"None of the cryptogamic skin diseases occur in patients who have been reduced by long illnesses, as, for instance, in the last stage of phthisis, etc.

"The cryptogamic growths on the tongue, etc., do occur in the debilitated and dying, but not favus or ringworm. These are a totally distinct form of fungus.

"Thus I arrive at the belief that the cryptogamic skin diseases are produced by the accidental implantation of the germs at a proper age, and on a proper part; that they have no relation to the health of the individual; that they are to be cured only by local applications which destroy the parasite."

ORIGINAL COMMUNICATIONS.

ON THE "AMYLOID" REACTION OF WAXY OR LARDACEOUS ORGANS.

By W. H. DICKINSON, M.D. Cantab., F.R.C.P.,
Assistant-Physician to St. George's Hospital, and to the Hospital for Sick Children.

A PAPER "On the so-called Amyloid Reaction of the Albuminoid, Waxy, or Lardaceous Degeneration," by Dr. J. Wickham Legg, which was published in your journal of July 25, contains some assertions and some inferences upon which I desire to remark.

The author of the paper seems to have lately returned from Berlin, and to have brought back with him some of the views of the great German pathologist, on which account additional interest attaches to his communication.

Dr. Legg tells us that Professor Virchow still maintains that tissues affected by the waxy or "amyloid" disease show a blue colour after a certain adjustment of iodine and sulphuric acid, and that he himself is also of opinion that a blue colour can be obtained under the same circumstances by the same reagents, though his method of applying them differs somewhat from that used by the Professor.

It is strange that there should still be a difference of opinion as to the simple question whether a colour, arising under given circumstances, is or is not blue. It appears that Professor Virchow, while searching the human body, by the help of iodine and sulphuric acid, for starch or its allies, came upon the peculiar reaction which is now in question, and which gave to his eyes the blue tint of which he was in search. Other observers, however, fail to see it in the same light.

The facts of the case are briefly these:—If an organ affected by the waxy or amyloid degeneration be acted upon by a solution of iodine, that reagent distinguishes in a remarkable manner the diseased from the healthy tissues. The affected parts take a rich brown colour, while the parts untouched by the disease assume a comparatively faint yellow stain. So far all pathologists are agreed. It is generally thought, in this country at least, that the difference is due to the more eager absorption of the reagent by the diseased tissue. If, now, sulphuric acid be brought to bear upon the section so tinted, the deep reddish-brown is converted into the colour which is the subject of controversy. To the uninitiated this colour is black, but to the eye of faith, or, perhaps I should say, when looked at with a discrimination which only some persons possess, it becomes blue. The change of colour which thus results has been supposed by those who fail to see the blue to depend upon a precipitation of the iodine by the acid, aided, when strong acid is used, by the charring of the tissue which takes place. Virchow and his followers consider the reaction to be similar to that which takes place with cellulose under the same circumstances, and to prove that the morbid product has a chemical alliance with starch.

Although the exact description of the colour in question is no longer important, I have been at the pains to collect the testimony of the English pathologists who have made an especial study of this subject. Dr. Pavy tells me that he has never succeeded in obtaining any colour resembling blue by the action of iodine and sulphuric acid upon waxy organs, but recognises a black which comes not through any shades resembling blue, but through red and brown, such colours as are produced being simply the result of the absorption and precipitation of the iodine. Dr. Bristowe has equally failed to discern a blue shade in the colour in question. He looks upon it as black, and considers it to be due to the precipitation of the iodine, which substance he has seen, under a high power of the microscope, in distinct grains as precipitated. Dr. Wilks has never been able to get a blue colour under the circumstances described, though he has spent much time in its pursuit, and states that he never knew an Englishman who believed in the

blue, excepting a student who had recently returned from Berlin. I may say that I myself am perfectly in accord with Dr. Pavy, Dr. Bristowe, and Dr. Wilks, and, after many trials and many modifications of the process, have never recognised any tint excepting such as must be described as compounded of red, brown, and black. Perhaps we may make a compromise, and describe the shade as invisible blue. But discussion of the precise colour obtained by the action of iodine and sulphuric acid upon waxy or lardaceous organs is idle. No one in this country, and I believe few elsewhere, now regards this morbid formation as connected in any way with starch. The starch theory has been absolutely disproved by analysis. There is an all but universal agreement that the morbid product in question belongs to the protein class. Whether black or blue under the action of iodine is now of no consequence, since the "amyloid" theory no longer needs consideration.

As a practical method of detecting the morbid change after death, the simple application of a watery solution of iodine with iodide of potassium answers all purposes. The further application of sulphuric acid is a useless complication. The iodine and the acid never produce the invisible blue but where an equally characteristic colour has been caused by the iodine solution alone.

I was led by the observation of many concurrent circumstances to suppose that the peculiarities of "amyloid" organs depended upon the absence of free alkali from certain parts of their structure. To some of these observations Dr. Legg takes exception. I stated that the "amyloid" reaction was permanently destroyed by the action of a dilute solution of potass or soda upon the affected tissue, and was led to conclude that the result was owing to the absorption of the alkali, and a consequent alteration in the chemical behaviour of the morbid formation. Dr. Legg tells us that such dilute solutions as he has used have failed to produce this effect, and, further, that in order to do so the solution must be of such strength as "immediately to destroy the tissues." With this difference of opinion I will give a few particulars, which will show whether the destruction of the tissue is necessary to the removal of the "amyloid" reaction. I have often taken a thin section of a waxy kidney, selecting the kidney for the experiment because the structure is readily traced under the microscope, and laid it for a few minutes in a solution of potash, containing less than one half per cent. of the alkali, and found that on its removal all trace of the peculiar reaction with iodine had vanished. Iodine alone no longer produced the well-known deep brown colour, nor with iodine and sulphuric acid was the invisible blue attainable. I have then put the section under the microscope, and seen the details of structure with scarcely any alteration—the enlarged Malpighian bodies, the thickened blood-vessels, the fibrous tissue, and the tubes, all being as distinct as before.

In a kidney in an advanced stage of the disease I found that the iodine reaction was destroyed upon a thin section after immersion for from five to ten minutes in a solution made by mixing liquor potassæ with twenty parts of water. The same result followed in a piece of mucous membrane from the intestine, which was affected by the disease in a very marked manner. After the immersion the villi and other details of structure were perfectly distinct.

The preservation of the renal structure, after the destruction of the "amyloid" reaction by the means I have described, may be beautifully seen by using a section made from a piece of waxy kidney which has been hardened in chromic acid. To produce the required effect the solution must be stronger and the time of immersion longer than with fresh tissue, but with the thin sections which can be made it is easy to see that even the epithelium of the tubes remains, though all trace of "amyloid" reaction has gone.

From these facts it will be allowed that "the immediate destruction of the tissue" is not necessary to the removal of the "amyloid" reaction. The action of the fixed alkalies upon "amyloid" or waxy organs appears to lead necessarily to one of two conclusions. Either the reaction is due to the presence of a material which is soluble in alkali with extraordinary readiness, and removable by it, while the rest of the organ is comparatively unchanged; or else the "amyloid" reaction, or, in other words, the peculiar affinity for iodine which characterises the parts affected by the disease, depends upon the absence of free alkali, and ceases on this material being supplied. The latter supposition must probably be adopted, as borne out by the concurrent facts of the case.

I stated in a paper in the *Medico-Chirurgical Transactions*, that with regard to the liver, which was selected as the organ best suited for such observations, the "amyloid" organ contained on an average a smaller proportion of alkali than was found in health. Dr. Legg has not been at the trouble of repeating the analyses, but confines himself to criticising the results, which he regards as insufficient to support my conclusion, and thinks that the figures I have adduced could not have been regarded as evidence of a decrease of alkali in "amyloid" organs, except by a person of disturbed judgment. Under these circumstances I will shortly state the grounds upon which my conclusion was based. Being aware that the amount of alkali in the healthy structures is subject to continual variation, and recognising the fact that, even in the most extreme cases of "amyloid" disease, a large proportion of unaffected structure remains in every organ, I thought it necessary to make a considerable number of analyses before attempting to form any conclusions. The result was, as might have been expected, that both with the "amyloid" and with the healthy organ there was a considerable range of variation. I estimated the amount of alkaline salts in a given weight of the liver in fourteen cases—that is, in seven healthy livers and in seven "amyloid."

The percentage of alkaline salts in the seven healthy livers varied from 1·181 to ·893. In the seven amyloid livers the alkaline salts varied from 1·075 to ·481.(a) On an average the alkaline salts were diminished in the amyloid liver by almost exactly a quarter, the healthy average being exactly 1·0 per cent., the amyloid average ·754 per cent. It was shown that both the potass and soda shared in the diminution; but since in one of the analyses these alkalies were not estimated separately, I have taken the gross alkaline salts as affording a larger basis for consideration. It appeared to me that the results of analysis fairly bore out the conclusion that in the cases under consideration there was a deficiency of alkali. Dr. Legg, however, would have it appear otherwise, and to this end has dealt with my figures in an ingenious manner which deserves to be pointed out. Dr. Legg has selected the four amyloid livers which contained the most alkali, and the four healthy livers which contained the least, and placed these selected results in opposite columns, with the view of showing that the difference between them is imaginary. By this method it is shown that the maximum of alkali in the waxy organ is not less than the minimum of alkali in the healthy organ. This fact is perfectly evident, and does not invalidate in the smallest degree the conclusion which I have stated. By Dr. Legg's method of argument it might be proved in an equally convincing manner that there is no difference in size between lambs and sheep, or between boys and men. It would be easy to select a certain number of very big boys and to show that they were at least as large as the same number of very small men. I venture to think that a sound deduction is more likely to be arrived at by taking into consideration, as I have done, all the estimations which were made, than by such a partial selection as Dr. Legg has adopted.

In the so-called "amyloid degeneration" what ordinarily occurs is not, as sometimes supposed, that a new material altogether unlike the tissues of the body is interspersed among the normal structures, but that some of the tissues belonging to the organ are changed in certain particulars, undergoing increase of bulk, and acquiring a peculiar reaction. Speaking generally, the occurrence of a peculiar exudation from the blood-vessels is a matter of inference rather than of observation. The conclusion that the "amyloid" tissues differ from healthy tissues in the absence of free alkali rests upon the following facts, which, as far as I can see, admit of no other explanation.

First of all, it is a fact which cannot be disputed that a large proportion of persons in whom the disease has been found have been the subjects of protracted suppuration, a process which necessarily removes alkali from the body. The converse of this is also true, that a large proportion of persons who have suffered from protracted suppuration are found after death to have the peculiar organic change. Passing to the examination of the affected organs, it has been shown that they contain less than their normal proportion of potass and soda. Where the change is extensive, the affected organs have been found to give an acid reaction to test-paper instead of an alkaline reaction as in health. The parts affected give a peculiar reaction with iodine which has been described as "amyloid," which they

(a) In my work on Albuminuria I have given an eighth estimation of the alkaline salts, which bears out the conclusion I had expressed elsewhere. The liver was highly amyloid; the percentage of alkaline salts was ·633.

no longer display after having been subjected to the action of potass or soda to an extent sufficient to permeate but not destroy the tissue. Further evidence is afforded by the action of sulphate of indigo. This substance loses its colour when acted upon by potass or soda; it is accordingly decolorised by the healthy tissue of the glandular organs, which contains free alkali, while the "amyloid" parts retain the bright blue of the pigment for an indefinite time.

The inference that "amyloid" reaction is dependent upon absence from the tissue of free alkali, is confirmed in a remarkable manner by the action of the iodine test upon fibrin or albumen which have been artificially deprived of the alkali with which, under ordinary circumstances, they are combined. Common fibrin reacts with iodine like the healthy tissues of the body—gives, that is, a yellow colour. Fibrin which has been dissolved in dilute acid, in the manner I have elsewhere fully explained, and has by this means been dealkalised, gives a deep brown colour with iodine, which closely resembles the colour which iodine produces upon "amyloid" tissues. The dealkalised fibrin may be again made to absorb potass, and on the restoration of this substance it no longer gives the dark "amyloid" tint with iodine, but presents again the yellow colour which it assumed with iodine before the action of the acid. Thus it appears that the dark brown or "amyloid" reaction with iodine depends absolutely upon the presence or absence of free alkali.

This appears to me to complete the proof that the cardinal distinction between "amyloid" and healthy tissue is in the presence or absence of free alkali.

STRANGULATED FEMORAL HERNIA.

UNSUCCESSFUL TAXIS—SUBCUTANEOUS DIVISION OF THE STRICTURE EXTERNAL TO THE SAC—RAPID RECOVERY.

By ALFRED POLAND, F.R.C.S.
(From notes by Mr. A. Copleston Roberts.)

Mary H., aged 66, was admitted into Guy's Hospital under the care of Mr. Poland on August 3. The patient states that of late years she has enjoyed bad health, and she suffers from asthma and rheumatism. About sixteen years ago she fell down stairs, and, on being taken up, she felt a swelling in her left groin. She sent for a Surgeon, who pronounced it to be a hernia; he applied the taxis, and reduced it. Since then she has worn a truss, and the hernia had never come down. On Saturday, August 1, she went to bed at 11.30 p.m., and at 3 o'clock in the morning she awoke with violent vomiting and pain over the umbilical region of the abdomen, and at 4 a.m., whilst in the act of vomiting, she felt something give way in the left groin, and on placing her hand there she felt a swelling. She then applied hot flannels. The vomiting continued to increase, and the pain moved to the lower part of the abdomen. About 2 p.m. on the Sunday the vomiting slightly abated, and she took the train from London and went into the country; but towards the end of the journey the vomiting became much worse, and continued until Monday morning, when she sent for a Surgeon, who tried the taxis on and off for about two hours, but without success. He then sent her up to the Hospital, where she arrived about 3 p.m.

On admission the expression of her countenance was anxious, the pulse small and quick, the abdomen tender and somewhat tympanitic; she had vomiting of bilious-looking fluid, but not stercoraceous; the bowels had not been open for three days. There was a small tumour in the left femoral region about the size of a bantam's egg, very tense and very painful; the integuments did not appear to have been the subject of much force. Moderate taxis was employed, but no impression could be made upon the tumour. There was a small enlarged gland at the outer side, unconnected with the tumour. The hernia was a femoral one. Two grains of opium were given immediately, and one grain to be taken in the course of two hours. An ice-bag to be constantly applied over the tumour.

At 7.30 p.m., the symptoms of strangulation still continuing and becoming more urgent, the patient was placed under the influence of chloroform, and another attempt at taxis made; and although some considerable force was used, the tumour maintained its tense condition, and could not be reduced. Mr. Poland immediately proceeded to return the hernia by operation. A very small lancet-wound, of a size to admit the entrance of a hernia-knife, was made through the superficial parts to the inner side of the tumour. A common curved blunt-pointed hernia-knife (known generally as the Astley Cooper hernia-knife) was attempted to be introduced, but it was stopped by some strong fascia; this was readily overcome by withdrawing the knife and passing a small probe, which made a passage through the fascia, when the knife readily entered, and was passed along the loose cellular tissue external to the sac towards Gimbernat's ligament, and then, by gentle manœuvring and coaxing, the knife readily passed under the constricting ligament, which was then divided. The knife was withdrawn, and the hernia reduced with remarkable facility. A small pad was placed over the situation of the hernia, and confined by bandages. From this moment all symptoms subsided, and she had some sleep during the night. All vomiting and all tenderness disappeared. She never had a bad symptom afterwards. An enema was administered on the third day, and the bowels were freely relieved. She was able to get about on the fourth day, and wear her truss over a pad of lint until a new one was made for her, as the truss she was wearing was an inguinal one. The puncture in the skin was barely perceptible. No inflammation or suppuration of any kind supervened. She remained in the wards of the Hospital for a couple of weeks awaiting her truss, and then left perfectly well.

Remarks.—Is it justifiable to recognise the subcutaneous division of the stricture in hernia as an operation to be performed? Should it receive the sanction of the Profession? Although it was done with facility in the above instance, we should reply in the negative. It is not an operation by any means safe, except in the hands of Surgeons who are constantly in the habit of performing herniotomy, who are fully experienced in the diversities which are so frequent, and who are capable of judging with precision the depth and extent one may pass the knife without doing mischief; this can only be learnt by great practice on the living subject.

ON THE

TREATMENT OF OMENTAL HERNIA.

By ALEXANDER BRUCE, M.S. Lond., F.R.C.S.,
Assistant-Surgeon to the Westminster Hospital.

Extensive as is the literature relating to hernia, and ably as this subject has been treated by writers, both from a clinical and anatomical point of view, there is yet room for some further investigations, especially with regard to those cases in which the presence of a portion of thickened and adherent omentum constitutes the chief obstruction to the return of the mass into the abdominal cavity. *Quot auctores, tot sententiæ*—so various and different are the opinions of the highest Surgical authorities upon this subject, and yet questions are involved in the consideration of which it is peculiarly necessary that the Practitioner should be guided by some settled principle, as these cases present themselves as emergencies requiring prompt and decisive treatment.

That it is dangerous to meddle with an old omental hernia no one would dispute, but an operation may at any time be rendered necessary by a portion of bowel becoming strangulated in the same sac, and an important question then presents itself—viz., what is to be done with the omentum? If the mass be inconsiderable in size, healthy in appearance, and non-adherent, no one would hesitate to return it with the bowel. But if, as is probable in the case suggested, changes have taken place in its structure—if it have become indurated or knotted, have contracted numerous or firm adhesions to the neck and body of the sac—or if it be considerable in bulk, and would consequently require much manipulation and squeezing to enable it to be returned into the cavity—what is then to be done with the omentum? In attempting to reply to this question, I shall in the first place briefly state the opinions which are to be found in some of the leading works on this subject both of this country and the Continent; and in the second place I shall endeavour to point out the advantages which some of these methods possess over the others. The various methods of treatment which have been employed may be conveniently placed under the following heads:—

1. Leaving the omentum in the sac. (1) Without further treatment allowing it to undergo granulation and suppuration. (2) Gradually destroying it by caustics, by the application of pressure, or by the constriction of a ligature. (3) Immediate strangulation by the application of a ligature, allowing the mass to slough away.

2. Removing the omentum by excision. (1) Without the

application of a ligature, the stump being allowed to retract. (2) With the application of ligatures to the separate vessels, the threads being either cut off short and the stump returned into the abdominal cavity, or the threads left hanging out of the external wound. (3) With ligature of the entire stump previous to excision.

Of the methods of treatment here proposed, two may be at once abandoned as being unsupported by any arguments in their favour—viz., the gradual destruction of the mass by caustics, and its gradual strangulation by the ligature. Neither of these methods is now practised, and they have been advocated by but few Surgeons, and not very warmly supported even by them (Larrey, Hey, Scarpa, and Velpeau).

When a mass of omentum is left in the sac after having been exposed to the air or much handled, it will inevitably become inflamed, suppurate, and will probably slough. The constitutional effects produced by the process are often severe, typhoid symptoms of a marked character setting in during the period of sloughing. There can be no doubt that in the old operation for hernia, in which the entire sac was laid open, the omentum was more likely to be disturbed, and evil results more likely to follow, than in that usually practised in the present day, when the incisions are more limited to the neck of the sac; whilst the employment of carbolic acid will probably still further lessen the dangers arising from septic changes. To leave a considerable mass of omentum in the sac, however, even if it be not much altered, is always unsatisfactory, and therefore, unless it have contracted adhesions to the parts around, it will be better, as a rule, to remove it. Several eminent Surgeons have, however, advocated the "let alone" treatment, among whom may be mentioned Guthrie, Hey, Syme, Chopart, and Desault, whilst others speak of it with qualified approval. The treatment by immediate strangulation by the ligature without excision of the mass so strangulated has only been employed in cases in which the quantity of omentum is small. It has an advantage over the last method in hastening the separation of the slough; but as this is not a necessary consequence of leaving the mass in the sac, there remains the great objection that the healing of the wound is delayed, and suppuration established without any adequate gain. Much difference of opinion has prevailed respecting the effects produced by the application of a ligature to the omentum, some authors affirming that this practice has been followed by a serious amount of peritoneal inflammation, by severe and continued vomiting, and that the patients have, in many instances, remained crippled for life, in consequence of the contracted state of their abdominal walls produced by the adhesions of the omentum at the seat of ligature. These alarming results, which have been chiefly described by the French Surgeons, present themselves so rarely that they can hardly be considered to be of sufficient importance to influence ordinary practice; they have had their influence, however, in inducing many Surgeons to advocate the dangerous method of excising the omental tumour without the application of a ligature—a practice which has led to serious and even fatal hæmorrhage. This practice has received the support of Bell, Pott, Boudin, Caqué, Pipelot, Ponteau, and Verdier, but has not found favour with more recent authors. It is true that in a certain proportion of cases no hæmorrhage will occur, but it is equally true that in others it has proved uncontrollable.

Some Surgeons, dreading the dangers following the application of a ligature to the entire stump, have attempted to lessen the still greater danger of hæmorrhage by applying separate ligatures to the cut ends of the vessels. This is, however, a somewhat troublesome operation; and, as it is by no means easy to recognise the vessels in a mass of fat, it usually fails of its object, as hæmorrhage not unfrequently occurs as soon as the stump is allowed to return into the abdominal cavity. This method has, however, received the sanction of such high authorities as Sir Astley Cooper, Lawrence, Syme, and Skey, besides several others who have given it a more qualified approval.

It has been employed in two ways—in some cases the ligatures have been cut off short, and the stump returned into the abdomen; in others, the threads have been left hanging out of the external wound. The latter method is open to far fewer objections than the former. The safest plan, and that which is employed by most Surgeons of the present day, is to pass a double ligature through the mass at the neck of the sac, and then tie it on each side; the part below having been then cut away, the threads are secured so as to prevent any retraction of the stump into the abdomen, and the wound is dressed upon ordinary principles. This method has been adopted by Birkett, Erichsen, Fergusson, Armand, Richerand, and Velpeau, etc., and does not seem in any case to have been followed by the serious consequences which earlier writers ascribed to it.

It was at one time believed that the removal of a considerable portion of omentum by natural slough or artificial strangulation would tend to prevent the recurrence of a hernia, as it was supposed that the canal would be effectually plugged from above. This result is, however, not always obtained, as, in consequence of the absorption of the fat which takes place, the mass usually shrinks considerably in bulk, and thus merely tends to keep the ring open without being sufficiently bulky to prevent the entrance of the bowel into the canal; it can, therefore, not be considered as adding materially to the patient's future safety.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE ROYAL INFIRMARY, LIVERPOOL.

Situation—Building and Annexes — Wards—Cases — Vesical Calculus—Lithotomy—Complicated Cases—Curious Case of Malignant Disease of Femur; Operation—Rarity of Strangulated Hernia—Tracheotomy for Damson-stone in Trachea—Tracheotomy for Lacerated Wound of Throat—Treatment of Elephantiasis—Dressings: Carbolic Acid in Water and Oil; Carbolic Acid Putty—Condy's Fluid and Higginson's Syringes—Chloride of Zinc to Wounds—Use of Elastic Bands in Fractures—Modes of Treating Fractures of the Thigh, Leg, Clavicle, etc.—Hyposulphite of Soda in Pyæmia—Exfoliation of Alveolar Plate of Lower Jaw in Chorea—Hypodermic Injection of Morphia for the Relief of Poisoning by Strychnine.

There are in Liverpool no fewer than three General Hospitals, each of considerable size. The oldest and most important of these is the Royal Infirmary, situated nearest the centre of the city. The two others—the Northern and the Southern Hospitals—are both built near the river, and the former also near one of the principal railway stations, so that cases of accidental injury are probably more commonly met with in it than in any of the others. The Infirmary is, however, placed not very far from the station on the London and North-Western Railway, whence the trains are let down by means of a rope to Lime-street Station, and any cases of accident occurring there are brought to the Infirmary, where there is indeed, apart from such instances, no lack of cases of interest surgically, and certainly better Surgical treatment is nowhere to be seen.

The Infirmary is a composite institution, having connected with it an Asylum and a Lock Hospital; but as these are under separate management, we shall not deal with them here. The building itself is of some date; its form is very irregular, and it is situated in a very desolate patch of ground. The entrance used is not in the front, but to the side of the building. Not far off are the school buildings, but students attend the other Hospitals as well as this for their practice, and the lecturers are composed partly of the Infirmary staff, partly of those of the Northern and Southern Hospitals. These school buildings are small and compact, but otherwise convenient. Another noticeable feature near the Infirmary is the Liverpool Workhouse, quite a village in itself, and containing a large Hospital, which would be well worth notice did our space admit of it.

The different wards of the Infirmary are of very different ages. Some of the old ones are not very lofty, but they all seem well ventilated, and are kept beautifully clean. Many of the newer ones communicate directly one with another. These are loftier and lighter than the others. One of the most recent divisions, going by the name of the Thornton Wards, and containing forty beds, is entirely devoted to the diseases of women, it having been erected for this purpose by a charitable lady. In a large Hospital like this, which accommodates 250 patients—there having been in all 3177 treated in 1866—cases of interest are constantly occurring. The only thing to be regretted is that they are not more frequently made known to the Medical public. The institution of an annual

volume of Hospital reports, as has been lately done here, will, however, to some extent, do away with this misfortune for the future—as far as Liverpool is concerned, at least. A reference to the last-published volume will show the class of cases most frequently encountered in Liverpool. Of those thus met with, stone in the bladder would seem to be not infrequent, more especially of recent date, for on July 21 no fewer than three individuals were operated on, and in all four cases have been thus dealt with, in a very short space of time. Two of these cases were under the care of Mr. Bickersteth, two under that of Mr. Harrison. The ordinary operation performed at this Hospital is the simple lateral operation of Cheselden, but in both instances referred to Mr. Bickersteth operated by the bilateral method. No difficulty was experienced in either operation beyond that arising from the size of the stone, which in one case weighed nearly three ounces. Mr. Bickersteth is not afraid of the cutting portion of this operation, even in cases where he is doubtful of the existence of a stone; and he has narrated certain cases which would seem to show that the direct escape of the urine by a perineal opening may be of great benefit by giving the bladder rest, even when it contains no stone, until it has had time to recover from an inflamed and contracted condition. He published some very sound remarks on the subject of lithotomy in the last volume of *Liverpool Reports*. One of Mr. Harrison's patients had an awkward complication as far as the operation was concerned: this was an anchylosed condition of the boy's left hip joint, preventing, of course, the proper amount of separation of the thighs. All these cases have done well, no bad symptoms of any kind having occurred, but the urine would seem to have been discharged for a longer time than usual by the perineal opening in the cases operated on by the medio-bilateral method.

In the spring, Mr. Bickersteth had under his care a girl, aged 8 years, sent to him with disease of the hip-joint. All her urine was passed through a sinus in front of the great trochanter, but there was no history of any bladder affection. On examining the urethra and bladder, a stone was felt of such a size that Mr. Bickersteth felt sure no ordinary operation would suffice for its removal. He therefore performed the suprapubic operation. The operation took nearly forty minutes, in consequence of the bladder being excessively contracted and thickened. A very large phosphatic stone was thus removed. The sinus through which the urine had been passed for nearly two years closed almost immediately, and she micturated per urethram four weeks after the operation. The child was discharged cured in two months from the date referred to.

In the spring of this year, amputation at the hip-joint was performed by Mr. Hakes for malignant disease of the femur (encephaloid cancer). The man did well after this for two or three weeks, and the stump was all but healed up when, unfortunately, lobular pneumonia set in, and proved fatal a month after the operation. The history of the disease in this case was that the man had for some weeks noticed what he considered rheumatic pains at the lower part of the thigh, but no swelling was observed. One day, whilst running after a cow in a field, he felt his thigh give way, when he fell down, and found he could not get up again—in fact, his thigh was broken. He was treated in the usual manner. A month after the thigh was examined, and instead of union having taken place, the parts were found swollen and painful. Two months after the injury, he was brought to the Infirmary with unmistakable malignant disease of the femur, which was, of course, ununited. The thigh was in its lower two-thirds more than twice the usual size, and with the aspect usual in such cases.

Strangulated hernia is remarkable from its rarity at the Infirmary, as well, it is said, as at the other Hospitals. No good reason can be given for this; but there has not been a single case treated this year, and three or four is the usual annual average.

Two cases of tracheotomy have occurred within the last twelve months, which have been attended by features of interest.

One was a case in which a boy, 6 years of age, was admitted with a history of having a week before got a damson-stone into his throat. The symptoms described were occasional fits of violent coughing, almost causing suffocation, with long intermissions of perfect ease. By the time of admission, however, this had given way to a frequent hacking cough accompanied by feverish symptoms. On examining the chest, it was found that hardly any air entered the right lung, whilst a little to the right of the sternum was heard mucous crepitation. The boy coughed up muco-purulent matter streaked with blood (the stone being evidently impacted in the right bronchus). One morning, four days after admission, Mr. Chauncy Puzey, the House-Surgeon, was called into the ward, and found him apparently dying from dyspnœa, which had suddenly come on with a violent fit of coughing. Mr. Puzey opened his trachea, but could not look for the stone in consequence of his state. A tube was introduced, and he was kept under a cradle supplied with steam. Thirty hours after the operation, during a violent fit of coughing, something came up, and could be felt striking against the tube in the trachea. The tube was suddenly withdrawn, and was immediately followed by the stone. The boy made a good recovery.

The other case was that of a man who, whilst at work at a circular saw, was struck in the neck by a large splinter of wood torn off by the saw. When seen he was suffering from great dyspnœa, and had a slight punctured wound at the right side of the neck near the thyroid cartilage. The neck was emphysematous. Mr. Bickersteth cut down on the trachea, and found its two upper rings and the cricoid cartilage torn completely through. A tube was inserted, the man soon rallied, and made a good though rather tedious recovery.

In Mr. Bickersteth's wards there is now a female patient who was admitted with elephantiasis of the left leg, the disease being of a very extensive nature, and affecting the whole extremity. The treatment employed was repeated blistering, with rest, and has been attended with the most satisfactory results, the leg having in less than two months become reduced in size to such an extent that it is now only a little larger than the healthy limb.

Among the dressings used in the Infirmary is carbolic acid in the form of lotion (three drachms to one pint of water), which is employed for nearly all wounds, whether from injury or operation, with most satisfactory results. The acid is also used as an application when dissolved in oil; of this there are employed two strengths—one part in six and one part in twelve of boiled linseed oil. These make very nice dressings, keeping the wound sweet and moist, and thus rendering the dressing of the wound easy both to the Surgeon and to the patient; it also very much diminishes discharge.

The Infirmary experience of the strong carbolic acid and carbolic acid putty in the treatment of compound fractures has been most unfavourable; but in one or two cases where large chronic abscesses, and in one case where a suppurating knee-joint have been opened under the carbolic acid putty, the result has been satisfactory.

Condy's fluid is used in weak solution principally for washing out wounds. In this Hospital nearly all wounds from injury, and also after operation, are cleaned by means of a syringe, no sponge, wool, or tow being used for the purpose. At every dressing of a stump the wound is washed out with Condy's fluid or carbolic acid in solution by means of a Higginson's syringe, so that without any pressure, therefore without causing any pain to the patient, every sinus is thoroughly cleaned, and no stale discharge is left in any part of the wound.

After operations some of the Surgeons are in the habit of applying the solution of chloride of zinc to the wounds, as recommended by Mr. Campbell De Morgan. Certainly pyæmia is extremely rare after its use, but it requires to be used with caution in the case of old people, especially where the skin is thin, as after excision of the breast; sometimes superficial sloughing of the whole surface of the wound, and in one or two cases of part of the skin flap itself, has occurred after its use; so that, in such cases, it is now used in much weaker solution.

Since Mr. Le Gros Clark recommended the use of bands of elastic cord in the treatment of badly uniting fractures of the extremities, the plan has been frequently tried here, and with so much success that they are now frequently used for ordinary fractures of the leg or thigh. For instance, after putting up a fractured thigh on the long splint, they would also apply two, three, or four small short splints along the thigh, holding these in position by two or three rings of stout elastic cord. The result is most satisfactory.

A kind of splint very frequently used here for the treatment of fractures of the thigh differs a good deal from that ordinarily employed. At the one extremity are the holes for the perineal band; at the other, a pulley, over which runs a piece of elastic cord, attached to the foot of the injured limb on the one side, and to hooks in the splint on the other. Any amount of elastic tension can thus be produced. Mr. Hakes has been using this splint in the treatment of very oblique fractures of the leg, where there is much overriding of the

fragments. This splint on the outer side of the leg, applied as for fractured thigh, an ordinary back splint, and a short leg splint on the inner side, have given most satisfactory results. There has just been sent out a young man treated in this manner, who was sent from Runcorn with an oblique compound fracture of the leg. The external wound was of considerable size. Two or three fragments of bone were removed, and the fractured ends of bone could not be retained in position until this treatment was adopted. No carbolic acid putty was used, but carbolic acid lotion was applied; and ten weeks after admission the leg was perfectly well, without deformity, and the man could walk on it without using even a stick, and without any bandage on the leg.

For fracture of the thigh the double inclined splint is frequently used, especially in Mr. Bickersteth's wards. The results of cases treated in this way cannot perhaps be said to excel those of cases treated with the long splint; but the patients find them much easier in every way, and there is seldom any appreciable shortening. Mr. Bickersteth a year or two ago tried the treatment of these cases by laying the patient on his side with the knee of the injured extremity flexed, and steadying the fracture by four short straight splints buckled along the fractured thigh. The cases recovered with perfectly straight limbs, quite free from deformity, but with a rather extreme amount of shortening.

Fractures into the elbow-joint are generally in children treated without splint, but by supporting the joint with a long figure-of-eight bandage, and the same plan is adopted after excision. Colles' fracture is rarely treated with a pistol-shaped splint, but is put up, like other fractures of the forearm, with two simple straight splints appropriately padded.

Fractured clavicle, if a simple case, is treated with a pad in the axilla, the arm bandaged to the side, the elbow supported by a bandage brought round and below it and over the sternal end of the clavicle of the injured side. If there is much displacement, the patient is kept lying on his back, with no appliance except a bandage fixing the arm to the side, and these cases always do the best. A short time since there were two cases in the Infirmary together of badly fractured clavicle. In one case the fracture was compound, and was complicated with several fractured ribs, emphysema, and profuse hæmoptysis. The wound was covered with several folds of lint dipped in carbolic acid oil, the arm was kept to the side, and the other injuries treated in the same way. The wound healed at once, and the man went out three weeks after with scarcely any irregularity of the clavicle. The other case was one in which a very oblique simple fracture of the clavicle was complicated with three or four fractured ribs where these were covered by the scapula, which was also fractured. In this case there were extensive ecchymosis and emphysema over the whole chest, both back and front. This man also went out three weeks after with hardly any apparent deformity, the arm having been kept to the side, and the fractured ribs and scapula treated as usual.

Dislocations of the shoulder and *elbow* are common here; and a frequent cause of the latter injury—which, indeed, in one day sent in three cases—is the street-boys' amusement of turning over on their hands and feet after the fashion of wheels.

Since using freely carbolic acid as a lotion, there has been very little pyæmia in the wards; but in some undoubted cases which have made their appearance, there has seemed to be very little doubt that the use of sulphite of soda in the quantity of two drachms per diem has had a very beneficial effect. Mr. Puzey tells us that he has found the most pleasant way of giving it and disguising its flavour is by mixing it with strong beef-tea made with Liebig's extractum carnis, with which it may be mixed in the proportion of one drachm to a pint of strong beef-tea. No patient has found fault with the flavour after the first pint or so. The remedy has been tried in so many cases now, especially in the chronic form of pyæmia, in such well-marked and severe cases, and has been followed by so much improvement, and in several cases by recovery, that they have no doubt of its efficacy.

In the Medical wards, under the care of Dr. Vose, there has been quite recently a case of severe chorea, which has been followed by a peculiar result well worth notice. A boy, of about 11 or 12 years of age, had been in the Infirmary for about two months with a very severe form of chorea, in which the muscles of the jaws were much affected, and the jaws were always being clashed together, so that the sound could be heard all over the ward. Every now and then one of his teeth would become loose, and be pulled out by the boy. His gums became sore and pulpy, but no peculiar discharge came from his mouth. One morning the nurse brought down to Dr. Orton, the House-Physician, a large piece of dead bone which she said the boy had just pulled out of his mouth. This proved to be the alveolar portion of the lower jaw, extending from the right second molar to the left canine inclusive, two or three of the sockets still containing teeth. From the rest the teeth had been lost one by one during the previous month. The boy had never been salivated; he had been treated with sulphate of zinc, and for a short time with bromide of potassium. It appeared most likely that a longitudinal fracture of the bone had taken place at one time from the violent clashing together of the jaws, and that from the same cause union had been prevented and the vitality of the bone destroyed. Considerable deformity was, as may be imagined, produced, and the boy's friends took him out of the Infirmary when they next saw him, so that the case has been lost sight of.

Early this year a young man was brought to the Infirmary who had taken three grains of strychnia, in the form of "vermin destroyer," about two hours previously. He was suffering from most acute tetanic symptoms when brought in, and it appeared that these were rapidly getting worse. He had had an emetic about three-quarters of an hour before admission, which had acted as he came along in the cab. He could not swallow anything; therefore, half an hour after admission Mr. Puzey determined to try the hypodermic injection of morphia. One-third of a grain was injected, which in five minutes was followed by relief to the patient. Three quarters of an hour after the dose was repeated, and brandy administered in consequence of the man's exhausted state. This was followed by increased benefit. An hour after the dose was again repeated, and after this the man improved so rapidly that nothing further except nourishment and nursing was required. A similar powder was analysed by Mr. J. C. Brown, Lecturer on Chemistry at the Royal Infirmary School of Medicine, and was found to contain three grains of strychnia, and in a small quantity of fluid the patient vomited half an hour after admission one-tenth of a grain was found.

There are many other points we should have desired to notice did we not fear to exceed our limits. We must not, however, in conclusion, neglect to thank the Hospital officials for their kindness and attention. To Mr. Chauncy Puzey, from whom most valuable information has been obtained, our thanks are in an especial manner due.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 19, 1868.

THE NEW INDIAN PHARMACOPŒIA.

For some time back it has been tolerably generally known that a new edition of the Bengal Pharmacopœia, adapted for more general use in our Indian Empire, was about to make its appearance. The somewhat arduous task of bringing this Pharmacopœia into accordance with the British Pharmacopœias of 1865 and 1867, and at the same time making it available for all India, was entrusted by her Majesty's Secretary of State for India in Council to a committee consisting of the following eminent members:—Sir J. Ranald Martin (President), Sir W. O'Shaughnessy Brooke

(better known as Sir W. O'Shaughnessy), Mr. A. Gibson (deceased), Mr. Daniel Hanbury, Dr. T. Thomson, Dr. J. F. Watson, Dr. R. Wight, and Dr. E. J. Waring. It is no breach of confidence to state that to the latter, on whom devolved the duties of editor, the major part of the work fell, and that the Pharmacopœia may be looked on as essentially his work.

Besides the list of drugs ordinarily found in a Pharmacopœia, in this work the editor has gone beyond even the British Pharmacopœia, for he has given some information as to the medicinal properties of the drugs enumerated, as well as the doses of the various preparations, which are somewhat more numerous than those contained in the British Pharmacopœia of 1867. All the substances and preparations given in that work are contained in this, with, in addition, a variety of products, chiefly vegetable, found in our Indian Empire, and which may there supersede the more expensive remedies imported from this country. Of the articles so introduced there are two classes—first, those whose virtues and efficacy are generally known and recognised; and, secondly, those whose rank as therapeutic agents is more doubtful. The former are rendered officinal; the latter are only suggested, that future experience may determine their real value, and so their right to a place in a work of this class.

Instead of an alphabetical classification, one dependent on the natural affinity of the substances, such as is usually adopted in works on Materia Medica, is employed, with a view probably to the work being made use of as a text-book of Materia Medica as well as a Pharmacopœia, for to this end it has been designed by its editor. As in the British Pharmacopœia, both the old and new systems of notation are employed, and designated, as in that work, by Roman and Egyptian characters. The same weights and measures of capacity are to be found in each.

Probably the portion of most interest to European as to Indian Practitioners is that relating to the Indian remedies here made officinal. Many of these are not unknown in this country, but a considerable number will be new to many of our readers. Two species of aconite are given, the *ferox* and *heterophyllum*, the former possessing properties similar to our *A. Napellus*, but more powerful, and containing a larger proportion of aconitin; the latter is used as a tonic; it contains no aconitin. The root of the *Coptis Teeta*, a plant growing in Assam, and a very good bitter, belongs with the former to the order *Ranunculaceæ*. *Cocculus indicus* is retained in this Pharmacopœia, and a plant called *Tinospora cordifolia*, or Gulencha, also belonging to the Moon-seed family, is recommended as a tonic, etc. Various kinds of barberry are recognised, the root-bark being used; their use is advised as tonics after fevers. The seed of the Indian mustard plant is included in the officinal list as a substitute for that used in this country. A plant belonging to an order not recognised in our Pharmacopœia, and which goes by the name of Chaulmugra (*Gynocardia odorata*) is recommended for leprosy; it is described as an alterative tonic. Indian as well as Siamese gamboge is introduced, and the oil of the seeds of the Kokum Butter-tree (*Garcinia purpurea*) is given as a substitute for the ordinary fatty ingredients in pessaries. The oleo-resin obtained from the Gurjun or wood-oil tree (*Dipterocarpus lævis*) is introduced as a substitute for copaiba in the treatment of gonorrhœa. Another remedy somewhat similar in its application, but acting rather as an emollient, is the *Hibiscus esculentus*, or Okra, a plant belonging to the cotton tribe. Limes are here rendered officinal as well as lemons, and a plant belonging to the same group, the *Toddalia acuta*, is given, being esteemed by some as a tonic. At one time it was much used in diarrhœa. Olibanum is retained in this Codex, whilst two new Meliads are introduced—the Nim or Margosa tree (*Azadirachta Indica*) and the Rohun (*Soymida febrifuga*), both astringent, tonic, and antiperiodic; the former, in the form of poultice, being also employed as a local stimulant. Cowitch and Black Catechu are still retained; the latter is the product of the *Acacia Catechu*, which, as well as another plant called Bonduc, said to act as a tonic and antiperiodic, the Bengal kino tree (*Butea frondosa*), the Indian liquorice plant (*Abrus precatorius*), and the ground-nut plant (*Arachis hypogæa*), belong to the natural order *Leguminosæ*. The only new umbellifers are the Ajwain or Omum plant (*Carum Ajowan*), a valuable carminative, and the *Hydrocotyle asiatica*, whose leaves are much used in the treatment of leprosy and constitutional syphilis. The fruit of the Indian Gab (*Diospyros embryopteris*) is recommended as a powerful astringent, whilst the bark of the *Alstonia scholaris* is given as a tonic and astringent in chronic diarrhœa. Two species of *Calotropis*, the Mudar plant, are included in the officinal list. The root-bark of this plant has been strongly recommended in constitutional disorders like leprosy, syphilis, or rheumatism. The leaves of the *Tylophora asthmatica* are given as an emetic, a diaphoretic, and an expectorant. As a substitute for jalap we find the seeds of the Kaladana (*Pharbitis Nil*) recommended. It is described as being a safe and effectual cathartic. The *Andrographis paniculata*, or Kariyat, is a bitter tonic, not unlike quassia. One of the most important of the substances in the Indian Pharmacopœia is the *Datura alba*, the well-known Dhatura of the country, used so fatally by the Thugs and other robbers throughout the peninsula. It is there the most ordinary poison after arsenic. In its properties it resembles stramonium. The seeds of the *Plantago Ispaghula*—the Ispaghul—are said to be demulcent and mildly astringent; whilst the bulbs of the *Crinum Asiaticum* are recommended as a substitute for squills. Belonging to the family of the grasses are the *Oryza sativa*, or rice plant, with uses too numerous for enumeration, and various species of *Andropogon*, whose volatile oil is stimulant, carminative, antispasmodic, etc. The last plant we find rendered officinal in this Pharmacopœia which is absent from ours is the *Gracillaria*, or Ceylon moss, with properties similar to those of Iceland and Irish moss. No mineral substances are recognised beyond those included in the British Pharmacopœia, whilst the only animal products added are the *Mylabris cichorii* as a substitute for cantharides, and the oil of the white shark for that of the cod. The preparations given are also of great interest to the Indian Practitioner; some of them less so to the British Medical man, as being obtained from the fresh article only. Many references are given throughout to notes at the end. This is not a good plan. Everything should be as nearly as possible brought in together; but this is a small blemish. Altogether the work is one of which its authors, and especially its editor, may be justly proud.

ARMY HOSPITALS.

We have lately been informed that the expenditure at our large Hospital establishments, such as those at Netley and Woolwich, is likely soon to form the subject of official inquiry. We sincerely hope so, and trust that success will attend the investigation, because every one knows that the cost of these establishments is disproportionately large to the return which either the soldier or the State receive.

We are not able just now to enter fully into this important question, and we doubt if Sir John Pakington himself could tell what sum of money one of these establishments yearly costs the country. That the expenditure is excessive will probably be granted, but the remedy will not be so readily acknowledged.

Generally speaking, in all attempts towards military economy, the screw is applied in the wrong quarter. If store room is required for barrack utensils, the soldiers are crowded into smaller sleeping apartments to make room for kettles and

blankets, or the families of married men are huddled together into one room, when pounds are paid freely to add a wing to the general's stable.

The same false economy exists in our present general Hospital system. While the prescribing Medical officer is forbidden to order a patient a bottle of soda water, hundreds of pounds a year are paid to *ci-devant* combatant officers as governors and assistant-governors of the establishment. The duties of these offices are very simple, and by no means requiring any special military talent. The country already pays Inspectors-General of Hospitals, and by these officers the Hospitals ought to be directed and governed, and not by half-pay generals, colonels, and majors. We know that there are many other matters of expenditure needing reform in our Hospital system, but we assert that the most gross, wilful waste of public money lies in the payment of these functionaries for doing the duties which ought to be done by the Medical Department. Our Inspectors of Hospitals are employed in trivial duties which ought to be the work of Staff-Surgeons, and half-pay combatant officers draw large emoluments for doing what the Inspectors ought to do. And besides this, the governor must have an assistant-governor, whom the State must pay, to enable the former highly paid functionary to enjoy his leave of absence and the other advantages of his sinecure.

In dealing with the question of economy in our military Medical establishments, there is no use in mincing matters. The Government, in the hands of different partisans, has been for a long time nibbling at Medical reform in the army; the axe must now be laid to the root of the tree, and the whole Medical Department reorganised. The paltry prejudices of the War Office and Horse Guards authorities must be cloven down, and the entire direction of military Medical matters placed in the hands of military Medical men. At present the Medical department is a kind of fungus not owned by any parent stem, instead of being an entity in itself; and even in the War Office civilians give advice on Medical matters, when the Director-General of the Army Medical Department and an efficient staff of officers are close at hand in Whitehall-yard. Surely these things look like wilful waste, which brings woful want.

TORSION.

Few subjects have attracted a greater amount of attention from Surgeons than the means at our disposal for the arrest of hæmorrhage, and fresh interest has recently been excited by the warm controversy which has arisen respecting the rival claims of the ligature, acupressure, and torsion. It seems to us that much valuable time is often lost in consequence of the tendency of investigators to commence the study of these subjects *de novo*, instead of making themselves fully acquainted with the results obtained by previous workers in the same field, and that thus not unfrequently theories are advanced which have already been disposed of, and experiments repeated again and again which have been proved to lead to no result. We now propose, therefore, to lay before our readers the principal facts relating to torsion which may be gleaned from an examination of the literature of this subject.

The fact that a lacerated wound bleeds less than a cleanly cut one must have been recognised from very early times, and we find it distinctly noticed by early writers. It is upon this fact that the principle of the method of arresting hæmorrhage by torsion is founded. But, although Surgeons had long recognised this fact, and had, in fact, adopted various barbarous methods of employing it as a means of preventing the occurrence of hæmorrhage after amputations, yet it was not till the year 1829 that any attempt was made to examine the subject scientifically and to reduce it to a system. It is true that there is good reason to suppose that the ancients employed torsion, but the subject is merely mentioned incidentally, as it were, by both Galen and Aëtius, and no reference is made to the principle involved, or to the precautions which are necessary for its successful application.

The passage from Galen is thus quoted by Léveillé(a):—"Vas sanguinem profundens . . . . deinde vero trajecto unco, sursum attollat et moderate intorqueat." Aëtius(b) repeats the same idea in very similar words—"vas, immissa volsella, extendemus et moderate circumflectemus." No further notice seems to have been taken of this method until, in June, 1829, M. Amussat(c) brought the subject before the Académie Royale de Médecine in an admirable paper, in which he gave a full account of the numerous experiments he had made upon animals with a view to determine the value of torsion as a means of arresting surgical hæmorrhage. The paper excited much interest, and was discussed by Larrey, Lisfranc, Ségalas, and others. Shortly after this paper had been read, M. Thierry(d) published a small volume upon the same subject. There can be no doubt that he had been conducting his experiments independently of M. Amussat, and that his results were original; still there is also no doubt that the latter had the advantage of priority, as he had deposited with the Academy a sealed packet containing an account of his investigations at a distinctly earlier date, and before his subsequent communication was ready. The subject was again discussed, and the claims of MM. Amussat and Thierry were considered at subsequent meetings of the Academy.(e) M. Velpeau also laid claim to a share of the honour of the discovery. He had, it appeared, employed torsion in some operations as early as 1828, and had during the early part of 1829 demonstrated its value to his students; he does not, however, appear to have investigated the subject scientifically, nor to have employed it systematically, until after the appearance of Amussat's paper. His earlier cases proved most unsuccessful, this being due apparently to his not having thoroughly understood the principles involved, and not having practised it with due care.(f) Velpeau did not publish any account of his experience of this method till 1832.(g) From this time, with the exception of some occasional references to this subject in the current literature of the day, no important work appeared till Dr. Fricke and his assistant, Dr. Rupp, published their essay on Torsion,(h) in which they gave a detailed account of the results of their practice at the Hamburg Hospital.

In the following year appeared the "Leçons Orales" of Dupuytren,(i) in which he discusses at length the advantages and disadvantages of torsion as a hæmostatic; and about the same time Lisfranc (k) also published his important work on the different methods of causing the obliteration of arteries, in which he gives a very excellent account of torsion. This method seems to have been very generally employed in the French Hospitals about this time, and to have given rise to great difference of opinion as to its real value. In 1836 two important works appeared, in both of which torsion is considered at length; these were Sanson's work on Hæmorrhage,(l) and a second edition of Manec's prize essay

(a) "Nouvelle Doctrine Chirurgicale" (Paris, 1812), vol. iv. p. 549.

(b) Lib. xiv. cap. 52.

(c) *Archives Générales de Médecine*, 1829, vol. xx. p. 606.

(d) "De la Torsion des Artères," par le Docteur Alexandre Thierry. Paris, 1829.

(e) *Archiv. Gén. de Méd.* 1829, vol. xx. p. 609, and vol. xxi. p. 457.

(f) See Schrader, "De la Torsion des Artères," Dissertation inaugurale etc., 1830, traduite par Dr. A. Petit (Paris, 1831), note, p. 9.

(g) See "Nouveaux Eléments de Médecine Opératoire" (Paris, 1832), vol. i. pp. 123, 320.

(h) "Ueber die Torsion." See "Annalen der chirurgischen Abtheilung des allgemeinen Krankenhauses in Hamburg," herausgegeben von Dr. Fricke (Hamburg, 1833), vol. ii. p. 150.

(i) Dupuytren, "Leçons Orales de Clinique Chirurgicale" (Paris, 1834), vol. iv. p. 404.

(k) Lisfranc, "Des diverses Méthodes et des differens Procédés pour l'Oblitération des Artères" (Paris, 1834), p. 79.

(l) Sanson, "Des Hémorrhagies Traumatiques" (Paris, 1836), p. 156.

on the Ligature of Arteries.(m) After this date the subject seems to have attracted less and less attention, being merely briefly referred to in text-books, and very rarely practised in capital operations either in this country or on the Continent.(n)

Mr. Syme has recently, both in his writings(o) and his practice, advocated a more extended use of this method, and his example has been followed by several Surgeons, so that the controversy respecting its value is likely again to be carried on with the same activity as it was more than thirty years ago.

We must now proceed to consider the effects produced upon an artery by the process of torsion, and the clinical advantages, if any, which it possesses over the ligature.

Torsion may be employed in several different ways.

1. Limited torsion consists in seizing the open end of a bleeding vessel with a broad-mouthed forceps, having some convenient catch for keeping it closed, and then, after the artery has been gently drawn forwards so as to free it from the surrounding parts, and cleared of structures which may be attached to it, another smooth-mouthed forceps is to be applied transversely across the vessel at its base, and held firmly, whilst the first forceps is steadily and slowly twisted in the axis of the vessel. The twisting may be continued until the end of the vessel comes off, as is advised by several of the French authors quoted above; or it may be continued for four, six, eight, or ten times, according to the size of the artery, the twisted end being left adherent.

2. Free torsion differs from the last in requiring the application of only one pair of forceps. The vessel is drawn out and then twisted, no attempt being made to prevent the torsion from extending any distance up the course of the artery. Several authors have pointed out the very serious results which may follow this practice when applied to vessels of any considerable size. Dupuytren more especially points out that small branches arising from a trunk at a short distance above the surface of the wound are liable to be torn across, and thus give rise to troublesome hæmorrhage. Besides this, the vitality of the walls of the trunk is impaired, and the nervous twigs in contact with them are torn through. Free torsion may of course be applied until the twisted end separates; but this is rarely necessary, and would be undesirable.

3. Torsion, applied to the continuity of an artery, was first suggested by Thierry in the treatment of aneurism. M. Thierry succeeded in producing obliteration of the carotid artery both in dogs and horses, but no one appears to have been rash enough to have employed this method on the human subject, and to any one inclined so to do we recommend an examination of the plates in M. Thierry's work. To effect the torsion, a strong blunt hook is passed beneath the artery, which is then raised and twisted into a knot.

In addition to these measures, M. Amussat introduced what he called the "refoulement" of the internal and middle coats of the vessel—that is to say, a folding back of these structures, so as to partially block up the canal. When torsion is to be applied to an open orifice, he recommends that the vessel should be seized in the ordinary manner by the torsion forceps, and then that the second forceps should be applied transversely, and the vessel be drawn through its blades whilst moderately compressed. He shows that the pressure of the forceps is sufficient to divide the internal and middle coats, and that these are then pushed upwards so as to form a complete plug to the vessel, whilst the twisting of the external coat serves to increase the security. He shows also that torsion alone gives rise to a slight degree of "refoulement" of these coats, thus producing an incurvation which acts almost as a valve in impeding the onward current of the blood. He subsequently employed the same method to obtain obliteration of an artery in its continuity as follows:—After laying bare the vessel in the ordinary manner, he seized it with a blunt forceps which had a smooth mouth, and holding it firmly, he applied another forceps in an exactly similar manner immediately below it, and then drew the latter downwards along the course of the vessel, so as to drag the internal and middle coats into the distal part of the artery. The effect of this procedure was to produce a plug, which the pressure of the current constantly tended to drive further and more tightly into the tube beyond. The portion of the cellular coat thus denuded of the internal and middle tunics became rapidly lined by a deposit of fibrin, and the vessel was permanently occluded. A very reasonable objection to this method is that there would be great danger of an aneurism being produced; no such result followed in the animals on which the experiment was tried, and no one has, as far as we are aware, yet attempted to employ it on the human subject.

The advantages offered by torsion are, according to its advocates, the following:—

1. That it is a natural method of closing a vessel, and that it is founded upon a close study of natural processes.

2. That wounds heal more rapidly in consequence of no foreign body being left in the wound.

3. That a vessel may be completely closed by this means, and that secondary hæmorrhage rarely, if ever, occurs after torsion when properly applied.

4. That it may be applied by a Surgeon without the aid of an assistant, and is, therefore, peculiarly valuable on an emergency.

To these advantages it may reasonably be objected that no proof has yet been brought forward of unusually rapid healing taking place after torsion. In four cases of amputation of the thigh performed by M. Amussat, three of which were children, only one healed by what might be called the first intention, and this was in a child aged seven, whose thigh was amputated for white swelling of the knee. The result of the experience of Surgeons generally was, that nothing was gained in the time required for healing by the substitution of torsion for the ligature. As regards the absence of secondary hæmorrhage, the evidence is in favour of torsion: in no case in which the method has been properly employed can it be said to have been followed by this accident, the only questions being whether we have, at present, a sufficient number of cases fully recorded to justify such an estimate. In some of the cases mentioned by Velpeau and others, hæmorrhage, both immediate and secondary, did occur, but in all these there seems good reason for believing that the operator, and not the method, was at fault. The most important question, however, yet remains unsolved—viz., how far torsion tends to set up inflammatory and suppurative mischief in the track of the vessels. There seems to be no doubt that torsion applied to veins is very dangerous: in the only two cases in which it is distinctly recorded that the veins were twisted death followed, the vessels being found much inflamed; and in one case pus was found within the canal. In several of the cases which died the stumps were found in a very unsatisfactory state, and in one case of Velpeau's, in which he had attempted and, as he thought, succeeded in getting primary union, a very extensive abscess was found running up as far as the hip-joint. Taking all the recorded cases together, there is certainly no advantage, as far as decrease in mortality, on the side of torsion. At the same time it must be admitted that many of these cases were very unfavourable subjects. We have omitted to speak of the pain produced respectively by the ligature and by torsion, because this can hardly be considered an important matter since the introduction of chloro-

(m) Manec, "Traité Théorique et Pratique de la Ligature des Artères," ouvrage couronné par l'Institut de France, 2e édition (Paris, 1836), pp. 22 and 30.

(n) Further references may be made to Chelius's "System of Surgery," translated by South, vol. i. p. 310; Miller's "System of Surgery," p. 224; Kust's "Theoretisch-practisches Handbuch der Chirurgie," Berlin, 1830, vol. ii. p. 288; Kust's "Magazin," vol. xxx. part 3; Frorieps' "Notizen," January, 1830, No. 577, sect. 286; May, 1831, No. 732, p. 301; Casper's "Repert. für die gesammte Heilkunde," vol. xx., iv., p. 3.

(o) See *Lancet*, May 5, 1860, p. 446.

form. In like manner the greater length of time required for torsion is hardly a subject for consideration for the same reason. Torsion has not been employed in the case of a patient with disease of his arterial coats, and therefore we cannot say positively whether it would succeed or not. There is no doubt that it requires more skill and manual dexterity in the Surgeon than the application of a ligature does. It must be remembered, however, that the latter proceedure is now performed with far greater care than was formerly the case, the arteries only being included, and that therefore the complaints of the older Surgeons of the very tedious process of separation of the threads have not so much weight as formerly, when much of the surrounding tissue, and even veins and nerves, were taken up with the vessel.

In conclusion, we may state our belief that experiments on the lower animals will add little or nothing to our knowledge on this subject, and that careful clinical observations can alone solve the problems yet to be worked out.

THE WEEK.

TOPICS OF THE DAY.

Has Mr. Buckle or any other enthusiastic expounder of the "reign of law" ever ventured to assert that there is any law regulating the number of persons who are to be destroyed by earthquakes in a hundred or a thousand years? Paradoxical as it may appear, an ingenious philosopher might find arguments to support such an assertion. On the one hand are the laws which govern human dispersion and occupation, and on the other the laws which regulate the origin, progress, and extension of earth-waves. From the operation of both, he might urge, it certainly ought to be possible to calculate the numbers which shall be engulfed in any given period of sufficient length. It will be a very long time, however, before science will overcome or moderate the horror with which mankind hears of such awful catastrophes as the late telegrams from Peru have announced. If there be no exaggeration, more than 20,000 lives have been lost in a succession of earthquakes which lasted from the 13th to the 16th of August, overthrew in Peru and Ecuador eight cities, and, by the enormous tidal waves which followed the telluric convulsions, destroyed a large amount of shipping. Unfortunately, the character of the country renders the account only too probable. In one part or other of the great volcanic region of the Andes earthquakes are of almost daily occurrence. One town in Peru, Copiapo, has been destroyed three times—in the years 1773, 1796, and 1819—after regular intervals of twenty-three years. Mr. Clement Markham, in a letter to the *Times*, writes that in the district about Arequipa, one of the cities said to have been destroyed, shocks of earthquake are of such common occurrence that the houses are built on purpose to withstand the shocks—of one story, with no deep foundation, but substantially of volcanic stone, each room with a vaulted stone ceiling. If it be true that this city has been destroyed, it is proof of the tremendous force of the convulsion.

The conclusion of the Abergele inquest allows us to review impartially the conduct of the coroner, Dr. Evan Pierce, in the difficult position in which he found himself placed. We think that the sequel proves that his conduct of the inquest was not only undeserving the censure it received from various quarters, but that he, in fact, conducted his official duties in a very praiseworthy manner, and mainly contributed to the full investigation of the case. His course of action seems to have been guided by the acknowledged rules of a coroner's duty, and in obtaining the assistance of a legal assessor he acted on his own convictions, and not, as Lord Farnham has endeavoured to show, from pressure brought to bear on him from without. As to the last-mentioned nobleman, his indecorum in interfering with the coroner in the discharge of his duties would in many other districts have led to a committal for contempt of court.

The guardians of St. Pancras, it appears, are determined to carry out the Vaccination Act with a high hand. They are advertising for a person to prosecute offences against the Act, and otherwise to enforce its provisions. They offer a salary of £100 a year.

We announced two or three weeks ago that the Spanish and Portuguese authorities have for some time past enforced quarantine on all vessels coming from England on the plea that English ports were infected with cholera. A telegram was received at the Foreign Office on Saturday last, from her Majesty's Chargé d'Affaires at Lisbon, stating that the Portuguese Board of Public Health have now declared all English ports free from cholera, and that there will be no more quarantine. The mistake has undoubtedly arisen from the frequent occurrence of the word "cholera" as a cause of death in our Registrar-General's Returns during the past summer. It will be difficult to prevent such misapprehension if the epidemic disease known as cholera is to retain its name, unless other scientific designations be found for those cases of sporadic "cholera," cholera infantum, and aggravated diarrhœa, which summer in our climate always brings.

The time for registration of graduates for the privilege of voting for the Scottish Universities will soon expire. We can only repeat our hope that Medical men who have the right will not hesitate to incur the trifling expense which the franchise entails. We are informed that the Medical candidate for the Universities of Edinburgh and St. Andrews, Dr. B. W. Richardson, is constantly receiving fresh promises of support from the Medical members of the constituency. Amongst others, Sir Charles Locock has promised him his valuable aid.

A telegram from Brussels, dated September 11, states that Sir W. Jenner has been called in consultation with Dr. Spring on the state of the health of the Crown Prince.

We regret to observe that the well-known Physician to the Parisian Embassy, Sir Joseph Olliffe, has been seriously ill at Deanville. He was attended by Nélaton, who, on his return to Paris on Friday last week, reported him recovering.

An accidental case of poisoning by putrid suet (?) is reported from Yorkshire. It is said that two persons, named Coulson, of Drax Hall, in the East Riding, partook of an apple dumpling made of suet which had been chopped and salted four months before. They both died. A servant girl who ate of the same pudding became ill, but recovered. We hope, at least, that there was a proper analysis made of the contents of the stomachs and of the viscera of the persons who died.

The revising barristers are unanimously not favourable to the pretensions and claims of the fair politicians who are besieging them. The question at issue remains to be decided in a higher court. In the meantime the common-sense view has been taken that as there is no precedent a new law must be necessary to introduce such a revolution as a female franchise.

HONORARY SURGEON TO HER MAJESTY.

The *Gazette* of the 17th inst. contains the nomination of Deputy Inspector-General of Hospitals T. Longmore, C.B., Professor of Military Surgery in the Army Medical School, Netley, to be one of her Majesty's Honorary Surgeons, *vice* Dr. Melvin, Inspector-General of Hospitals, deceased. The selection of Professor Longmore to this distinction will, we are sure, be gratifying to the Department and to Mr. Longmore's many personal friends both in this and foreign countries.

SMALL-POX AT SUEZ.

A correspondent at Suez informs us that some cases of small-pox having occurred among the lascar crew of H.M.'s troop-ship *Jumna*, it was only after a correspondence and special application to the Egyptian authorities that permission was obtained to put the patients on shore and have them admitted into the native Hospital for treatment. It certainly appears

strange that the possibility of such a contingency should not have been foreseen and provided for when the overland transport of troops from India was first organised and the Victoria Hospital established at Suez. If small-pox were to occur among troops on transit through Egypt, either to or from India, similar delay in the disposal of the patients might be attended with very serious results.

LOCK HOSPITALS AT THE CAPE.

The Bill for establishing Lock Hospitals at the military stations in the Cape of Good Hope command has received the sanction of the colonial Legislature, but the details have not yet been fully arranged.

HOSPITAL EXPENSES.

At the present moment, when public attention is being directed to the subject of the general management of Hospitals, a survey of the relative expenditures of the several metropolitan and provincial Hospitals is especially valuable. Such a survey is to be found in the excellent pamphlet which has been published by Mr. J. G. Wilkinson, Secretary to St. Mary's Hospital.(a) Secretaries are so apt to be partisans that it might at first sight be thought that Mr. Wilkinson's observations would be devoted to a disquisition on the superior merits of his own Hospital. But in this pamphlet we find nothing more than a "plain unvarnished tale" of the cost of maintaining the several London Hospitals. Mr. Wilkinson's object has been to show how the heavy expenditure of his own and other Hospitals might be reduced by proper care; and in demonstrating this he has compiled a number of valuable statistics which indicate some remarkable, and, we must confess, to us inexplicable, distinctions as to cost between the various metropolitan Hospitals. These discrepancies — for such they are—will best be seen on a reference to the tabular scheme which accompanies the pamphlet; but we may roughly sketch out a few of them for our readers. Taking, for example, one of the first items in the expenditure of an Hospital, that of diet, we see some very singular records. St. Mary's Hospital, with 141 beds occupied, expends £2564 per annum on the patients' food, while King's College, with almost exactly the same number, expends only £1680, a difference of nearly £900! "Again, the provisions at Charing-cross, with about three-fourths of the number of beds occupied in King's College, cost £1865, or £185 more than the latter and larger Hospital." Turning to the subject of nursing, Mr. Wilkinson tells us (and his statistics have been derived from the secretaries of the several Hospitals) that "the nursing at King's costs more than that at St. George's, and about half of that at Guy's, although the former contains more than twice, and the latter more than three times, the number of occupied beds. The Westminster Hospital contains about the same number of occupied beds as King's, while the expense of nursing does not represent one-third of the amount." These are serious and suggestive facts. What is their meaning? Clearly, either the patients are overfed in some of the charities, or starved in others. Either they receive too much attention in some Hospitals, or are insufficiently nursed in others. These are very grave conclusions, and they point, we should think, to the necessity for some arrangement by which a scheme of unification in expenditure might be arrived at. Mr. Wilkinson remarks that much might be done by the adoption of some uniform system of keeping Hospital accounts. He thinks that this end might readily be accomplished "were the several Hospitals to consent to furnish statistics of costs, etc., upon given forms to be previously agreed upon, and which might be published annually in a collective form, thus showing the working of the different institutions from year to year." There is one of Mr. Wilkinson's returns which is of considerable interest; it is that in reference to the proportion of in-patients admitted to each bed during the year. The figures are as follows, and they show an advantage which the county Hospitals possess over the metropolitan ones, and which is somewhat hard to explain: —Charing-cross, 10·5; Guy's, 10·5; King's, 12·7; London, 11·2; Middlesex, 9; Bartholomew's, 9·6; St. George's, 12·2; St. Mary's, 12·6; University, 10·9; Westminster, 11·5; Birmingham General Hospital, 16·7; Bath Royal United Hospital, 13·8; Manchester Royal Infirmary, 13·0. In summing up his inquiry, Mr. Wilkinson concludes that the difference found to exist in the cost of our London Hospitals is mainly owing to the extra diets, the drugs, and the system of nursing, and he asks whether, in some of these departments, retrenchment may not be carried out by all who are connected with the Hospitals putting their shoulders vigorously to the wheel. Mr. Wilkinson's views may be right—as we think they are—or may be unsound; but in either case his pamphlet will be read with interest and advantage not only by Hospital Physicians and Surgeons, but by that very large body of the public who are anxious to make our Hospitals what they should be, but what they certainly are not—efficient institutions for the treatment of disease among the *poor*.

(a) "Hospital Relief, and the Cost of its Administration in the Metropolis: being an analysis of the principal working expenses of the principal London Hospitals for the year 1867, with a commentary, presented to the Weekly Board of Governors of St. Mary's Hospital, on August 7, 1868." By Jos. G. Wilkinson, Secretary. Printed by order of the Weekly Board.

PROPOSED ASYLUM FOR IDIOTIC AND IMBECILE CHILDREN IN IRELAND.

We are glad to hear that the proposal, first made two or three years ago, to establish an asylum in Ireland for idiotic and imbecile children has within the last few months received such an impetus from the generosity of a member of our Profession that there are fair grounds for the expectation that the asylum will soon be in operation. A committee of noblemen and gentlemen, the Earl of Charlemont being Chairman and Lord James Butler Vice-Chairman, has for some time past been holding meetings and collecting money for this purpose in Dublin and Belfast. It was at first intended that £20,000 should be collected before commencing operations, but the disturbed state of the country, and the unhappy religious differences which so complicate all social and political questions in Ireland, interfered with the amounts contributed, and until recently barely £6000 had been collected, and the proposal seemed in a fair way of being indefinitely postponed for want of funds. Help, however, has latterly appeared in the person of Dr. H. H. Stewart, a well-known member of our Profession in Dublin, formerly Governor of the House of Industry, and latterly the proprietor of a thriving asylum for middle-class lunatics, in a healthy and beautifully situated locality on the banks of the Liffey, near Lucan, about seven miles from Dublin. Dr. Stewart has placed in the hands of the committee the immediate use of £4000, at a trifling rate of interest, with ultimate possession of that sum, and perhaps £1000 more, on the expiration of two rather advanced lives, together with the premises at Lucan, at which he has been carrying on the Asylum for Middle-class Lunatics, on the understanding that the original asylum shall be maintained in connexion with the new Asylum for Idiots. The committee at first hesitated as to the propriety of attempting to combine two such establishments, but finally decided on doing so, as, from the nature of the buildings already in existence, the necessary alterations for keeping the two classes of patients entirely separate, although under the same management and administration, can be easily effected. Besides, Dr. Stewart has no desire to bind them to carry out his plan, in case it should not meet with an encouraging amount of success. The original asylum is already a paying concern, and it is hoped that it will prove to be an assistance to, rather than a drag on, the new Asylum for Idiots. Under the circumstances, we

think the committee were justified in accepting Dr. Stewart's munificent offer on his own terms, and we trust that we may soon hear of the asylum being opened for the reception of patients, and that it may continue to advance in prosperity and importance as a national institution, to which, it should ever be borne in mind, the generosity of a member of the Medical Profession in Ireland has so largely contributed.

FROM ABROAD.—CLOT BEY—PROFESSOR VIRCHOW AND THE JEWS—CATHETERISM AND FALSE PASSAGES.

Of the early career of one of the most remarkable men of the period who has just passed away, Clot Bey, the *Messager de Toulouse* contains an interesting account.

"Clot was one of the most intelligent and, at the same time, one of the poorest Practitioners of Marseilles. He lived as a Bohemian, ill-clothed and ill-fed, drawing teeth now and then for the sailors, dining a little better when the extraction of a few molars put a little in his purse. Mehemet Ali, having taken it into his head to import civilisation into Africa, commissioned General Lirron to expedite workmen, Surgeons, savants, merchants, etc., to Egypt, each workman to receive 150 francs besides a free passage. Dr. Clot presented himself with a seedy coat, holes in his boots, and a shapeless hat. 'General,' he said, 'I am a Doctor in Medicine—here is my diploma. I have plenty of courage, but no clothes. All I ask is to try my fortune.' The general selected him. When Mehemet Ali passed his French consignment under review, he found that there was not one of the newcomers able to exchange a couple of words with him. Still Mehemet understood Italian, and one of the emigrants only was found who could speak that language fluently. It was Dr. Clot. Conversation was rapidly set up, and Clot as rapidly became a favourite of the Viceroy. Six months afterwards a School of Medicine and Hospital were founded. Clot studied Arabic so effectually as to be able to speak the language and peruse the Medical writers. He delivered his lectures in that language, received a commission in the army, and became Bey at the same time as Col. Selves became Pacha under the name of Soliman.

"Clot abdicated neither his nationality nor his religion, continuing all his life a Frenchman and a Catholic, and always employed all his influence for the protection of the Catholic missionaries. This point is to be insisted upon, as he has been accused of apostasy. He repaired, however, several times to Rome, where he was well received, thanked, and encouraged by the Pope. In fact, he lived and died a Christian. Many were the difficulties he had to overcome. Mussulman fanaticism interdicts all anatomical studies, and when he proposed dissections there was a general explosion. The ulemas, the muftis, and devotees of every description besieged the Viceroy and demanded of him the closure of the school. Dissecting bodies was indeed a profanation. Mehemet put them off, and bade Clot Bey commence his demonstrations. The Professor, forceps and scalpel in hand, opens the chest of a corpse, when one of the students, more fanatical or bolder than the others, rushed upon him and stabbed him with a poignard. The blade slid over the ribs, and Clot Bey, perceiving that he was not seriously hurt, took a piece of court plaster from his dressing-case, and, applying it to the wound, observed to his class—'We were speaking of the disposition of the sternum and the ribs, and I now have to show you why a blow directed from above has so little chance of penetrating the cavity of the thorax.' This proof of *sang-froid* gave him an incontestable moral ascendant over his pupils. He continued his lectures, and turned out some skilful Practitioners. He was Officer of the Legion of Honour, and Commander or Grand Cross of almost every order of the world, having more than sixty decorations, although never wearing other than the red rosette, the cross of his own country. In one of my conversations with him, I asked him his matured opinion on the plague of the East, a disease which he had studied for a quarter of a century, and had so successfully combated. 'Is it contagious?' 'Certainly not. For eighteen years it has existed wherever I have been. I have passed entire days in visiting patients, changing their position with my own hands because no one else dare touch them. Well, after thus being in contact with hundreds of them, I have gone home and have found running to meet me my only daughter. She would throw her arms round my neck, and I pressed her to my heart, never for an instant believing that I exposed her to any danger. I entirely deny contagion.'"

An accusation has recently been made against Professor Virchow. Two vacancies for assistants in the Berlin Pathological Institute, of which he is the Director, having recently occurred, he recommended from amongst several candidates Drs. Cohnheim and Wegner as the persons best qualified to fill the posts, and they were accordingly appointed to them by the Minister of Instruction. Among the rejected candidates was a Dr. Aufrecht, a Jew, and a Jewish journal, published at Bonn, immediately circulated the report that he had been rejected by Virchow because he was a Jew; and the statement was copied, with due comments and amplifications, into the Prussian democratic journals, most of which, we believe, are in the hands of Jews. So absurd did the supposition seem that he should have set up as a proselyter, that Virchow did not at first think it worth while to take any notice of the statement. Its reiteration in an aggravated form and its diffusion have obliged him to advert to it, which he does in a tone of indignation in the last number of his *Archiv*. In the first place he observes that his opponents have none of them stated that the persons appointed are unfit for their posts, or that the rejected candidate in question is in possession of superior qualifications. He declares that, according to his own conviction, they are those of the candidates who are best fitted by their acquirements; and, so far from having felt any animosity towards their Jewish rival, he had formerly recommended him to another post, which he, indeed, obtained through such recommendation. Jews and Christians are alike welcomed at the Institute, and enjoy its privileges without distinction. Had he found that a Jew was best qualified and suited to fill the post, Virchow states that he would have had no hesitation in recommending him to the Minister, and he has as little doubt that he would have been appointed, just as Jewish assistants are appointed in the Hospitals and Kliniks; but he cannot go so far as to consider his being a Jew was a special recommendation. "I deny it not," Virchow concludes, "that among the Jews there are highly distinguished men, and I will even confess that they are proportionally numerous, but every Jew is not to be compared with a Spinoza or a Lasker. The pride of race and family easily leads to boasting and injustice. That I understand, although I do not admire it. Still I do not doubt but that this peculiarity, as also the excessive susceptibility of the Jews, will disappear with the full acknowledgment of their rights, and to their obtaining this I shall always be ready to lend my aid."

A report, read at the Academy of Medicine, by M. Gosselin, on a paper which purported to detail some cases of stricture in which forced catheterism was resorted to, but which was, in fact, not employed, was of interest by reason of a short discussion it gave rise to, in which the President, M. Ricord, bore the chief part. He observed that, on principle, he never stated that a stricture was impassable, but only that it had never been passed, and he terms that catheterism forced which one is forced to employ where we can no longer wait to empty the bladder. He has often observed that, the smaller the bougies and catheters employed were, the less easily did they penetrate, while those of a tolerably large volume entered without difficulty. The great art in these cases is to enter the bladder how we can, in thoroughly knowing, so to say, every hole and corner of the urethra. Grooved catheters, large catheters, wax bougies, etc., all may be good as soon as they can be employed. What he has often found of service is to incise the urethra from before backwards with his urethrotome, first guarding it with a kind of funnel, and endeavouring to keep in the mesial line. Sometimes we get out of this and make false passages. This was often done by our predecessors without being aware of it, and after repeated catheterism the urine took its course through such passages. And false passages so "methodised" are fistulæ opening into the urethra, and are far preferable to external fistulæ. M. Gosselin observed that, for his part, had he to choose between

one of those "methodised" false passages and external urethrotomy, he should certainly choose the latter, which, under the rules now laid down for its performance, without a conductor, is not a very difficult operation. He has practised it four times, and always with success; while in trying to make a false passage you can never be certain of keeping in the mesial line and penetrating the bladder. M. Ricord explained that he did not recommend trying to make a false passage, but that such was often met with, and might be utilised. M. Demarquay admitted that forced catheterism might succeed, but that we should be always ready to resort to external urethrotomy if necessary. Prior to the attempt the patient might have been able to pass urine, but the mucous membrane of the urethra, already softened by inflammation, may easily become torn and thrust like a plug into the strictured part. The patient would then be no longer able to pass urine, and urethrotomy would be indicated. M. Huguier thought that to speak of "methodising" false routes was to hold out encouragement to the ignorant and the clumsy. M. Ricord did not fear this interpretation put on his words, and could only repeat that if in all these cases course could be given to the urine by a false passage—an internal fistula—he should prefer the external urethrotomy, which produces an external fistula.

THE POOR-LAW BOARD.

The twentieth annual report of this Board, just issued, brings the history of pauperism in England and Wales, so far as regards expenditure, up to March 25, 1867. The results of the past agitation in favour of Poor-law reform, as shown in the erection of infirmaries, etc., are exhibited up to a more recent date. During the year ended at Lady-day, 1867, there was expended in and about the relief of the poor a sum of £6,959,841, being an increase of £520,326 as compared with the expenditure of the previous year. The increase per cent. was 8·8, and the increased rate per head on the population 5d. This increase has occurred in the several counties in a ratio varying from 21·0 in Middlesex (the metropolitan portion) to 0·3 in Notinghamshire—the East Riding of Yorkshire alone exhibits a decrease at the rate of 0·3. The information as to the numbers in receipt of relief is brought up to January 1, 1868, on which day there were, of all classes, 1,040,103 as against 963,200 on January 1, 1867, being an increase of 8·0 per cent., while of adult able-bodied there were relieved on January 2, 1868, 185,630, being 27,312 (or 17·3 per cent.) more than on January 1, 1867.

With regard to the metropolis the Board state that "although every union and parish exhibits some increase, the rate of increase varies very materially, the largest, namely, 76 per cent., being in the Poplar Union. In Kensington, Paddington, St. Pancras, St. Mary, Islington, Bethnal Green, the Strand Union, the St. Saviour's Union, and other parishes or unions, it varies from 27 to 35 per cent. So far as we have been able to ascertain the causes of this increase, particularly in the metropolitan district, we think that it may be mainly attributed to the general depression consequent upon the commercial crisis of 1866, which had been preceded by much speculation and overtrading. Large numbers of workmen were suddenly thrown out of employment, many of whom had been attracted to the metropolis by the high rate of wages obtainable in the iron ship-building yards, the building trades, and the numerous railway works in progress, in all of which an almost unprecedented demand for labour had for some time existed.

"The cholera which prevailed in the summer and autumn of 1866 added still further to the distress thus caused, carrying off in the east of London many of the heads of families, whose wives and children were left almost entirely dependent upon the poor-rates.

"This calamity was followed by a winter of great severity, causing the suspension of outdoor employment, and an urgent pressure for relief; and, as in such a case an easy and abundant supply actually creates or increases the demand, even the large sums which were so liberally subscribed by the public to relieve the distress, and which in many instances, it is to be feared, were distributed without due discrimination, tended to aggravate the evil."

The steps taken with the view of carrying out the Metropolitan Poor Act, 1867, are described at length, especially the alterations in the mode of administering the law in parishes heretofore under local acts, and the changes considered requisite in certain places already under the provisions of the Poor-law Amendment Act. The steps taken with respect to the sick and insane poor, the improvement of whose condition was one of the main objects of the Metropolitan Poor Act, form so interesting a part of the report, especially to all who are likely to have paupers of those classes under their charge, that it seems desirable to give a detail of those steps in the words of the report. The Board say:—

"We have, by an order, dated June 18, 1867, combined the whole of the unions and parishes in the metropolis into a district, termed the Metropolitan Asylum District for insane, fever, and small-pox cases.

"Under this order a board of management has been constituted, consisting of forty-five members elected by the guardians of the several unions and parishes in the district, and of fifteen members nominated by the Poor-law Board under the power granted to them for this purpose by the 11th section of the Act.

"The managers have since been actively engaged in carrying into effect the objects for which they were appointed. They have decided on erecting two asylums for the insane, each to accommodate 1500 patients, one situated at Leavesden, near Watford, on the north side, and the other at Caterham, near Croydon, on the south side of the Thames. Sites have been purchased for both, and plans for the buildings have been approved by us.

"The managers have also determined to erect three asylums for fever and small-pox patients, one for the north-west, another for the north-east, and a third for the southern district.

"For two of these asylums very eligible sites have been secured; for the north-western in the parish of Hampstead, and for the north-eastern at Homerton; and the managers are in treaty for a site at Stockwell for the southern district.

"We have also formed the following sick asylum districts:—

"1. The Rotherhithe Sick Asylum District, consisting of the St. Olave's Union, and the parishes of St. Mary Magdalen, Bermondsey, and St. Mary, Rotherhithe.

"2. The Newington Asylum District, comprising the St. Saviour's Union, and the parishes of St. George-the-Martyr, Southwark, and St. Mary, Newington.

"3. The Kensington Sick Asylum District, comprising the parishes of St. Mary Abbotts, Kensington, and St. Margaret and St. John, Westminster.

"4. The Poplar and Stepney Sick Asylum District, comprising the Poplar and Stepney Unions.

"5. The Central London Sick Asylum District, comprising the Westminster and Strand Unions, and the parishes of St. Giles-in-the-Fields and St. George, Bloomsbury.

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"In St. Giles, Camberwell, a committee has been appointed to consider the arrangements for erecting an infirmary, but they have not yet submitted to us a report or plan.

"In St. Luke, Chelsea, the guardians have reported that they have secured a site in every respect suitable for the purpose of an infirmary on very advantageous terms.

"In the Fulham Union the question of providing additional Hospital accommodation for the sick poor was referred to a committee, and instructions have been given to an architect to prepare plans, which are under consideration.

"In St. George-in-the-East the guardians propose to purchase certain land and premises lying on the south side of the workhouse of the parish as a site for the erection of a new infirmary at a cost of £7000, and by an order, dated January 15, 1868, we have sanctioned the expenditure.

"In St. George, Hanover-square, we are informed that the guardians are desirous of carrying out the wishes of the Board with reference to the infirmary arrangements, and will be enabled to do so as soon as their children can be removed from the workhouse at Little Chelsea.

"In the Hackney Union the requisite separation of the workhouse from the infirmary, with ample accommodation for the purposes of each, can, it is found, be readily made on the existing site.

"In St. Mary, Lambeth, the guardians have purchased 3½ acres at Norwood, adjoining their industrial school, as a site for an infirmary, and by an order, dated December 31, 1867, we have sanctioned the requisite expenditure."

"In St. Marylebone the guardians are about to make arrangements for placing their infirmary under separate management.

"In Mile-end Old Town the guardians have a detached infirmary which will accommodate ninety-five persons, and, when the lunatics who occupy another detached building are removed, the additional accommodation available, when the requisite offices for the service of the infirmary are constructed, will amply meet the requirements of the hamlet.

"In Paddington the guardians have had plans prepared for such further additions as may render their infirmary sufficient for their requirements, and enable them to place it under separate management.

"In St. Pancras the guardians have purchased a site comprising three acres and a half at Highgate for an infirmary for the accommodation of 500 patients. The plans for the building have since been submitted to us.

"In St. Leonard, Shoreditch, the guardians propose to buy additional land, and to build a Medical officer's residence and other offices, and to adapt for infirmary purposes the building at present occupied by the imbeciles; but in this parish and in those of Clerkenwell and St. Luke, Middlesex, and in the Holborn and Whitechapel Unions, we have still under our consideration the best mode of effecting the complete separation of the sick and infirm from the healthy inmates, and of securing at the same time adequate provision for each of these classes.

"In the Wandsworth and Clapham Union the guardians appointed a committee to consider the subject, and have adopted their report. Plans for a new infirmary have been prepared.

"The guardians of the parish of St. Mary, Islington, are proceeding with the erection of a new workhouse, the plans for which, with a separate infirmary in connexion with it, have received our approval.

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"When all the measures which we have described shall have been completed, the removal, from the workhouses, to suitable buildings provided for them, will be effected of the patients suffering from fever and small-pox, of the harmless and chronic lunatics and idiots, of the children, and of the paupers suffering from acute disease, and we do not doubt that ample room will then be left in the workhouses for the due relief, classification, and management of the able-bodied poor of both sexes and of all classes, and of the aged and infirm."

Pending, however, the completion of these arrangements, temporary buildings have been provided for certain classes of the poor by most of the metropolitan unions and parishes.

With reference to the outdoor sick poor, it appears that, where the guardians concur in the proposal, the Board are about to issue orders for the election of dispensary managers and for the appointment of dispensers.

A considerable part of the Report is devoted to the inquiries into the condition of the workhouse infirmaries in the metropolitan district and the provinces, conducted by Dr. Smith, the Medical officer of the Board. Dr. Smith's report appeared as a Parliamentary paper, and has already been before our readers. With reference to the condition of the sick poor, the Board say :—

"We have transmitted to the guardians of the several unions a copy of Dr. Smith's report on the subject of workhouse infirmaries with a view to their considering the suggestions which it contains; and our continued attention will be given to the question of providing in the infirmaries all that may be necessary for the proper care and treatment of the sick inmates of workhouses.

"We desire, however, with reference to the sick wards of the workhouses, to point out that they were originally provided for the cases of paupers in the workhouse who might be attacked by illness, and not as State Hospitals into which all the sick poor of the country might be received for Medical treatment and care. So far, indeed, is this from being the case, that at least two-thirds of the sick poor receive Medical attendance and treatment in their own homes.

"It is also a very general practice on the part of the guardians of unions to subscribe annually, under the provisions of 14 and 15 Vict. c. 105, s. 4, to the Hospitals and Infirmaries in their neighbourhood, with the view of sending to them the most serious cases of accident or illness, so that the paupers suffering under dangerous and difficult diseases may have the benefit of the combined skill and complete appliances for Medical or Surgical treatment which are afforded by these institutions.

"It is nevertheless highly important that the workhouses should be supplied with all reasonable and proper appliances for the treatment of diseases of every kind; and there can be no question of the necessity of cleanliness, sufficient space, good nursing, and of the adoption of everything which may tend to promote a cure or alleviate suffering. To secure these important objects our earnest endeavours will at all times be directed; and we do not doubt that we shall have the willing co-operation of the guardians."

The Report admits that the subject of an equalisation of the poor-rate is one of much importance, but adds that, bearing in mind that by the Metropolitan Poor Act 1867 about one-third of the total expenditure for relief is already made a common charge, and that, as yet, there has not been sufficient experience of this provision, it appears "that the time has not arrived for forming any reliable conclusion on the subject."

The Report refers to the labours of Dr. Smith towards establishing uniformity in workhouse dietaries in the provinces, and states that the Board have taken measures to establish a uniform dietary in the metropolis, since there the habits of the labouring population do not so far differ as to place any obstacle in the way of such an arrangement.

Much information is given as to the education of pauper children, new workhouses, emigration, etc., and reference is made to the steps taken by the Board on the passing of the Vaccination Act 1867. We have already published their circular letter on the subject, issued on December 31, 1867. The Report concludes with an allusion to Section 1 of the Poor-law Amendment Act 1867, as affecting the constitution of the Board. By that section the Poor-law Board has been rendered permanent.

MEDICAL NOTES ON PRISONS, PRISONERS, AND PUNISHMENTS.

THE SURREY HOUSE OF CORRECTION, WANDSWORTH.

This prison is built in a remarkably airy, healthy situation, and contains accommodation for 742 prisoners. It consists of five radiating wings, with the ordinary central hall for offices, and in each wing there are three tiers of cells. Within the walls of this prison are all classes of offenders, from the brat a few years old, who has been sent for a whipping on account of some petty larceny committed to satisfy his appetite, to the felon who has been sent to prison with hard labour for two years. The account given by the magistrates of the county as to the causes which led to the building of Wandsworth Prison is a document well worthy of perusal; it gives a very lucid history of the various stages in the development of houses of correction throughout the country from the time of Richard II. downwards. The great reason given for the building of this prison was the crowded state of Brixton Prison, which must, from what we have read and heard, have been in a most awful state. Fever was rife among its inmates, and that it should spread rapidly and prove generally fatal is scarcely to be wondered at, when we learn that the prison was so crowded that four people had often to sleep in one cell scarcely large enough for a solitary occupant, and that three of these had to occupy a space only three feet nine inches in width. The abominable crimes which were the result, and the unrestricted intercourse thus permitted among the prisoners, struck at the root of discipline, and the punishment of imprisonment became a regular training to evil rather than an incentive to well-doing. So little was this punishment dreaded, that it became impossible to prevent those under sentence from shouting and singing ribald songs on their way to the prison. Matters changed, however, when Wandsworth House of Correction was opened in 1851. The prison was planned and erected under the supervision of the well-known Mr. D. R. Hill, of Birmingham, and it was resolved to carry out in it the separate system to the fullest possible extent. In accordance with this resolution, all prisoners were, and are, compelled to wear masks when out of their cells, and the chapel, the school-room, and the working rooms were all to be built in accordance with this system.

Nothing strikes a visitor more forcibly on entering this prison than the peculiar appearance presented by the masked prisoners gliding about engaged in cleaning the floors or in

their other prison avocations, for here the system, although abandoned in almost every other instance, is still kept up in all its integrity. Originally it was introduced as an additional means of isolation; when the separate system first came in vogue it was supposed that prisoners would thereby be prevented from recognising each other, and that their minds, being thus more completely abstracted from the outer world, would be more susceptible of the improving or reclaiming influences brought to bear upon them. No one who knows the criminal classes need be told that such a project was utterly futile—they have their passwords and signs, closely kept and guarded as those of freemasonry, and before a prisoner is twenty-four hours in prison all his old pals are aware of his presence. Nowadays this reason is no longer assigned for the perpetuation of the masks, but it is alleged that men not utterly bad may land in prison, submit to their sentence with propriety, and pass out into the world again wiser and better men, not to be dragged down by old prison associates presenting themselves at inconvenient or unwished-for times. This might be all very well, and with the spirit which prompts to such actions we most heartily sympathise, were it not that in the intermediate stages no such privacy is secured; in the common gaol all are compelled to herd together when engaged in exercise and suchlike periods, and every facility is thereby afforded for becoming perfectly familiar with each other's features, not in the felon's garb, which is in all cases a kind of disguise, especially when the hair and beard are cut short, but in their own ordinary attire. For this same reason the compartments in the chapel are continued, although many strong objections are, and have been, brought against them—none, to our mind, more telling than that given by an old gaolbird when urged to say whether the means of communication were facilitated or the reverse by the removal of the old partitions. With a grunt he replied—"If yer wanted ter see wot a cove did, would yer shet 'im up in a box?" Scraps of paper will be secured and thrust under the doors, a gentleman in a central compartment will sham sickness and occasion the removal of all those between him and the radiating passages, and much can be done by judicious knocks when hands and feet are both concealed from the overlooking warders. John Clay had, and we believe justly, a rooted dislike to worship conducted in this way, and what good can any one expect to come of services so conducted that the prisoners may not take part in the responses, as is the case at Wandsworth, lest they should thereby be enabled to communicate one with another? The whole system powerfully reminds us of the old plan of dealing with lunatics—forcible restraint and coercion, as contrasted with the present plan of intelligent supervision. In prisons where they were formerly adopted masks and compartments in chapel have now disappeared, with anything but detriment to discipline.

Of the sanitary state of this prison we must speak in terms of high approval; it is beautifully clean, and there is little or no prison smell. The cell furniture is the same as usual, and the ventilation, which is good, is beyond the control of the prisoner. The floors are tiled, which most superintendents seem to prefer to asphalte; the washing basins are of copper, and, as well as the closets, are in good order. In many respects, the House of Correction, therefore, contrasts favourably with the county gaol.

One noteworthy feature in the discipline of this institution is that all prisoners are for the first month of their imprisonment deprived of the luxury of a bed or hammock; they have the ordinary supply of bedclothes, but have to lie on a plank bedstead.

A few words now as to the character of the labour exacted from the prisoners. As in most other prisons, the chief remunerative employments are matmaking, shoemaking, and tailoring, besides the picking of oakum. But besides these there are certain others for prisoners who have been sentenced to hard labour, such as crank work for pumping water and driving a mill for grinding wheat, hand mills for grinding wheat, and hard-labour machines, also driven by a crank, in a number of the cells. Of these, as instruments of reformation and discipline, we have something to say.

When, on account of his crimes against society, a man has forfeited to his fellows the right of personal liberty, his better regulated countrymen, in thus assuming a charge which he has shown himself incompetent or unfitted to retain, have certain duties to perform towards the criminal as well as to themselves. We do not care now to consider the question whether punishment should be prospective or retrospective, whether it should be looked upon as a payment made by the offender for his misdeeds merely, or a warning to himself and others that such misdeeds may not lightly be performed, or a combination of both; let us rather look at the matter from another point of view. It may be said that into almost all modern punishments *incapacitation* enters, for the time during which a criminal is undergoing his sentence he is isolated from the means of offending against the laws of society; and this incapacitation, of course, varies with the length of the sentence: in itself it does not constitute a part of the punishment. How, then, is the criminal to be employed during this period of forced inactivity from his ordinary pursuits? To this we reply that, apart altogether from any idea of punishment, the prisoner has forfeited his right to exercise any independent opinion as to what he should do or not do, and his fellow-subjects have become entitled to employ his labour in whatever way they think proper. Still further, being deprived of liberty, the prisoner is entitled to food, clothing, and shelter at the hands of his fellows; in return they may exact from him whatever labour they think proper, within reasonable bounds. We hold that no man is entitled to tamper with the health of another; no crime of which a man may be guilty can justify us in destroying him by inches, and this is what we really do if, by the hardships of a prison life, we introduce an element of disease which will carry the unfortunate man to his grave. Nothing, we repeat, can justify such conduct. If a man is sentenced to a term of imprisonment, it is our duty to set him free at the end of that time in as nearly as possible the same state of bodily health he would have enjoyed at the same period had he not been imprisoned—at all events, as nearly as possible in sound health. This, then, is the limit; within it any amount of work may be demanded of a criminal; and as, further, he has no right of selection, we hold it to be the duty of the prison officials to choose for him that which will prove most remunerative—it being, at the same time, really hard manual labour—for thereby the expense of his maintenance will fall less heavily on the ratepayers.

There is a fatal facility about oakum picking. Any one can do it, and it requires little or no trouble to teach those who are ignorant of the process. On the other hand, the labour thus employed may almost be said to be wasted; it is worth so little, there being now so little demand for the manufactured article. To teach a man a trade, on the other hand, takes much time and patience; but once acquired, it supplies its master with what we might call an unfailing means of maintaining life. Labour is the true philosopher's stone which transmutes all the baser metals into gold, and it should not be wasted. It was long a favourite notion with many, that men might be deterred from crime by harsh treatment, and, as the prisoners had displayed an indisposition to labour aright outside the prison, their work inside was made as distasteful as possible. We need hardly say that such criminals were not thereby induced to resort to honest practices when they regained their liberty. One of the most hateful of the plans whereby labour might be rendered distasteful and deterrent was the introduction of the so-called hard-labour machines, of which, we regret to say, no fewer than 120 are to be found in Wandsworth Prison. These machines are so constructed that a certain force has to be overcome in each turn of the handle, and this force can be increased or diminished by adding to the weight pressure on the machine. The number of turns each prisoner has to make varies, and may amount to 10,000 or 12,000 in the course of the day. But here, again, one great and important means of discipline is dispensed with: prisoners may do their work when and how they like, so it is done—fast or slow, with frequent rests or no rests, so the tale is complete at the close of the day. The labour is totally wasted. The other forms of hard labour in use at Wandsworth are the cranks for raising water from an artesian well for the use of the prison. Now, as the supply required must vary, so the amount of work of this kind demanded must be variable. To this we also object.

All the bread used is baked in the prison, and the wheat is also ground into meal by means of cranks similar to those of the pumps, and attached to a large mill; partly also by small hand mills. The brown bread thus prepared is of very good quality, but the amount of labour consumed in its preparation is hardly adequate to the value of the product. Mat-making in looms is also recognised as hard labour. The hours of labour exacted from the prisoners are at the hard-labour machines and mat-making ten hours a day; at the corn mill or pumps six hours a day; but the prisoners engaged in the latter occupations have also to pick 8 lbs. of oakum a week.

The great objection to the labour system, therefore, as adopted at Wandsworth, is that sufficient advantage is not taken of it—that it is not rendered more remunerative. In this matter the prison officials are not to blame; it is the duty of the visiting magistrates to see that the expense of keeping up such an institution does not press more heavily than it ought on the ratepayers. We admit that there are difficulties in the way, the chief of these being the curse of short sentences, for what can be done with a prisoner who is sent to a house of correction for ten days or a fortnight? Practically the criminal is not benefited; he leaves the prison no better fitted to procure himself a livelihood except by crime. The dread of the unknown terrors of a gaol has passed away, for familiarity, in this as in other matters, breeds contempt; and it would probably have been better had he never entered the walls. The great object now-a-days of prison discipline is to reform the criminal, but reformations are not effected in a fortnight; in one inured to crime they are nearly unheard of, and the withdrawal from his fellows during the period of his sentence only whets his appetite for the pleasures to be obtained by him through a life of crime.

REVIEWS.

The Surgical Treatment of the Diseases of Infancy and Childhood. By T. Holmes, M.A. Cantab., Surgeon to the Hospital for Sick Children, etc. London: Longmans and Co. 1868. Pp. 642.

A comprehensive treatise on the Surgical affections of children from the pen of one with experience of his own, and well acquainted with French and German literature of this subject, has been much required for some time. An excellent work by a former Surgeon to the Ormond-street Hospital has done good service, but so fast have we progressed in the accumulation of Surgical as of all other scientific knowledge, that it has become necessary for us to take stock, as it were, of the many recent contributions to journals and reviews, and to have the differing views of modern authors on the nature and treatment of children's diseases tested by some one entitled by his ability and opportunities to decide upon their usefulness. Much important matter contributed by Langenbeck, Billroth, and Behrend in Germany, and by Giraldès and Guersant in France, and many articles contained in the *Journal für Kinderkrankheiten* and the *Bulletin de Thérapeutique*, ought not to be overlooked by Practitioners in this country. Another reason for the necessity of a good work upon the practical surgery of children, is the help such a one may give in the solution of many undecided questions, as, for instance, the best time for performing staphyloraphy, the comparative advantages of excision of joints and of amputation in early life, and the benefit to be derived from the treatment by "rest," in preference to that by more active measures. Another important purpose of a work of this kind will be best stated in the words of Mr. Holmes, who hopes that his treatise "will lead the reader to reflect how much may be done by well-timed Surgical interference to save life and limb in the affections of childhood—how far, in fact, 'that conservative Surgery' may be carried which has been introduced into modern practice mainly by the exertions of Sir W. Fergusson."

The first part of this work, extending over 220 pages, treats of malformations, and commences with an extremely interesting chapter on joined twins and parasitic fœtuses. This is followed by chapters on nævus, meningocele and encephalocele, spina bifida, and harelip, all instructive and well written. The seventh chapter deals with fissured palate, a malformation, Mr. Holmes has long been of opinion, that it may be occasionally possible to treat by operation in infancy. Although success has attended some cases treated by Billroth and Mr. T. Smith, and chloroform can now be administered and the mouth kept open by a gag contrived by the latter Surgeon, we think with Mr. Holmes that little encouragement is afforded for hopes of success by the most recent experience of staphyloraphy in infants. The enormous secretion of mucus from the exposed fauces during the operation, the thinness of the flaps, the free hæmorrhage, and the danger of subsequent convulsions and death, are all considered as important difficulties and dangers. Mr. Holmes seems to favour the idea of waiting until the child is from eight months to a year old, and then attempting to close the palate by repeated operations. The subject of congenital malformations in the neck is ably treated, and on account of its novelty and interest merits careful study.

The second part is devoted to injuries, and contains chapters on burns, fractures, and dislocations, and foreign bodies in the nose, ear, and respiratory passages. Mr. Holmes has diligently studied the question about the precise line of fracture in the traumatic lesion styled "separation of the epiphyses." On this point M. Chassaignac holds that true separation of the epiphysial cartilage rarely occurs but that a portion of the osseous tissue of the shaft is carried away with it. Prof. Smith, of Dublin, on the other hand, believes that this separation really does occur without osseous fracture, and that the accident is a frequent one. Mr. Holmes, desirous of testing the relative accuracy of these opinions, examined many Hospital museums in London, and there found but three preparations of pure separation of the epiphyses. He states, "The conclusion to which my experience of this injury would lead me is, that fracture occurs not very rarely at or in the immediate neighbourhood of the epiphysial line; that the line of fracture coincides in these cases partially with that of the epiphysial cartilage, but seldom completely; that the general symptoms are, therefore, the same as those of fracture, while the special symptoms must be sought for from the anatomy of each joint; and, finally, that, as the epiphysial cartilage is usually severely injured, loss of growth is very liable to follow."

In opening the air-passages, Mr. Holmes is of opinion that laryngotomy or laryngo-tracheotomy is a preferable operation to tracheotomy in very young subjects, although, from the flatness of the thyroid cartilage, the former operation is neither easy nor free from danger; tracheotomy he does not recommend before puberty. The following remarks are made on the indications for tracheotomy in acute disease of the windpipe:—

"It seems to me that, for Surgical purposes, it will be better to consider the diseases which are spoken of as 'croup,' 'diphtheritic croup,' and 'diphtheria,' under the single aspect of acute laryngeal inflammation, without intending to deny or assert the essential difference between croup and diphtheria. This acute laryngitis occurs in children mainly under three forms:—1. Combined with general symptoms of acute inflammation, the dyspnœa being the symptom most threatening to life. 2. Combined with low fever, the dyspnœa not being more threatening to life than the fever, perhaps not so much so. 3. Combined with, and consecutive to, one of the acute affections of the throat, usually measles or scarlatina, and in these cases, as far as I have seen, always associated with bronchitis or broncho-pneumonia. . . . In the first class of cases we are bound, I think, to operate early, if the persevering use of antiphlogistic treatment (emetics, antimony, and perhaps calomel) have failed to check the disease, or if there is real danger from the dyspnœa. In the second class of cases, we should be guided by the proportion of the dyspnœa. If this is urgent, the operation may be undertaken, but not without explaining to the parents that there is less prospect of success. In the third class of cases, I consider it almost useless to operate; but as such cases are of themselves most certainly fatal, I do not mean to say that it is unjustifiable."

Part III., making up about one-half of the treatise, is devoted to the Surgical diseases of infancy and childhood. As this deals with such important subjects to modern Practitioners as diseases of the joints, excisions of the hip, knee, and other joints, and stone in the bladder, all of which are treated exhaustively and elucidated by the results of the author's experience, it merits careful study and consideration. In Chapter XXV. Mr. Holmes speaks of excision of the knee, and discusses the undecided questions as to the comparative success of this operation in relation to amputation, its relative value at different periods of life, and the cases in which it ought to be recommended. The author believes that excision is a more fatal operation than amputation, but still thinks the results of the former operation, where it succeeds, are so good that he should still practise it. By the many supporters of excision the latter statement will no doubt be accepted with much satisfaction, but we think that Mr. Holmes will not find many Surgeons to agree with him in his conclusions as to the comparative fatality of the two operations. The fact is, that our statistical information upon this point is not complete; whilst almost every case of excision performed in this country and abroad since the year 1762 has been carefully reported and tabulated, with its conditions and results, very few returns have been made of amputation of the thigh performed for

disease of the knee. A short table of this kind was published in this Journal in October, 1856, and shows that, out of twelve cases of amputation of the thigh for disease of the knee, six were fatal, whilst in by far the most unfavourable table of excisions—that of the Continental operations performed between 1830 and 1850—the cures were 5 to 4 deaths. Mr. Holmes argues that the deaths from amputation would have been fewer if they had been treated on the principle of rigid rest, which, he believes, has long been applied to the after-treatment in cases of excision. But the excellent system of simple treatment and perfect rest is by no means universally accepted even in metropolitan Hospitals. We have had for some years past opportunities of witnessing the after-treatment in two large Hospitals, and we have never known an instance of the knee remaining untouched for many days, much less for weeks. The most satisfactory plan of testing the influence of the after-treatment on the mortality of amputation would, we imagine, be the collection of cases treated on the old plan of daily strapping and bandaging and cases allowed to remain untouched and at perfect rest. Another reason for the rapid success of amputation over excision in severe cases is that the former operation removes the soft tissues which are loaded with the products of inflammation, whilst the latter removes only the tissues which are the origin of the disease, or at least which are diseased beyond repair. This is a point concerning which experienced Surgeons differ. Attention has frequently been directed by Sir Wm. Fergusson, Mr. Wood, and others to the fact that, after the removal of dead bone and other tissues which are the true origin of the disease, the softened and inflamed structures around it soon pass into their normal condition. Mr. Holmes, at the conclusion of his argument on this point, states the following:—

"Again, if after excision the activity of the suppurative process should pass the due bound, the repair of the breach in the bones is prevented, necrosis or osteomyelitis ensues, and the case terminates in failure or death. In amputation, on the contrary, a considerable excess of local action, even leading to death of bone, may perhaps have no worse consequence than retarded convalescence."

According to Dr. Brinton and other American Surgeons of great experience, it would seem that there is great danger of necrosis or osteomyelitis after division of the shaft of the femur, and that the results of removal of the leg are more favourable where the saw is carried through the lower end of the femur—in fact, where, so far as the upper segment of the lower limb is concerned, the parts are in precisely the same state.

Mr. Holmes alludes rather slightingly to the "enthusiasm" of Mr. Price, and to the limited experience of Mr. Butcher. It should not be forgotten, however, that these gentlemen published, in support of their views, most valuable accumulations of clinical reports and statistics. It is a matter for regret that Mr. Holmes is able to give us nothing more than "general impressions left upon his mind" by the results of his own experience.

In concluding our notice of this important treatise with congratulations to Mr. Holmes on having carried out so well and so completely what has long been a favourite project of his, we will venture to suggest the necessity of a few verbal alterations in a future edition. "Absurd" and "imbecile" are harsh expressions to use in condemnation of the practice of others. To "poke," although a good old English word, is hardly admissible into the language of science; the sentence at the bottom of page 106 is in doubtful taste, since, if it has any meaning whatever, it can be applied only to the works of two gentlemen who, in their own countries, are deservedly among the foremost representatives of that science to which Mr. Holmes himself has contributed so much.

Wissenschaftliches System der Mimik und Physiognomik. Von Dr. Theodor Piderit. Detmold. 1868. Pp. 204.

A Scientific System of Mimics and Physiognomics. By Dr. Th. Piderit. With 94 photo-lithographic drawings.

This is unquestionably the most important essay which has yet appeared on Mimics and Physiognomics. Dr. Piderit has, we believe, for a number of years been a highly successful Medical Practitioner in Valparaiso, and having lately retired to his native country, to rest on his laurels, he has devoted his well-earned leisure to the elucidation of a subject which, although deeply interesting, has nevertheless up to the present time been very much neglected by anatomists as well as physiologists. Indeed, a very few and discursive endeavours only have been made to clear up the problems which offer at every step in this direction; and the subject has thus come to be considered as almost unworthy of scientific investigation.

It seems surprising to find that, while the study of spoken and written languages has at all times been a favourite subject of study for the most eminent philosophers, scarcely anything has been done to clear up the mysteries of mimic language, or, as the author calls it, "the silent language of the mind." Yet verbal languages are diverse and ever changing, while mimic language has remained the same at all times and in all places, and must therefore be subject to certain invariable laws. The expressions of terror, anger, delight, etc., are the same in the face of the American redskin and in that of the accomplished European, in the face of the master and the servant, of the old man and the child; and that they have never varied in kind is shown by a study of the statues and monuments of antiquity. This mimic language is, indeed, so distinct and intelligible that even the infant will recognise the expression of sorrow or anger in the mother's face, and that animals, such as the dog and the elephant, will read the temper of their master by the expression of his face. Every one speaks and understands this silent language, but it is learnt empirically, without resort to its grammar.

It has been the author's endeavour to write a scientific grammar of mimic language. By tracing the language of the affections to their causes—by dissecting, as it were, the ever-varying and complicated play of physiognomy—he has arrived at a systematic classification and explanation of the mimic movements of the muscles, more especially those of the face. The different kinds of expression have been illustrated by schematic drawings of the same face, taken either in front or in profile. The simple outline of one face was at first closely copied, and then mimic expression was put into it by a few characteristic lines. The author has thus endeavoured to give his drawings the simplicity and distinctness of geometrical figures. But in order to convince us that a particular affection or temper is always expressed only in one, and not in several ways, and also in order to show that the works of ancient and modern art coincide with his own schematic drawings, he has added to his work a number of illustrations from important statues and paintings of all times. These illustrations have been multiplied by photo-lithography, which appeared to be the easiest mode of reproduction. Thus we have likenesses of Laocoon, Nero, Murillo's Holy Elizabeth, Guido Reni's Madonna, Luther, Cromwell, Richelieu, Frederick the Great, Goethe, Napoleon, Franklin, and others, scientifically analysed and dissected. We much regret being compelled by want of space to be prevented from entering into the author's argumentation, which shows a perfect mastery of anatomy and physiology and considerable philosophical acumen; and we must be satisfied with strongly recommending a careful perusal of Dr. Piderit's able treatise, which will constitute a landmark in this department of science.

GENERAL CORRESPONDENCE.

BIRMINGHAM GENERAL DISPENSARY.

Letter from Dr. Anthony.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your number for September 5, under the head of "Provincial Correspondence," I find the following paragraph:—

"The honorarium dispute at the General Dispensary has been for the time settled by the line of conduct adopted by the Committee of Governors, which has resulted in the resignation of the whole of the honorary Medical staff, with one notable exception. One of the number, to the entire exclusion of his *confrères*, has thought it consistent with his dignity to be appointed Consultant to the charity at an annual premium of £100. Here, then, is another glorious instance of the instability of Doctors' coalitions for the good of the Medical commonwealth, etc., etc."

As I suppose I am the "notable" referred to, allow me to say that your correspondent, whoever he may be, has imposed on you a tissue of impudent falsehoods; and since the honorarium question for Dispensaries is one of considerable importance to the Profession, I will, if you will allow me, give a synopsis of the late events at our institution as they actually took place; being both able and willing, if necessary, to give ample proof of my statements.

Some years ago I recorded my opinion that Dispensaries, not affording the prestige and contingent advantages of Hospitals, ought to pay for all Medical services. The Birmingham Dispensary pleaded poverty, and the matter passed by. As the institution might now be called rich, one of my colleagues, in calling my attention to the fact, claimed my co-operation for testing the principle "whether, in Dispensaries or Medical institutions not affording the prestige or contingent advantages of Hospitals, the Medical staff should not receive either whole or part remuneration for their services." It seemed unsatisfactory to the honorary Medical officers attached to the Birmingham Dispensary that, as the institution expanded, the patient list grew longer, and the coffers grew fuller, there should nothing come to them but additional work, and so an application was made to the Committee by these Medical officers for some sort of "honorarium, more as a recognition of the principle of payment than as an equivalent for services." The Committee, not relishing the innovation, disposed of the proposition rather curtly, and so brought about a renewed application for payment, with an alternative of the collective resignation of the entire honorary Medical staff. This bringing matters to a crisis, the subject was referred to a general meeting of the Governors of the charity, where, spite of the advantages pointed out of giving the Medical officers what they asked for, the majority of the Governors would not tolerate what they seemed to regard as a monstrous anomaly—viz., that honorary officers who had *ex officio* seats at the Board of Government should at the same time be in receipt of payment—and so the resignation of the whole honorary Medical staff was accepted, my name, as the senior Physician, heading that resignation. So much for the truth of your correspondent's statement of "resignation with one notable exception." Well, we had fought a good fight, and in support of what we believed to be just—namely, the principle "that all Medical officers connected with a Dispensary should be paid"—and we won for the Profession the practical concession of that principle, as at the Birmingham Dispensary no attempt will ever be made in future to obtain gratuitous Medical service; but we felt that we ourselves had been martyrs in the cause, and we shook hands as we dissolved our last committee with expressions of mutual regard. Our resignation brought about changes in the General Committee of the Dispensary, and the new chairman, having had forced on him the conviction that Medical men would one and all refuse to work for nothing where an institution was able to afford remuneration, set himself to remodel the home department of the Birmingham Dispensary, resolving to have (so I was credibly informed) one, and, if necessary, two, well-educated and thoroughly efficient Physicians to reside on the premises, to be paid good salaries, and to do the class of work hitherto done by the honorary staff. Some fortnight after our collective resignation had been definitely accepted, and our services to the institution had come to an end, I was applied to to know "if, in any case of extra importance which might occur in the Dispensary practice, I should have any objection to be called in and take my fee as for a private patient" (for that was the way it was put to me). I saw no sort of objection; only it was my own proposition that, in order to avoid any hesitation in calling me in to any doubtful case, they should give me an annual fee of 100 guineas, and so send for me in any case of special gravity. So I fixed my own value, and my terms were accepted. It will easily be seen that I could scarcely refuse to act in the capacity, as it came within the terms of the principle we had gone for and had gained—viz., "that all Medical officers of the Dispensary should be paid." The office bore no resemblance to the one I held before as honorary Physician. The duties I then performed were of an entirely different character from those now expected of me, and the idea of its acting "to the entire exclusion of my *confrères*" is of course absurd. The entire work which I used to do at the Dispensary is now done (and, I believe, well done) by the Resident Physician; so that it must be a very forlorn hope that the late honorary staff would ever be sought out, inducted into their former offices, and duly paid according to the tenor of their requirements. No; we were, as I said, martyrs, and I confess I thought, and still think, myself the greatest martyr of all; for in support of a principle I resigned the only public office I held, while my Medical colleagues were still attached to two important Hospitals. I resigned a post which I liked so well that I look on my present office as poor in comparison, spite of its emoluments. As to being influenced by what is called "loaves and fishes," half my life has been a practical refutation of the idea that public appointments are always sought for to be made subservient to Professional greed. Living, as I have done, a secluded and studious life, in a spot popularly supposed to be all but inaccessible, I have given the best part of two days a week for fifteen years to the performance of public Medical work, and for the Dispensary and Children's Hospital I cannot have seen less than 20,000 patients—my numbers at the Dispensary having increased to that extent, that at the time I resigned I was seeing at the rate of 2400 patients a year! Why did I do it? Because I liked it. But I made little or no use of the great prestige I gained. I did not seek for lucrative practice; I never asked for any one appointment in Birmingham to which a penny of salary was attached. As to my colleagues, I never had a hard word with one of them for fifteen years, and they know, or ought to know, that nothing could be more foreign to my habits or inclinations than to injure them in thought or deed. It is no secret that, although I approved of the principle for which we contended, I should have preferred to let it remain strongly expressed, but short of the threat of resignation, claiming, however, the accompanying request for paid Professional assistance in the simpler and more routine cases, and which request, we had every reason to believe, would have been cheerfully conceded. There is but one thing omitted which I might have done, and that was to call my late colleagues together and parade my new appointment. The omission was more one of kind feeling than of neglect, and I hope that it will be so taken.

And now, sir, having told a plain unvarnished tale of the salient points of the honorarium question, I am quite willing to submit my part in it to the judgment of my Professional brethren and the general public. I am, &c.

JOHN ANTHONY, M.D. Cantab.

Washwood-heath, near Birmingham, September 12.

SPEAR *v.* DOIDGE.

LETTER FROM MR. JOHN H. WILLIS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have read a letter which appeared in your impression of September 5, signed "John Whipple," and in which the following passage occurs:—"In this particular case, when asked, 'Can nothing be done for the relief of the arm?' I said that the head of the bone could be removed, and I believed with safety, as it was outside the joint; this being done, flexion was possible." Now, sir, I heard Mr. Whipple's evidence in this case, and am pretty sure he will agree with me that his evidence on this point was rendered as nearly as possible in the following manner:—In reply to the question he said that the head of the bone could be removed, but that the operation would be attended with a great deal of danger, and he so strongly insisted upon the danger of the operation that the foreman of the jury remarked to him, "Then I suppose, sir, the man will have to go to London in order to be operated upon?" "Certainly not," said Mr. Whipple, "for I can tell you that we have at Plymouth successfully performed many operations which have not been performed in London." In support (if needed) of my statement, I would appeal to three members of the Profession who were present—viz., Messrs. Delagarde, Sleeman, and Fox—as well as to the foreman of the jury, Mr. Geo. Johnson, of Newton Abbot.

I am, &c. JOHN H. WILLIS.

Lewdown, Exeter, September 15.

LETTER FROM MR. HENRY GREENWAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—The letter from Mr. Francis Fox, in your issue of the 5th inst., contains certain statements, relative to my evidence at the above trial, which call for a few remarks.

I do not remember having said the fore-arm could be bent across the chest whilst the head of the radius remained dislocated, "the ulna being fractured." I said (taking into account the fractured ulna)—"If the radius had been fractured as well as dislocated, then the fore-arm could have been bent across the chest without the reduction of the dislocation." Mr. Cole, the counsel for the plaintiff, asked me for my authority for making that statement. I replied, "Any Surgeon will tell you so." He repeated my answer by way of interrogation, and I gave him the same reply. I also said I thought the plaintiff's fore-arm could not have been bent across the chest (implying flexion at an acute angle) if the radius were

only dislocated and not fractured. By this statement I did not mean all power of flexion would be lost. Within the last week or two, however, after due consideration, I have had reason to alter my opinion, and I am now convinced the fore-arm of a patient whose ulna was completely fractured, and radius dislocated forwards, could be flexed almost, if not entirely, to the full natural extent with a slight amount of force.

Mr. Fox states in his letter that Mr. De la Garde agreed with him in reference to the inability to bend the fore-arm during the existence of the dislocation. I perfectly remember Mr. De la Garde showing at what angle such fore-arm could be bent, he at the same mentioning the number of degrees.

I also find it stated that "both Mr. Greenway and Mr. De la Garde" agreed in the main with Mr. Whipple's evidence. Although I agreed with the greater part of his evidence, it does not follow I agreed with the weightier portion. In reply to a question on this point, put to me by Mr. Cole, I said I could not agree with Mr. Whipple in persisting, under every circumstance, in the local treatment of the injury (by retaining the splints and bandages). I believe, if Mr. Doidge had so persisted, supposing the plaintiff's arm to have been inflamed and swollen to the extent represented, the result would have been very different—probably loss of limb or life. Mr. Coleridge, alluding in one of his speeches to rash treatment, said "Painters hang their blemished pictures very high up, Doctors place their failures underground;" and it would, in a certain sense, have been fortunate for Mr. Doidge had he not been so successful in saving life.

I cannot conclude this letter without saying how fully I agree with the generally expressed opinion that Mr. Doidge has great reason for feeling aggrieved at the position in which he has been placed. On the part of the plaintiff, it was assumed Mr. Doidge had only to treat an ordinary fracture and dislocation, and that the mangled limb, inflamed and swollen, was too insignificant a matter to be dwelt on. I feel assured it would be difficult to find a Surgeon who, in a similar case, having ascertained the nature of the accident and how it occurred, would be so rash as to hold out hopes of recovery with a sound limb. I am, &c.

Plymouth, September 7. HENRY GREENWAY.

CORRIGENDUM.

LETTER FROM PROFESSOR ROLLESTON.

[To the Editor of the Medical Times and Gazette.]

SIR,—The reference which, in my address before the British Medical Asscciation at Oxford, I made to Professor Niemeyer's work on Medicine furnishes a good instance of the great truth that it is unsafe to take any assertion as to a third writer at second-hand. Professor Niemeyer's words, to which I referred, may be found at p. 334 of the second volume of the seventh edition of his "Lehrbuch der speciellen Therapie." They may be translated thus:—"According to an ingenious hypothesis of Du Bois Reymond, which Dr. Möllendorf has worked out further, attacks of hemicrania depend upon a dilatation of the ramifications of the cerebral carotid of that side, which is the consequence of an abnormal innervation of its vessels, from the uppermost cervical sympathetic ganglion. According to this view the brain would, during the attack, be in a similar condition to that in which the ear of a rabbit is when the cervical sympathetic is cut through." These words I took as an authoritative exposition of the theory of pain which I dissented from. To my great surprise I found, some days after my address, from a translation of a paper of Dubois Reymond's in Brown-Séquard's journal, No. XIII., 1861, the original of which appeared in Du Bois Reymond's and Reichart's *Archiv* of the previous year, that Niemeyer had adduced the name of the Berlin physiologist in support of exactly the opposite theory to that which this his paper advocates. In this paper, Du Bois Reymond, writing of a neuralgic affection from which he has suffered at intervals for many years, tells us that his view is that his hemicrania "is a tetanus of the muscular coat of the arteries of the side of the head which is affected, or, in other words, a tetanus produced by the cervical portion of the great sympathetic of the right side." Indeed, as if to show how entirely the morbid affection corresponds with the results of physiological stimulation, and its cessation with the results of experimentally produced cessation of the action of the sympathetic, Du Bois Reymond says—"When the fit approaches its termination the right ear becomes red. I feel there a sensation of considerable heat, and the hand can appreciate the rise of temperature."

Surely Whately could not have wished for a more happy illustration of his "Fallacy of Reference."

I am, &c. GEORGE ROLLESTON.

Oxford, September 7.

OBITUARY.

SURGEON-MAJOR JUDD.

WE regret to have to record this week the death of an old and much-respected member of the Profession, Surgeon-Major Judd, F.R.C.S., etc., for many years Surgeon in the Guards, and "Surgeon in Ordinary" to H.R.H. the late Prince Consort. He died at his residence in London on Thursday evening last. He joined the Fusilier Guards so long back as 1818, and served with distinction in that regiment for more than forty years. He was well known for his contributions to Medical as well as general literature, was the intimate friend and fellow-student of Brodie, Lawrence, and many other ornaments of the Profession who have passed away before him. Nor should the Profession be unmindful that, at the sacrifice of his own interest in high quarters, he was the first to take up the cause and advocate the claims of the Army Surgeon. To him, also, are the British infantry really indebted for the abolition of the old cross-belt and the substitution of the present improved manner of carrying the cartouch-box and ammunition. He retired from the Profession some few years back in consequence of failing health, and has for some time past been under the Medical care of his friend Dr. Scott, of Upper Woburn-place. He was interred at Brompton Cemetery on Wednesday last. Surgeon-Major Judd was the author of a treatise on syphilis, which appeared in 1836, and of several contributions to current Medical literature.

NEW INVENTIONS.

PURE ESSENTIAL OIL OF ALMONDS.

A SPECIMEN of essential oil of almonds has been forwarded to us by Messrs. Preston and Sons, wholesale druggists, Leadenhall-street. Almost every specimen of the oil we have hitherto seen contained more or less prussic acid; indeed, from the process of manufacture ordinarily adopted, it is almost impossible to avoid the admission of this potent and unwished-for ingredient. Such an oil could not, of course, be used for the purposes of cookery with any degree of safety, and the introduction of a preparation like that of Messrs. Preston, which contains none of the poisonous acid, is a matter for congratulation. A sample of it has been carefully analysed by Messrs. Northcote and Barrett, of the Royal College of Chemistry, and has been found by them to be entirely free from hydrocyanic acid. This improvement is all the more important, as, on the Sale of Poisons Bill coming into force, restrictions on the sale of impure essential oil of almonds must of necessity be introduced.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS.—At the recent preliminary Examination in Arts, etc., at this institution, it is stated that as many as 247 candidates offered themselves, of which number 21 passed for the Fellowship, and 194 for the Membership, of the College. The following gentlemen were reported to have acquitted themselves to the satisfaction of the Court for the first-named distinction:—

Brewer, R. E. W.	Duncan, W. A.	Rayner, A.
Carter, F. R.	Eddowes, A.	Rogers, W. T.
Cole, W. J.	Greensill, E. S.	Smith, H. H.
Dixon, H. E.	Greenwood, J. W.	Smith, H. N.
Dobbie, R. J. A.	Lungley, F.	Stradling, W. A.
Dobson, N. C.	Morgan, E. R.	Thomas, H. H.
Duke, M. S.	Postance, J. R.	Vowell, C. M.

The following passed the "Preliminary" for Membership:—

Adams, J.	Bascombe, T. E.	Boodle, R. M.
Adey, H.	Beck, M. J.	Boone, C. F.
Alleyne, J. L.	Belfield, C. W.	Bowes, J. I.
Arthur, W.	Bell, H. R.	Boyle, E. C. C.
Atkinson, C. M.	Bell, G. P.	Bradshaw, F. F.
Atthill, W. E. B.	Bennett, W. E.	Breach, J. F.
Baker, J. H.	Benthall, A.	Brigham, H. G.
Ballenden, J.	Berry, W.	Brookes, W. J.

Brummitt, R.	Hayman, C. N.	Schrader, E. H.
Buckley, J. M. K.	Heath, W.	Scott, J. W.
Canney, R. B.	Higgs, T. T.	Shield, G. R.
Carline, W. A.	Highton, T.	Sellon, J. W. G.
Churchward, A.	Hill, A.	Sewell, W.
Clark, H. F.	Hill, A.	Shapley, H. T.
Cogman, C.	Hitchings, E. G.	Shemilt, G. R.
Cole, G. W.	Hobbes, T. G. F. R.	Shippard, J.
Collingwood, W.	Hodson, H. A.	Smithard, C. L.
Compton, J. W.	Hunt, J. A.	Snell, J.
Congdon, G. J.	Jackson, C.	Soy, E.
Cookson, H. A.	Jenkinson, H.	Spurgin, W. H.
Cooper, H.	Johnson, F.	Steele, H. F. A.
Cripps, W. H.	Jumeaux, B.	Stephens, S. H.
Crouch, E. T.	Kelly, J. B.	Stewart, R. W.
Cullen, E.	Key, D. T.	Stowers, J. H.
Dandridge, J. S.	Klien, E. H.	Stuart, J. B.
Daniel, E.	Lawrence, C. H.	Stuart, R.
Davidson, J.	Le Mattée, G. H.	Sunderland, W.
Davies, E. K.	Lloyd, J. H.	Symons, J. G. R.
Davies, J. H.	Lucas, R. J.	Tayler, H. P.
Delamotte, P. W.	M'Carthy, J.	Thompson, A.
Downes, A. H.	M'Collah, F.	Tilly, J. C.
Dresser, C. F. K.	McHardy, M. McD.	Todd, W.
Dunbar, J. S. A.	Mahon, E. E.	Tomkinson, G. H.
Elliott, N. B.	March, F. K.	Triggs, J. B. B.
Eminson, L.	Mason, H. W.	Trotter, L. B.
Etheridge, G. D.	Massingham, J. P.	Utting, J.
Evans, F. M.	Massiah, B. J.	Utting, J.
Evans, L.	Michell, R.	Vause, A. J.
Evans, R. W. J.	Mills, J.	Vevers, H.
Farbstein, H.	Moffatt, G. T. B.	Vincent, J. F.
Fell, T. K.	Monro, C. E.	Waghorn, J.
Fenn, C. D.	Moore, C. J.	Wakem, J. R.
Fenn, E. H.	Morriss, E J.	Walker, D. F.
Ford, R. G.	Nash, W. G.	Walmsley, F. H.
Foster, R. H.	Odell, W.	Warden, C. J. H.
Foster, W.	Oldham, H.	Ward, W. A.
Garrard, W. A.	Orr, J. W.	Waylen, G. S. A.
Glenny, G. W.	Owen, C. W.	Webber, W. L.
Glyde, E. E.	Parkhouse, H.	Webster, R. M.
Goldfinch, T. L.	Parkinson, G. W.	White, E. A.
Goldsmith, S. J.	Payne, H.	White, G. B.
Goodchild, N.	Pead, W. B.	White, T.
Gray, F. A.	Phillips, E. J. M.	Whitmarsh, J. L.
Griffin, C. T.	Pocock, F. E.	Wigan, G.
Griffiths, J.	Poignaud, M.	Willey, J. M.
Hall, J. T.	Price, D.	Williams, W. H.
Hansell, W. C.	Rae, G. A.	Wilkinson, E. W. C.
Harcourt, C. B.	Reckitt, E. B.	Wilson, W. W.
Hargitt, W. V.	Redman, E. M.	Winkworth, F. S.
Harrison, E. T. B.	Roberts, D. J.	Withers, R.
Hart, P. N.	Roberts, F. C.	Woodhouse, R. H.
Hartridge, G.	Roberts, O. E.	Wride, F. G.
Harvey, W.	Robinson, M. A.	Wright, J. F.
Hawkes, A. E.	Saer, D. P.	
Hawton, J. W. H.	Scarbrow, E. W.	

These examinations, which were continued for several days, were conducted by a staff of the College of Preceptors.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 3, 1868:—

Glencross, Frederic John, Devonport.
Lake, George Robert, Leamington.
Roberts, William Lake, Spilsby.

Also on September 10:—

Brookhouse, Charles Turing, 118, High-street, Deptford.
Ferguson, Daniel William, Bridlington.
Minter, Edward Withers, Southsea, Hants.
Shorter, Henry Goldsworthy, Hastings.

The following gentlemen also, on the same day, passed their First Examination:—

M'Cann, Charles, Westminster Hospital.
Solly, Stephen Francis, Westminster Hospital.
Wilder, Henry B., Westminster Hospital.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DAVIDSON, ALEXANDER DYCE, C.M., M.R.C.S.—Surgeon to the Aberdeen Ophthalmic Institution, *vice* J. R. Wolfe, M.D., F.R.C.S., resigned.

HOCKLEY, Mr., L.D.S.—Dental Surgeon to the French Hospital, London.

NAVAL AND MILITARY APPOINTMENTS.

BENGAL.—To be Surgeon-Major: Surgeon John Campbell Bow, M.D. To be Surgeons: Assistant-Surgeons Frank Powell, M.B.; John Ince, M.D.; Frederick Pettingal; John Jones, M.D.; James Browne; Robert Sander Bateson; Thomas Petit Wright; Alexander Morison Dallas; Charles Kilkelly, M.B.; and Neil Benjamin Baillie. To be Assistant-Surgeons from April 1, 1868: Davis Douglas Cunningham, M.B.; Henry Whitwell; Archibald Cameron, M.D.; Benjamin Evers; James Charles Gordon Carmichael, M.D.; William Harvey; Alexander Gibb Grant, M.B.; Warwick Jackson; George Gilbert M'Laren, M.B.; Joseph Johnstone Monteath, M.D.; and Richard Howell Stevens, M.B.

BOMBAY.—To be Surgeon-Major: Surgeon John Mills. To be Assistant-Surgeons from April 1, 1868: George William Robertson Hay, M.D., and John Roche, M.D.

MADRAS.—To be Surgeon-Major: Surgeon Arthur Langford Trewman Cooke. To be Surgeon: Assistant-Surgeon Charles Abdy Andrews. To be Assistant-Surgeons from April 1, 1868: Patrick Richard Martin, M.D.; Joseph Patrick M'Dermott; Alfred Eugenius Dalgairns; Preo Nath Mookerjee; Alexander M'Arthur, M.B.; John Francis Fitzpatrick, M.D.; and Henry Mervyn Gray Archdall.

MEDICAL DEPARTMENT.—Deputy Inspector-General of Hospitals Thomas Longmore, C.B., to be Honorary Surgeon to her Majesty, *vice* Inspector-General of Hospitals Alexander Melvin, half-pay, deceased—Surgeon-Major Thomas Best, from the 68th Foot, to be Staff Surgeon-Major, *vice* Staff Surgeon Edward M'Gill, M.D., who exchanges—Staff Assistant-Surgeon George Langford Hinde to be Staff Surgeon, *vice* Staff Surgeon-Major James Crerar, placed on half-pay. To be Staff Assistant-Surgeons: Timothy Lewis, M.B.; George Edward Dobson, M.B.; James Fraser, M.D.; Ninian Alexander Williamson, M.D.; John Walker, M.B.; George Ryan, gent.; Eugene Valentine M'Swiney, M.D.; James Saltus Conyers, M.D.; Richard Gerald Fitzgerald, gent.; James Henry Ussher, M.B.; John Leader, gent.; James Aloysius Joseph O'Brien, M.D.; William Charles Gasteen, M.B.; Robert Anderson, gent.; William Geoghegan, M.B. Albert Halahan L'Estrange, gent.; Albert Kirwan, gent.; Charles Edward Jones, gent.; Maurice Know, gent.; Richard Manifold Craig, gent.; John Roche Rahilly, gent.; Anthony Lennon Brown, gent.; Andrew Arthur Macrobin, M.B.; Frederick Waghorn, M.D.; Charles Barromeo Jennings, gent.; William Henry Garde, gent.; James Henry Reynolds, M.B.; Henry Hummerston Burford, gent.; Thomas Jackson, M.B.; Daniel Thornton, gent.; John Latchford, M.B; George Wellington L'Estrange, gent.; Peter Thomas Fraser, gent.; William John Campbell, gent.; William Frederick Samuels, gent.; Francis Adolphus L'Estrange, gent.; Oliver Stokes Eager, gent.; Duke Parke, gent. Staff Assistant-Surgeon William Ireland Wheeler has been permitted to resign his commission—Staff Assistant-Surgeon Thomas Gray Archdall has been permitted to resign his commission.

ROYAL ARTILLERY.—Surgeon John Riggs Miller Lewis, M.D., having completed twenty years' full-pay service, to be Surgeon-Major under the provisions of the Royal Warrant of April 1, 1868.

3RD HUSSARS.—Staff Assistant-Surgeon Robert Anderson to be Assistant-Surgeon.

62ND FOOT.—Staff Assistant-Surgeon Robert John Scott, M.B., to be Assistant-Surgeon.

68TH FOOT.—Staff Surgeon Edward M'Gill, M.D., to be Surgeon, *vice* Surgeon-Major Thomas Best, who exchanges.

75TH FOOT.—Assistant-Surgeon Christopher John Weir, M.B., from the 90th Foot, to be Assistant-Surgeon.

90TH FOOT.—Staff Assistant-Surgeon Alexander Minty, M.B., to be Assistant-Surgeon, *vice* Christopher John Weir, M.B., appointed to the 75th Foot.

BIRTHS.

BERNARD.—On September 9, at Sydney House, Stapleton-road, Bristol, the wife of D. E. Bernard, M.R.C.S.E., L.R.C.P. Edin., of a son.

BRITTON.—On September 7, at 64, Acacia-road, the wife of W. S. Britton, M.R.C.S., of a son.

BROWNE.—On September 9, at 147, Camberwell-grove, the wife of Charles Browne, Surgeon, of a daughter.

COLLUM.—On September 15, at Croy, Surbiton, Surrey, the wife of Robert Collum, Esq., M.D., of a daughter.

COOK.—On September 9, at Budleigh Salterton, Devon, the wife of Henry Cook, M.D., Surgeon Bombay Army, of a son.

CORBETT.—On September 6, at Sheffield, the wife of Staff Surgeon Dr. W. H. Corbett, of a daughter.

CORNER.—On September 7, the wife of Dr. Corner, of a son.

DIAMOND.—On September 9, at Dudley-villa, Brixton, the wife of Dr. Warren Hastings Diamond, of a daughter—Juliet Gonville.

DODGSON.—On August 31, at Cockermouth, Cumberland, the wife of Henry Dodgson, M.D., of a son.

DUDGEON.—On September 7, at 53, Montague-square, the wife of Dr. Dudgeon, of a daughter.

GIBBON.—On September 15, at 59, Oxford-terrace, Hyde-park, the wife of Dr. Gibbon, of a daughter.

HENDERSON.—On September 10, at St. Leonard's-on-Sea, the wife of J. Henderson, Esq., M.D., Madras Army, of a son.

HYDE.—On August 21, at Up Park Camp, Jamaica, the wife of John Martin Hyde, Esq., Staff Surgeon, of a daughter.

JOYCE.—On September 9, at the Parsonage House, Rolvenden, the wife of Thomas Joyce, M.D. Edin., of a son.

LOWNDS.—On September 13, at Hill-house, Pensford, Somerset, the wife of T. M. Lownds, Esq., M.D., Bombay Army, Surgeon Rajpootana Agency, of a son.

ROLLESTON.—On September 3, at Park Grange, Oxford, the wife of Prof. Rolleston, M.D., F.R.C.P., of a son.

SAUNDERS.—On September 7, at Cuckfield, Sussex, the wife of C. E. Saunders, M.D., of a daughter.

SMITH.—On September 7, at Surrey-villa, Kennington-road, the wife of Septimus W. Smith, Esq., Surgeon, of a daughter.

STILLWELL.—On September 12, the wife of R. R. Stillwell, M.D., of Springcroft, Beckenham, Kent, of a son.

STOVEN.—On September 6, at Wheatley, the wife of Dr. Stoven, of a daughter.

TUKE.—On September 1, at Manor-house, Chiswick, the wife of Harrington Tuke, M.D., of a son.

MARRIAGES.

COLLINS—HARRISON.—On August 27, at Llandudno, by the Rev. T. Hutton, M.A., Rector of Stilton, brother-in-law of the bride, assisted by the Rev. J. Thomas, B.A., Dr. Collins, of Leamington, to Emma Elizabeth, second daughter of W. Harrison, Esq., Norton-hall, Staffordshire, and of Eastland-house, Leamington.

CRANE—STUDD.—On August 27, at Hallaton, Charles A. Crane, M.D, to Henrietta Margaret, eldest daughter of E. Studd, Esq.

GOUGH—BOULTER.—On September 12, at St. Paul's Church, Sculcoates, Hull, James Gough, to Alice, only daughter of the late Benjamin Boulter, Esq., Surgeon, of Hull. No cards.

KEYLE—OLLIER.—On September 3, at St. Matthew's-church, Canonbury, George Thomas Keyle, Surgeon, of St. Paul's-road, Highbury, to Ellen Ayres Ollier, of Canonbury-park, North. No cards.

REEVE—MEESON.—On September 2, at All Saints', Rottendon, Essex, Augustus Reeve, sen., M.R.C.S. Eng., of Richmond, Surrey, to Frances, fourth daughter of the late Richard Jas. Meeson, of Rottendon.

SAVAGE—WALTON.—On September 9, at the Church of Nent Head, Cumberland, by the Rev. H. Robinson (brother-in-law of the bride), assisted by the Rev. Mr. Mauhan, G. H. Savage, M.D. Lond. Univ., second son of Mr. W. D. Savage, Brighton, to Margaret, fifth daughter of the late Jacob Walton, Esq., Greenends, Alston. No cards.

SHORTO—CAPLEN.—On September 15, at St. James's Church, Shirley, near Southampton, J. Reeve Shorto, Esq., M.R.C.S., to Frances Jane Blake, eldest daughter of C. Caplen, Esq., of Norham Lodge, Shirley.

WHITTON—COLLIER.—On September 3, at the parish church, Towcester, William Whitton, solicitor, Towcester, to Frances Louisa Egerton, only surviving daughter of Thomas Collier, Surgeon, Towcester. No cards.

WICKHAM—JACKSON.—On September 3, Joseph Wickham, M.D., to Fanny, only daughter of the late William Jackson, M.D., both of Penrith.

DEATHS.

COUSINS, EDWARD, F.R.C.S. Eng., M. and L.S.A., of 215, Camden-road, London, N.W., on September 1, aged 45.

HILDITCH, JOHN, Esq., M.R.C.S.E., of Brighton, at the residence of his father, the Fields, Sandbach, Cheshire, on September 10, aged 56.

JOLLEY, Dr. JOHN T. S., of St. Peter's College, Cambridge, and of the Government Emigration Service, eldest son of William Rowe Jolley, Esq., of Torquay, in lat. 46° 47′ north, and long. 19° 37′ west, on board the ship *Harkaway*, from dysentery, aged 48.

JUDD, WILLIAM HENRY, Surgeon-Major, late 3rd Fusilier Guards, on September 3, aged 73.

LAWTON, JOHN, M.R.C.S E., formerly of Boxford, Suffolk, at Chiddingford, Surrey, on September 2, in the 69th year of his age.

RIGGALL, EMILY BEELEY, wife of Edward Riggall, M.R.C.S., at her home, 141, Queen's-road, Bayswater, on September 10, aged 49.

WINDSOR, JOHN, F.R.C.S.L., F.L.S., Consulting Surgeon Manchester Eye Hospital, at his residence, Piccadilly, on September 1, aged 81.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

St. Pancras Parish.—Mr. J. B. Welch, Medical Officer for Females at the Workhouse, has resigned; salary £100 per annum.

Bedford Union.—Mr. N. Godfrey has resigned the Turvey District; area 9048; population 2407; remuneration per case.

Hambledon Union.—The Chiddingfold District is vacant; salary £40 per annum. Also the Workhouse; salary £60 per annum.

APPOINTMENTS.

Barnstaple Union.—Frederick R. Fairbank, M.R.C.S.E., L.R.C.P., to the Eleventh District.

Bury Union.—James Smith, L.R.C.P. Edin., L.R.C.S. Edin., to the Tottington District.

Halifax Union.—Francis E. Macauley, M.R.C.S.E., L.S.A., to the Ovenden District.

Maidstone Union.—Edward M. Owens, L.R.C.P., M.R.C.S.E., L.S.A., to the Fifth District.

Neath Union.—John Jenkins, M.R.C.S.E., L.S.A., to the Glyncorrwg District.

Wellington (Somerset.) Union.—Frederick Morgan, M.R.C.S.E, to the Third District.

Wycombe Union.—Thomas Warren, M.R.C.S.E., to the Fifth District and the Bledlow School.

Axbridge Union.—Edward Dodd, M.R.C.S.E., L.S.A., to the Second District.

Devizes Union.—Charles H. Carter, M.R.C.S.E., L.R.C.P. Edin., L.S.A., to the Fourth District.

Marlborough Union.—Alexander P. Petman, M.R.C.S.E., L.S.A., to the Second District.

West Derby Union.—John C. McNicol, M.D. Edin., M.R.C.S. Edin., as Assistant Resident Medical Officer at the Workhouse.

UNIVERSITY OF CAMBRIDGE.—The Professors of Medicine and Natural Science having found the time which has usually been allotted to their lectures in each term insufficient, intend to begin their courses in the ensuing terms earlier than has hitherto been the custom. The courses in anatomy and chemistry will, accordingly, begin on October 12 and on January 18. It is expected that examinations in natural science for scholarships will be held in the several Colleges as follows:—Sidney, October 7; St. John's, in April or May; Downing, in May; St. Peter's, in May; Trinity, on Easter Monday. That in Trinity is open to all undergraduates of Oxford or Cambridge. The others are open to all students (whether they are members of the Church of England or not) who will not have commenced residence in the University at the times of the respective examinations. Information may be obtained from the tutors of the several Colleges, and notice is given beforehand in the *Times* and other newspapers under the head of "University Intelligence."

CAMBRIDGE UNIVERSITY MEDICAL SCHOOL.—The following particulars were omitted in our last number:—Winter courses of lectures: Zoology and Comparative Anatomy, by Professor Newton. Anatomy and Physiology, by Professor Humphry. Practical Anatomy, by Professor Humphry and Mr. Carver. Superintendence of Dissections, by Mr. Carver. Microscopical Demonstrations, by Professor Humphry, with the assistance of Mr. Gedge. Chemistry, by Professor Liveing. Practical Chemistry, by Professor Liveing. Laws of Heat, by Professor Liveing. Materia Medica, by Professor Fisher. Summer courses: Pathology, by Professor Bond. Botany, by Professor Babington. Chemistry and Practical Chemistry, by Professor Liveing. Addenbrooke's Hospital: The Physicians and Surgeons attend daily, and Clinical Lectures are delivered twice in each week.

CHELTENHAM AND GLOUCESTERSHIRE OPHTHALMIC INFIRMARY.—At a special general meeting of the donors and subscribers of the above Infirmary, held on Wednesday, September 2, the Rev. Harry Wright in the chair, John Bubb, Esq., was unanimously elected Surgeon to the institution in the room of Surgeon-Major Davies, deceased, and Frederick A. A. Smith, Esq., was unanimously elected Assistant-Surgeon, in the room of John Bubb, Esq., resigned.

COTTAGE HOSPITAL, EAST GRINSTEAD, SUSSEX.—A bazaar was held at Rowfant, the seat of Sir Curtis M. Lampson, Bart., on the 5th and 7th inst., for the benefit of this Hospital, when the sum of £250 was received. This includes a donation of £20 from George Peabody, Esq.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—At the meeting of this Society, held on Friday, September 4, in the Hall of the Faculty of Physicians and Surgeons, the following gentlemen were elected office-bearers, viz.:—*President:* Dr. J. G. Fleming. *Vice-Presidents:* Dr. W. T. Gairdner and Dr. E. Watson. *Council:* Dr. Dewar, Mr. Tindal, Dr. G. H. B. Macleod, Dr. A. R. Simpson, Dr. Richmond, Paisley, Dr. F. Thomson, Mr. Torrance (Airdrie), and Dr. H. Thomson. *Secretaries:* Dr. James Adams and Dr. R. Perry. *Treasurer:* Dr. H. R. Howatt.

A COMPREHENSIVE TITLE.—The celebrated Berlin Surgeon Langenbeck is thus designated officially:—"Geheim. Ober-Medicinal Rath General-ärzt Professor Dr. von Langenbeck."

MEDICAL CHARITIES.—The funds of the following metropolitan and provincial Hospitals will be augmented by legacies from the undermentioned ladies:—Miss Jane Alexander, of Cambridge-terrace, Kensington, who bequeaths £300 to University College Hospital, £100 to the Westminster Hospital, and £100 to King's College Hospital. Miss Elizabeth Polley, of Bocking, Essex, £100 to the Colchester Hospital; and the Right Hon. Caroline Baroness Wenlock, of Escrick-park, Yorkshire, has bequeathed £100 to the York County Hospital.

FROM its annual report, the Weymouth Sanatorium for Women and Children would seem to be in a prosperous state. It has been in existence now some twenty years, and has largely increased in size and importance during that period. It now contains twenty beds, and receives upwards of seventy in-patients in the course of the year. The endowment fund is also rapidly increasing; whenever it has reached the sum of £4500, Dr. Smith, the founder of the institution, promises to complete it by the addition of £500.

DEATH OF PROFESSOR MIDDLEDORPFF.—This eminent Breslau Professor and Surgeon has recently been cut off in the prime and renown of life, being only 44 years of age. He was in robust health, and died so rapidly that the report prevails that during the excitement produced by overwork he committed suicide. The Vienna journals are much alarmed lest this vacancy, or that produced by the retirement of Junken from the Berlin Charité, should tempt Billroth to leave them after his short and much-appreciated domiciling in Vienna.

BENGAL MEDICAL COLLEGE.—From a report on public instruction in the lower provinces of the Bengal Presidency, which has just reached us, it appears that the number of undergraduate students attending the English classes in the Medical College has risen from 128 at the end of the previous year to 139 early in the following year; but the average monthly attendance has been somewhat lower, being returned at 128, against 136 for the preceding session. The Bengali classes are increasingly popular, and form a most important department of the Medical College. A new section

of the department called the Vernacular Licentiate Class, organised to provide a higher course of instruction than had before been offered for students desiring to qualify themselves for independent practice, is steadily progressing, and affords promise of producing excellent results. The authorities of the College have expressed themselves highly satisfied with the work which has been accomplished, and urge an extension of the course at present provided, so as to include systematic instruction in midwifery and the diseases of women and children. The proposal is at present under consideration, as is also a scheme for organising similar schools of Medicine at some of the chief towns in the interior.

Case of Herpes Zoster in an Infant.—Dr. L. Thomas relates this case because he believes that it is unique as regards the age of the subject—viz., a boy aged ten months. On September 20 some red spots with vesicular eruption were observed on the right leg. During the night other parts became the seat of eruption, so that on the 21st groups of vesicles, developed on a hyperæmic base, occupied about an inch of space over the right gluteus, somewhat nearer the mesial line than outwardly. Another patch, about an inch and a half long, was seen on the outer surface of the leg, just under the knee. Two other groups appeared between this one and the ankle, and others on the foot, occupying also the plantar surface, and between the toes. In a day or two some of these vesicles attained the same size as they usually do in the adult. By the 24th all the vesicles, except those on the plantar surface, had dried up. The child exhibited no febrile sign of irritation, or other ill health.—*Arch. f. Heilkunde.*

Bromide of Potassium in Sickness of Pregnancy.—Dr. Packard states that he has successfully employed the bromide in several cases where the sickness has been manifestly due to reflex irritation of the stomach, and in which the other remedies had failed. He gives 20 grains every three hours until the symptoms begin to yield.—*Amer. Jour. Med. Science*, July.

Bromide of Potash in Chordee.—Dr. Munro observes that as there seems a tendency to constitute the bromide as a specific in nearly every stage of nearly every disease, he believes that negative evidence may not prove useless. Nearly every work on venereal diseases recommends its use in chordee, but he has used it persistently with such unsatisfactory results that he has abandoned its employment, except when it has been specially indicated by the unnaturally nervous condition of the patient.—*New York Journal*, July.

Spanish Registration Returns.—In a paper recently read at the Academy of Sciences, M. Ramon de la Sagra furnished the following figures concerning these for 1866:—Births: In a population of 15,800,000 there were 614,032 births, or about 1 for every 26 inhabitants. There were 51·65 boys to 48·35 girls. Of the 611,627 infants baptised during the year, 33,140 were illegitimate—*i.e.*, 1 to every 18 legitimate infants. Marriages: These amounted to 116,257, the proportion being 1 marriage for 112 inhabitants. Deaths: These amounted to 463,684, 317,207 being males, and 226,824 females. The deaths, compared to the total population, were 1 per 34 inhabitants, and for the town population 1 per 28. The comparison of the births with the deaths exhibits an increase of 150,347 individuals, 75,755 males and 74,592 females. As to the ages of the deceased, there were 503 per 1000 under 6 years, 95 between 6 and 26, 77 between 26 and 41, 126 between 41 and 61, and 209 above 61.

Fatal Injection of a Nævus with Perchloride of Iron.—Professor Santesson, of Stockholm, relates the following case:—An infant, aged 8 weeks, was brought to him on account of a large nævus on the cheek, which was increasing with great rapidity. It was too deeply situated to allow of success from vaccination to be hoped for, and it was resolved to inject it with the perchloride, a means which had proved successful in other cases, and up to that time had never given rise to any mischievous effects. The tinct. ferri oxymur. of the Swedish Pharmacopœia was employed, the syringe holding from eight to ten drops of the tincture. The canula was first introduced in a vertical and then in a transverse direction, using about half the contents of the syringe each time. While this was being slowly withdrawn the child suddenly ceased to scream, and was observed to be cyanotic and breathing with difficulty. Convulsive movements followed, but, in spite of all restorative measures, in a few minutes the child was dead. At the autopsy the spongy texture of the tumour was found to have been rendered firm by coagulation of the blood. The facial vein and its roots were empty, and no coagula were found in the upper part of the jugulars; but in the lower part of their course, towards the aperture of the chest, the blood was for the most part coagulated. The coagula continued, becoming, too, more solid, into the subclavian and vena cava, and the right cavities of the heart were distended with them. A little coagulum existed in the left auricle, and the muscular substance of the heart was well contracted. The lungs were gorged with blood, especially at the posterior parts. These appearances, and the symptoms during life, leave scarcely any doubt that the point of the canula must have penetrated into some venal branch, possibly the facial vein itself, the three or four drops injected giving rise to the coagulation observed.—*Journal für Kinderk.* 1868, No. 3.

Impaction of Calculus in the Urethra of a Boy.—Dr. Plett, of Lubeck, narrates an interesting case in which a calculus obstructing the urethra gave rise to very dangerous symptoms. A boy, aged 6 years, came under his notice after difficulty in passing water had existed for a day or two. This, he says, was at first supposed to arise rather from the introduction of a foreign body into the urethra than from the presence of a calculus, so rare is that affection in this locality. However, he found the boy with the penis and scrotum much swollen, and great distension of the bladder. Only a little urine dribbled away, and a catheter could only be passed between the prepuce and the glans to the extent of about two inches. This was cut down upon to facilitate the search, but all appearance of the glans was lost in the general œdematous condition of the parts, and no orifice could be detected. The child had, however, passed into a uræmic condition, and the bladder threatened to rupture. This was therefore punctured above the pubis, but with difficulty on account of the swelling of the soft parts over the symphysis. The child rallied from his unconscious state with great rapidity, and seemed next day quite well. On the second day after a calculus was extracted from just before the bulb of the urethra by an incision made into the penis. A gangrenous spot, which had formed on the back of the urethra, led to the penetration of this, and the wound of the incision was long in healing. Eight weeks elapsed before the boy was enabled to spontaneously pass his urine by the urethra, and that the catheter in the hypogastric region could be dispensed with. At a still later period the urethral fistulæ entirely healed up—the lad's health throughout the entire illness continuing remarkably good.—*Journal für Kinderkr.* 1868, H. 3.

Fracture by Ointment.—Curious cases sometimes come across the Indian Medical officer's path, and are worth recording. The following may not be unique to others, but to me it certainly is. One morning, early in 1866, a little Hindoo boy, aged about four years, was brought to me by his mother for treatment. On examination, I found the right humerus to present a uniform enlargement, from about three inches below the head to within two inches of the condyles, tapering above and below. The diagnosis was not difficult, for the history of the case was very simple. He had been running from something that frightened him, and fell heavily on his left arm, sustaining a bad comminuted simple fracture through the whole extent of the middle third of the bone. Residing far from any Surgical aid, his people simply let him alone, and this tumour was but nature's rough surgery. No trace of crepitus remained; it was from head to condyles one solid bone. Such was his state some eight months after the accident. I was rather at a loss how to come to his aid. Amputation was thought of, and dismissed. I then fancied that I might remove the enlarged shaft, leaving the periosteum, but in the end I temporised and determined to improve his health by good food, etc., before doing anything; so, putting his arm in a sling, I let him run about. He ran about so long that he got into good health, but I felt it rather a reproach, as he welcomed my daily visits to see him, for I could not make up my mind what to do; others saw him also, and could suggest nothing. For the sake of doing something, I ordered an ointment, containing 100 grains of iodide of potassium and 10 grains of iodine to an ounce of lard, to be rubbed into the tumour twice a day; he was also to take a grain of the iodide twice daily. I confess I did not expect much, but the result astonished me. After treatment of this kind for about three weeks, he complained that the rubbing hurt him; and on examining the arm, I plainly detected crepitus, and found the tumour, like an iceberg in summer, rapidly breaking up in every direction. The tale is told. I persevered more carefully with unusual interest, and in the end reabsorbed almost all the callus, left the fragments movable, and thus "*refractured the bone by ointment.*" All medicine was then stopped, and

the bone properly set in splints. He made a capital recovery, callus being again thrown out; and the fragments reunited in their proper places. — *Bamlet W. Switzer, F.R.C.S.I., Assistant-Surgeon, 6th Punjab Infantry.*

POOR-LAW MEDICAL SERVICE.—The attention of the Clerkenwell Board of Guardians having been called by one of their Medical officers to the undue pressure of cases of Medical relief in his district, the board appointed a committee to consider the subject of the Medical districts of the parish. The committee, after due consideration and conferring with the Medical officers, made a rearrangement of districts, with a view to distribute the work more equally among the Medical officers. The question of salary was likewise taken into consideration, and the clerk was directed to obtain a return from other unions and parishes in the metropolis of the salaries paid to district Medical officers. On this return being submitted, the committee carefully considered and compared the salaries paid to the Medical officers of those districts where the area, population, etc., approached that of Clerkenwell. The result was that the committee, with only one dissentient, came to the conclusion that their district Medical officers were not paid in accordance with the salaries of the Medical officers of other parishes, and recommended the board to increase the salaries of their three officers from £75 to £100 per annum. At the next meeting of the board these recommendations were submitted to the board, and passed with very little discussion. The Medical officers have extra-Medical fees to the amount of £5 per annum each. Two are vaccinators, and receive £18 and £20 respectively. The drugs are partly supplied by the Medical officers, cod-liver oil and expensive medicines being paid for by the guardians. Comparing the salaries of the Clerkenwell Medical officers with those of other parishes, we find that, while the former were receiving only £75 per annum each, the Medical officers of St. Pancras, for instance, receive £150 each. The extra Medical fees at Clerkenwell were £5 for each officer, while several parishes give £60 and £70, and at Poplar as much as £160 each, in addition to £100 salaries. The vaccination fees at Clerkenwell, distributed between two officers, amounted to £38, while at Islington they amount to £260, and at Chelsea, which has a population slightly less than that of Clerkenwell, the amount allowed for vaccination fees is £65. In thirteen out of the thirty-nine parishes into which the metropolis is divided, the guardians find the medicine, but at Clerkenwell the Medical officers have also to supply the medicines in part. The increase of salary now tardily conceded them by the guardians can at most be considered only as a first instalment of justice. At Mile-end the Medical officers are peculiarly situated. No other parish but this inhibits their Medical officers from private practice. On this consideration chiefly the guardians have lately raised the salaries of their three officers—two to £250 and one to £200 per annum. The Poor-law Board at first objected to this, and refused to sanction the arrangement; but the guardians stood firm, and now they have received a communication from the Poor-law Board that, in consideration of the increase of cases which they have reason to believe has lately arisen in the parish, the Commissioners are willing to sanction the salaries named by the guardians. They wish, however, that the prohibition from private practice, peculiar to this parish alone, may be first reconsidered.

NEW BOOKS, WITH SHORT CRITIQUES.

Holden's Manual of the Dissection of the Human Body. Edited by Luther Holden, F.R.C.S., Surgeon to St. Bartholomew's Hospital, and Lecturer on Anatomy at the Hospital, etc.; and John Langton, F.R.C.S., Assistant-Surgeon to, and Demonstrator of Anatomy and Operative Surgery at, St. Bartholomew's Hospital, etc. Third edition. London: John Churchill and Sons. Pp. 604.

*** The new edition of this well-known and admirable dissector's manual has been thoroughly and carefully revised, chiefly by Mr. Langton; additional material, mostly relating to the viscera, has been introduced, and several new woodcuts added. The work in this its improved form cannot fail to be acceptable to the English student. In America the work is even more highly valued than it is in this country.

On Varicose Disease of the Lower Extremities, and its Allied Disorders. By John Gay, F.R.C.S., Surgeon to the Great Northern Hospital, etc. London: John Churchill and Sons. Pp. 171.

*** The substance of this volume constituted the Lettsomian Lectures delivered before the Medical Society of London in 1867—only, however, the substance, for much has been added in this work. Those who heard these lectures, and Mr. Gay's clear distinctions between ulcers depending on arterial and venous obstruction, will be glad to have an opportunity of renewing and extending their acquaintance with his views, whilst to those who had not that privilege we can recommend the work as one full of suggestions as well as of practical experience. It is illustrated by lithographs, of whose execution we cannot say much in the way of praise.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M.D.—We never divulge the names of our staff of correspondents.

Mars.—Three years for either College or Hall; your time would go for nothing.

Dr Williams.—Your pupil who has passed the preliminary examination at the College, and the one undergoing a similar examination at the Hall, if successful, can at once enter on their Hospital studies.

Galway.—The "Students' Number" of this journal, published last week, will give you the desired information.

Bibliopole.—The library and museum of the College of Surgeons will reopen on October 1.

Erratum.—At page 275, col. 2, line 23 from top, in Dr. Hughlings Jackson's paper "On the Physiology of Language," *for* "Indeed, writing, and we may add reading, is the same defect," etc., *read* "Indeed, writing, and we may add reading, is speech," etc.

MR. STORER'S CASE OF ABDOMINAL ANEURISM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read the interesting and instructive case of abdominal aneurism, so admirably and truthfully reported by Mr. Mickley in your last impression. In spite of the absence of "lateral expansion," so justly insisted upon by Mr. Mickley as an important element in the diagnosis of the case, I think those of your readers who carefully examine Mr. Mickley's report will admit that the evidence, although not absolutely conclusive, is decidedly in favour of aneurism, and not of induration of pancreas, or any other non-aneurismal pulsating abdominal tumour. It is the balance of evidence in a certain direction, rather than absolute preponderance of any one fact, negative or even positive, upon which diagnosis must be based in obscure cases of disease, at least in the present state of knowledge. The time seems to be coming, however, when, by the use of such instruments as Marey's sphygmograph, to say nothing of the dream of throwing artificial light through the integuments, we shall have direct physical evidence of the nature of even pulsating abdominal tumours; but for the present we must be content to judge by the balance of evidence taken as whole, and not by so-called pathognomonic or diagnostic facts—or rather fragments of facts, which may be regarded as what the lawyers call truth, but not the whole truth. A diagnosis arrived at by logical induction from facts has not the charm of absolute certainty, such as an abdominal endoscope might perhaps afford, but it will generally prove correct. If we are often wrong by such a plan, the fault is not so much in the system as in our own limited grasp of the simple facts before us. Want of "lateral expansion" was only one fact, and a negative one in the above case, against the diagnosis of aneurism. All the other facts were in favour of that diagnosis, and no other. Although an admirer and advocate of precision of thought and language, I am not in favour of laying too much stress upon any one fact, a failing to which a certain class of even eminent cultivators of Medical diagnosis are prone. I am, &c. WM. J. MARSH.

Littlemore, September 8.

BLOOD AS AN ARTICLE OF DIET.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Meat is likely to be very dear from limited supplies this coming winter, and I would bring under your notice the conversion of the blood fresh from the bullock, sheep, and pig into soups, puddings, pancakes, sausages, etc., not only as a far more nutritious and supporting food than the ordinary coarse, ill-cooked meats of the poorer classes, but I venture from experience to declare that there are, by preparing the blood when properly managed, many most excellent and savoury dishes that might be introduced on any table, and soups of the most nourishing and palatable kind, far superior to the vile stuff we often have put before us at the restaurants and other places.

The old-fashioned black puddings made in many little farmhouses I know to be a great relish, but those sold in London in the meat shops for the poor ought to be looked after, as I know that many are most improper food even for dogs.

I am aware of the prevailing prejudices that exist, and of the difficulties in preparing the blood properly when warm from the slaughtered animals, and of the necessity of its immediately being converted and cooked in hot weather; still experience will remove them, and an unlimited supply of wholesome food would result. Soups made from blood will be found far more speedily restorative after exhaustion from typhoid fever and other prostrating diseases—far more flesh-producing than the various extracts of meat, turtle, invalid soups, and the like; and blood food introduced into fever Hospitals would have a happy effect, particularly the soups, which have a rich meaty flavour and look tempting. What say you?

I have tried most of the various preparations for invalids, and have very little faith in them—they are mostly artificial, with gelatine and a bone or two of ox-tail, etc., not worth the tins containing them, though they are tolerably toothsome; but a small basin of blood soup is of far greater worth if well made. I am, &c.

August 27. SENEX, M.D., etc.

P.S.—I have tried and eaten in various forms the blood food, and declare it excellent.

PHTHISIS IN NORFOLK.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you permit me to correct two or three inaccuracies in the report of the abstract of my paper in your journal of last week, "On the Statistics of Pulmonary Consumption in the 623 Districts of England and Wales?" The abstract was not sent to the journals by myself, and hence the inaccuracies. The word *generally* should be added to the statement that the death-rate from phthisis corresponds with the density of the population. My analysis extends from 1850 to 1861, not, as stated, from 1857 to 1861; and among the causes, I said *perhaps* the communicability of the disease from one person to another, although, up to the present time, I have no proof of this. The paper was read on the last day of the session, when a period of only an hour and a half was allowed for several

communications, and I was therefore only able to give the heads of my essay. The editor of the *Norwich Chronicle*, in a most unwarrantable manner, added the statement respecting the proportion of phthisical cases to the total number of deaths at Norwich. It was not in my paper, and I leave its correctness to be tested by the Practitioners of that city. There is one circumstance, however, of great interest to the Medical Practitioners of Norfolk that was not reported, and as the question is one of vital importance, and one that takes a prominent place among the causes of this fatal malady, you will perhaps allow me to allude to it. In my essay "On Tuberculous Affections in Man and in the Lower Animals in relation to their supposed Zymotic Nature," read at the meeting of the St. Andrews Graduates' Association, 1867, and published in the *Transactions*, I stated, after an extensive inquiry into the causes of the disease in this and in other countries, that a dry atmosphere, hot or cold, generally prevailed in countries where the inhabitants were most free from this scourge of the human race. I repeated this statement in my recent paper, as seen in your report, but I said that to this rule there were several exceptions. Let me now give the proportion of the deaths from phthisis to the population in all the districts in Norfolk during the ten years alluded to; and I leave the local Practitioners, who are best acquainted with the soil, height above the sea level, amount of stagnant water, prevailing fogs and winds, occupations of the inhabitants, nature of their food, etc., to solve the mystery. Appended to my paper above alluded to is a note on the geology of the places I referred to (a number at that time comparatively limited), by Mr. Alfred Haviland, of Bridgwater, and the subjoined are his conclusions:—In the old red sandstone, 1 in 41; London clay, 1 in 39; coal measures, 1 in 38; chalk, 1 in 36; new red sandstone, 1 in 34. Mr. Haviland observes that these figures are far from conclusive, but they point to a field still unexplored.

But to return to Norfolk. I avoid fractions, as, where the data are necessarily imperfect, they are useless. At Thetford, where, judging from its site and surroundings, fogs and mists must prevail, 1 person in 28 dies of phthisis, at Downham 1 in 48, at King's Lynn and Swaffham 1 in 47, Blofield 1 in 43, Lodden 1 in 41, Great Yarmouth 1 in 40, Norwich 1 in 37, and Walsingham 1 in 31.

With the people of these towns is included a large amount of the population of the surrounding country, and, with the exception of Norwich and Great Yarmouth, there is no important difference in the populations. It will be seen that at two places, with populations nearly alike, and the towns not far distant, the difference in the rate of mortality from phthisis is enormous. Why is this?

I have not in my paper included the Scotch returns, as the very unaccountable and strange error prevails of classing hydrocephalus and tabes mesenterica with phthisis. From Ireland I can get no satisfactory returns. Professor Hennessy, in commenting upon my paper, said "that the disease was more prevalent in the interior of Ireland than along the coast," but I suspect that for this statement he has not sufficient evidence, and that, as in some parts of England, the "balmy sea breezes" the Professor spoke of on the Irish coast may, when the subject is fully investigated, prove to be the most dangerous.

I am, &c.

29, Beaufort-street, Chelsea, September 8. EDWARDS CRISP.

COMMUNICATIONS have been received from—

Mr. A. L. MACKAY; Dr. W. H. PEARSE; Mr. E. S. LEETE; Dr. MUSPRATT; Mr. JOHN SIMON; A HOSPITAL ASSISTANT-PHYSICIAN; Professor ROLLESTON; Dr. C. A. GORDON; Mr. HENRY RICHARD; Dr. JOHN ANTHONY; Mr. W. J. MARSH; Dr. EDWARDS CRISP; SPES; Mr. H. SERJEANT; MARS; Dr. J. H. ROGERS; Mr. J. W. H. M'KENZIE; Mr. HENRY GREENWAY; DR. JOHN MADDEN; Messrs. P. B. COW, HILL, AND CO.; Mr. J. HOLM; Dr. GIBBON; Dr. LANKESTER; Mr. J. H. WILLIS; Mr. J. CHATTO; Mr. A. POLAND; Mr. A. BRUCE; Dr. DICKINSON; Dr. HUGHLINGS JACKSON.

BOOKS RECEIVED—

Macmillan's Magazine, No. 107—Fayrer's Address—Dunlop's Philosophy of the Bath—Holden's Manual of Dissections—Gay on Varicose Disease of the Lower Extremities—Pacific Medical and Surgical Journal, August—Journal of the Statistical and Social Inquiry Society of Ireland, July—American Journal of Obstetrics, August—New York Medical Journal, August—Report of the Belfast District Hospital for the Insane, 1868—Virchow on Famine Fever—Owen on the Poor-law Amendment Act—New York Medical Journal, No. 42—Thorley's Farmer's Almanack for 1869.

NEWSPAPERS RECEIVED—

Lincolnshire Chronicle—Nova Scotia Mining Gazette—Belfast Newsletter—Medical Press and Circular—Christian Times—California Medical Gazette, August.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 12, 1868.

BIRTHS.

Births of Boys, 1052; Girls, 969; Total, 2021.
Average of 10 corresponding weeks, 1858-67, 1860·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	642	604	1246
Average of the ten years 1858-67	602·5	565·3	1167·8
Average corrected to increased population	..	..	1284
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	1	12	2	1	6	11	..
North ..	618,210	1	6	14	1	6	20	23	1
Central	378,058	..	2	13	2	..	11	17	3
East ..	571,158	3	8	9	2	4	15	20	..
South ..	773,175	2	3	9	..	4	12	28	1
Total ..	2,803,989	6	20	57	7	15	64	99	5

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·972 in.
Mean temperature	64·6
Highest point of thermometer	92·1
Lowest point of thermometer	43·6
Mean dew-point temperature	53·9
General direction of wind	N.E.
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 12, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Sept. 12.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Sept. 12.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2021	1441	1246	92·1	43·6	64·0	0·00	0
Bristol (City)	167487	35·7	92	75	*59	..	..	..	..	..
Birmingham (Boro')	352296	45·0	259	171	158	85·4	47·2	60·8	0·0	0
Liverpool (Borough)	500676	98·0	362	290	279	85·2	41·3	59·8	0·00	0
Manchester (City)	366835	81·8	232	208	*239	..	..	..	..	..
Salford (Borough)	117162	22·7	79	59	89	88·1	46·5	62·1	0·03	3
Sheffield (Borough)	232362	10·2	186	122	120	86·6	46·5	59·9	0·26	26
Bradford (Borough)	108019	16 4	57	55	74	..	..	..	..	..
Leeds (Borough)	236746	11·0	161	120	173	83·0	47·0	62·5	0·07	7
Hull (Borough)	108269	30·4	78	50	58	82·0	38·0	55·2	0·02	2
Newcstl-on-Tyne, do.	127701	23·9	95	68	64	..	..	..	..	..
Edinburgh (City)	177039	40·0	120	85	92	81·7	42·0	57 0	0·10	10
Glasgow (City)	449868	88·9	313	262	216	77·1	39·6	55·3	0·20	20
Dublin (City and some suburbs)	319985	32·8	158	157	136	83·7	41·3	58·2	0·03	3
Total of 14 large Towns	6391080	34·7	4214	3163	3003	92·1	38·0	59·5	0·07	7
					Week ending Sept. 5.	Week ending Sept. 5.				
Vienna (City)	560000 (1863)	..	..	..	..	..	..	† ..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·972 in. The barometrical reading decreased from 30·21 in. on Wednesday, September 9, to 29·81 in. on Friday, September 11. The general direction of the wind was N.E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1851 has been at the same annual rate as between the censuses 1851 and 61; t this distant period, however, since the last census it is robable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 65·3°.

APPOINTMENTS FOR THE WEEK.

September 19. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

21. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

23. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

25. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVII.—Part III.

TURNING CONTINUED: THE INDICATIONS FOR TURNING IN CONTRACTED PELVIS — THE OPERATION.

The Indications for the Operation.

Assuming a standard head whose base, unyielding, measures 3″, this is obviously the limit beyond which the operation would be useless. For although the head is caught in the bi-temporal diameter, a little in front of the greatest transverse or bi-parietal diameter, the base must be exposed in its full width to the narrowed strait. Even if the side of the head be indented by the promontory, no important degree of canting or obliquity of the base can be counted upon. If the head should fortunately be undersized or unusually plastic, there is a fair prospect of the child being drawn alive through a conjugate diameter measuring 3·00″.

But, generally, from 3·25″ to 3·50″, or even a little more, is the working range for a child at term. The great majority of those who advocate the operation insist upon this amount of space. It is very important to have a fair oblique or sacro-cotyloid diameter on one side; for if the ileo-pectineal margin of the brim incline rapidly backwards, the occiput will not find room.

The operation is also indicated if, the conjugate diameter being 3·50″ or more, the forceps have failed.

Velpeau (1835), Chailly (1842), Edward Martin, and others advise the operation in cases of unequally contracted pelvis where there is more room in one side of the pelvis than in the other—when the thicker or occipital end of the head is not already engaged in this larger side.

I have already shown that the head is always nipped in its small or bi-temporo-frontal diameter, which generally measures about 3″, and is more compressible than the bi-parietal diameter. *The mark of pressure or indentation against the jutting promontory is always seen at one end of this short diameter whenever there has been obstruction in delivery.* It follows, then, that for the operation to be successful there ought to be room enough on one side of the pelvis to receive the occiput or big end of the head.

The operation may also be performed as the complement to the premature induction of labour where the conjugate measures from 2·75″ to 3·50″. Indeed, this I believe to be one of its most valuable applications.

The next condition is, that there be reasonable presumption that the child is alive.

The cervix should be dilated enough to admit the fingers pointed in a cone, and dilatable enough to yield with readiness under the extraction of the trunk. In this, as in most cases where the head cannot press fairly upon the cervix, we are not to expect complete spontaneous dilatation.

The membranes should be intact, or there should be enough liquor amnii present to permit of the ready version of the child.

The *contra-indications of the operation are:*—

1. A conjugate diameter narrowed to less than 3″.
2. Firm and close contraction of the uterus round the child, compressing it into a globular shape.
3. Impaction or very firm setting of the head in the brim of the pelvis.
4. Marked exhaustion or prostration of the mother.
5. Death of the child.

As Hohl has remarked, the sudden emptying of the uterus of a woman far gone in prostration, acting as a new shock, is apt to increase the *collapsus post partum*.

The Operation.—The preparatory steps are the same as for the ordinary operation of turning. As the conditions postulated admit of bi-polar action, it is important to avail ourselves of a means that so greatly lessens the force necessary to use, and which further enables the operator to bring a leg and the breech through a cervix that would not permit the passage of his hand. Chloroform will be useful chiefly during extraction.

If exploration by the whole hand in the pelvis satisfy us that the pelvis is symmetrical—that is, that there is equal and sufficient space for the big end of the head in either side—we turn according to the ordinary rules. Finding the head in the first position, or with the occiput to the left ilium, depress the breech towards the right with the right hand externally; push the head across to the left iliac fossa with the fingers of the left hand passed through the os uteri, and seize the further knee. Extraction must be performed at first slowly, so as to allow the half-breech to dilate the cervix. This is especially a case where hurry is misplaced. The extraction should go on slowly whilst the trunk is passing. As soon as the funis is felt, draw down a loop, and direct it towards the posterior wall of the pelvis. So long as it pulsates freely, do not hurry. But if the pulsations flag, lose no time in liberating the arms. The pelvic contraction makes this a little more difficult than under ordinary circumstances. I refer for the description of this proceeding to Lecture XIII. (*Medical Times and Gazette*, May, 1868.) As soon as the arms are liberated, the real difficulty begins: the extraction of the head. Sometimes the head is delayed by being encircled by the imperfectly dilated os uteri. This is an unfortunate complication, since compression at this point is likely to stop the circulation through the cord. To avoid this risk, it is necessary not to hurry the trunk through the cervix. It is above all things necessary to draw at first as much backwards as possible, so as to make the head revolve round the jutting sacral promontory until it clears the strait, when the head can enter its natural orbit, the curve of Carus. Then traction is changed to the direction of the pelvic outlet. Traction is effected by holding the legs with one hand, and the nape of the neck with the other. Commonly, the force thus obtained is enough. But sometimes more is wanted. This is obtained by crossing a fine napkin or silk handkerchief over the neck, and bringing the ends in front of the chest, and drawing upon them, as in

Fig. 82.

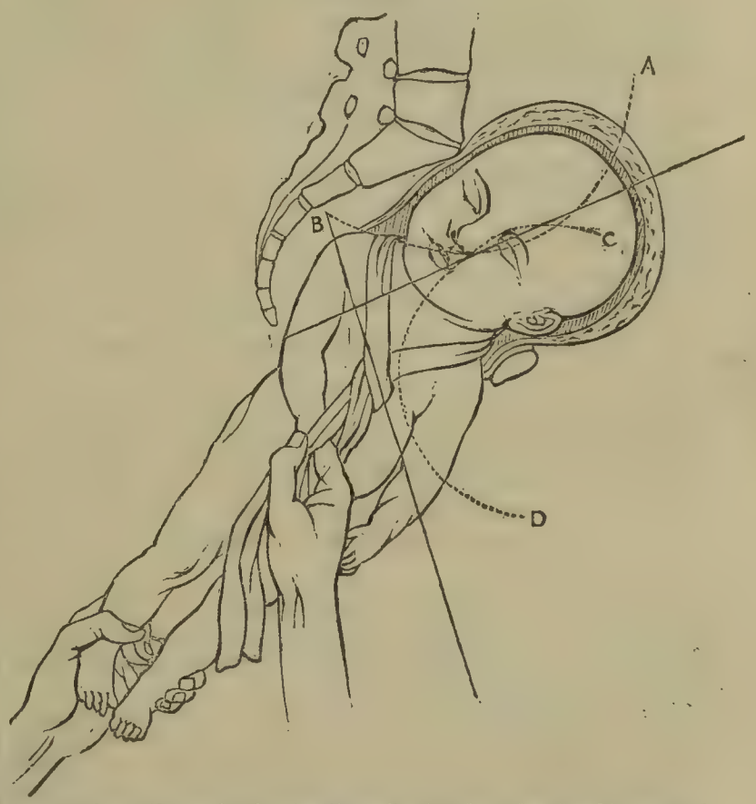


Fig. 82 shows the mode of extraction after turning when head is jammed in the conjugate diameter. The right forehead fixed against the jutting promontory is the centre of rotation. The left side of the head, resting on the pubes, sweeps round in the orbit of the false promontory A B. To favour this first movement, traction is made well backwards. As soon as the equator of the head-globe has slipped through the conjugate, the head enters the true orbit, revolving round the pubes C D.

Great assistance in extraction may be gained, and traction-force economised, by getting an assistant to press firmly upon the vault of the head through the abdominal walls, thus helping to push the head through the strait. This proceeding was advised by Pugh and Wigand, and quite recently Dr. Strass-

mann(a) has insisted upon its utility. The possibility of deriving advantage from it should be borne in mind in all cases of head-last labour.

Where the pelvis is unequally contracted, one half being smaller than the other, the object is to throw the big or occipital end of the head into the larger half. Professor E. Martin describes three modes of accomplishing this.

1. *A suitable position of the woman.* Let her lie on that side towards which the forehead is directed. The fundus uteri will gradually sink with the pelvic end of the child to this side; the spine draws the occiput to the opposite side of the pelvis, and the forehead sinks more deeply towards the brim. Martin refers to a case in which he successfully carried this plan into execution, the pelvis measuring three inches only.

2. *The forceps* is a means of releasing the posterior transverse diameter of the head when imprisoned in the pelvic conjugate. This explains the frequent easy extraction when a little traction has been made. Martin admits that we must not be sanguine as to the success of this plan. We must be prepared, he says, to perforate, if there be evidence of exhaustion. My own experience is decidedly adverse to it if the contraction is at all marked.

3. *Turning by the Feet.*—How is this to be done? In consequence of the well-known law that, in complete foot presentation, the foot that is drawn down always comes under the pubic arch, if the fœtus is not abnormally small, or the pelvis too large, if we draw down the right foot, the child's back, and also its occiput, will come into the right half of the uterus, and *vice versa*. If, therefore, the right half of the pelvis is the larger, seize the right knee; if the left side is larger, seize the left knee.

Hohl and Strassmann doubt the possibility of securing this result. If it happens, it does so by accident. I believe, however, the rule and the practice are good and feasible. But the success of the operation is not necessarily imperilled, if even the occiput should fall into the narrower half of the pelvis. I have saved children when this has happened, and Strassmann relates some striking cases(b) in proof of this proposition.

To determine which side of the pelvis is the more contracted, attention to the following points will help.

1. If the woman walks straight, and the legs are of equal length, the defect in symmetry will be but slight; but the presumption is that the right side is the larger.

2. If the woman has one hip affected, or one leg shorter than the other, the corresponding side of the pelvis will be the smaller.

3. You may measure and compare the two half circumferences of the pelvis externally from the crest of the sacral spine to the symphysis pubis.

4. The hand in the pelvis may take a very close estimate of the relative space in the two sides.

ORIGINAL COMMUNICATIONS.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
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(*Continued from page* 264.)

First Efforts to remedy Defects—Important Circulars—Causes of Disease—Prophylactics—Baths—Improvements effected—Confinement of Men to Barracks.

It was not till 1825 that the East India Company agreed to allow an administrative officer of the Army Medical Department to be sent to that country for the purpose of superintending the Professional details connected with the Imperial forces. In May, 1826, Dr. Burke, Inspector of Hospitals, as the rank was then designated, arrived at Calcutta, and immediately set to work to make himself fully acquainted with the conditions of the soldier, some of which we have endeavoured to enumerate. By the month of November of that year he had obtained some knowledge of how much there was to learn, and accordingly, like a sensible man, which he unquestionably was, he applied himself to the officers under his orders to supply him with what he full well knew was necessary to enable him to suggest measures for the mitigation or removal of what was objectionable. With this view he addressed to each a circular which deserves to be given here at length. It was as follows:—

"Sir,—Desiring to obtain the fullest and most correct information upon all points touching the health, comfort, and discipline of the troops, with the view of establishing one uniform system of clothing, diet, and exercise, etc., in this command, I have submitted the subject in all its bearings to his Excellency the Commander-in-Chief, and have his Lordship's order now to request that you will transmit to me for his information a detailed account of the system pursued in the regiment of which you are Surgeon as to diet, exercise, clothing and bedding, etc.

"Having detailed the practice of his Majesty's regiment of which you are Surgeon, I am to invite you to communicate freely your own ideas and opinions of improvement, if you conceive such expedient. As his Lordship's ultimate decision upon the several points mentioned will naturally be drawn from a careful consideration of the most approved practice and the most apparently sound suggestions, I need scarcely on this occasion advert to what you are of course fully aware of—that the rules for the regulation of diet, clothing, and exercise, in order to be applicable to all conditions, must be simple, convenient, and complete, with nothing superfluous. The principles of management of the physical powers of troops, or military economy, are deduced from a correct knowledge of the human constitution, of which your scientific studies and long experience have made you so good a judge.

"It may be presumed that health is the best preserved in diet among all classes of men by a wholesome and spare rather than a full diet—in short, by a diet which does not accumulate irritability and predispose to explosions of disease. In this climate a greater portion of farinaceous or vegetable food, or both, when practicable, with the animal ration, might be most advantageous.

"Your opinion is requested as to the issue of spirits as a part of the ration of soldiers in his Majesty's service, and as to substituting an equivalent in money for it, and the establishing regimental canteens, in which they may be supplied, under strict regulations, with certain quantities of good wine or malt liquors.

"In dress, usefulness and convenience would appear to be the chief considerations; as also in bedding; and what may be most suitable to this climate and the vicissitudes proper to it.

"In exercise, to make it add directly and collaterally to the efficiency of the military power and of health; and when bodily exercises cease, the exercise of the mind to begin.

"In personal cleanliness, as the making the body clean gives vigour, affords gratification, and preserves health, every soldier should have the means of washing his body every day from head to foot, completely and perfectly. Probably in this country noon might be the better time, and in some covered chamber and place allotted or built for the purpose."

Dr. Burke had soon formed a correct estimate of the circumstances which combined to produce disease among the troops, and of the nature of the precautions which ought to have been taken against them. For example, in his report for 1828 he thus expressed himself:—"It has been found difficult to restrain the men from drinking; from getting out of barracks and roving about the bazaars; from sleeping in the night air; from the crowded and heated state of the guard-room; from wet feet at drill, or in resorting to the privies, which are placed at a most unusual and pernicious distance from the barracks; and from the exposed state of the men whilst asleep, all of which," he adds, "has been represented to the Commander-in-Chief and to Government." "If," he adds, "we consider the above causes to have more or less operated, and conduced to sickness with men unseasoned to a tropical climate, and some of them with naturally bad constitutions, we shall have a satisfactory solution of the causes" of mortality among them.

Six years passed, and Dr. Burke was still at his post. During that time he had never ceased to represent matters which, according to his view, demanded improvement, as well as the means which he deemed best adapted to preserve health. Of the latter he wrote as follows:—"Temperate habits," he observed, adverting at the same time to the report of the 38th Foot by Dr. Roe, Surgeon of that corps, "no excesses, a composed and well employed mind, a tranquil temper, defence from the sun, and taking much exercise, short of fatigue, are the best prophylactic means in this or any other treacherous climate to promote health and to ward off disease."(a) May we

(a) *Monatsschr. f. Geburtsk.*, June, 1868. (b) *Ibid.*

(a) Report for 1833, p. 311.

not, indeed, refer to this short extract as embodying the rules for maintaining health which ever, from ancient times to the present, have been deemed the principles of hygiene?

The importance of ample means of maintaining personal cleanliness in a climate such as that of India cannot be overestimated. It is, indeed, everywhere necessary for the preservation of health, but in that country especially so, where during the greater part of the year the exhalation from the surface of the body is both profuse and offensive. When we take into account the nature of the climate, we can hardly understand the delay that has occurred in providing our troops in India with proper baths, which are not only sources of personal comfort and enjoyment to the men, but are also valuable in the prevention of many diseases; thus, we now read with astonishment that in 1830(b) no proper bathing-places had been erected at any station in Bengal. At all stations, we are informed, "bathing, wherever practicable, is permitted in the mornings under the superintendence of the Medical officers;" but when we consider that, with a very few exceptions, no special arrangements existed to enable the men really to enjoy the luxury of a bath, and bear in mind the continual evaporation from their surfaces, the natural effect of the high temperature of the climate, we can have little difficulty in forming an opinion as to what their condition really was at all places except the very few where such arrangements existed.

That some results followed the representations made on the subject of this important want appears by the records from which I quote; that those improvements, however, were slowly effected and partial in their nature is no less clear, for in 1841 we find Dr. Sandham, in alluding to what had been effected and what left undone, remarking that "within the last few years the state of the European soldier has been much attended to, and greatly improved by the establishment of libraries, tennis courts," etc.; but, he adds, "there is still one grand desideratum that is much felt. Few barracks are provided with baths, which *would afford a luxury, and, above all, be highly conducive to health.*" And so recently as 1844 Dr. Clarke had occasion to observe, in reference to the subject, that "bathing-rooms are in this climate indispensable. No barrack can be considered efficiently constructed without them." But it is evident that to be without them was then the rule, to have them the exception.

Some of those, for example, that have of late years been erected for the use of the soldier are in their way monuments of a peculiar kind of skill. The one at Benares consists of an excavation in the earth, lined with masonry, and easily enough filled. There being no outlet, however, when it is required to be emptied, the water has to be baled out—a process which occupies several days. So also with the bath at Chinsurah, and at Barrackpore there existed, in 1867, the remains of what had been intended for a bath according to the same principles of construction, but the mistake having been discovered in time, the work was abandoned. At the same time, there existed both at Chinsurah and Benares an arrangement by which the bath intended for the women and children was filled from the overflowings of the one for the men. In few places was that for the women sufficiently protected from the curiosity of the men, and yet surprise was often expressed that the women's were not more resorted to than they were. Some soldiers' wives have more modesty left than perhaps they get credit for. Unfavourable as were the conditions under which, at the time now referred to, the soldier in India existed, it is evident that the authorities then took credit to themselves—a credit which was readily accorded by the Medical officers—for many improvements that had then been effected. It was in this spirit that Dr. Burke, in 1833, thus expressed himself when alluding in his report to the 44th Regiment:—

"In the present state of his Majesty's army in India," this Medical officer observed, "when the strictest attention is paid to the cleanliness of the soldier's person and clothing, ventilation and good order in barracks, and regularity and wholesomeness of his food, it does not appear that much more can be done in the way of prophylactic measures when any sudden disease arises; for he always lives surrounded by all those precautions which are supposed to be the best safeguards against disease, as far as the circumstances and necessities of the service required of him will allow." In 1835 he again refers in the following terms to the improvements that had taken place:—

"Since 1820," he observed, "the position of the King's soldiers has greatly improved in many respects. Canteens under salutary regulations have been established, from which incalculable advantages may accrue to the soldier and his family, by a judicious disbursement of part of the funds arising almost entirely from the profits on spirits, beer being retailed under prime cost. Hospitals are conducted on the most liberal principles in every sense of the word, and the greatest attention is paid to the comfort and education of orphans, which the soldiers well know how to appreciate." As a result of these improvements he adds that "it is worth recording that maiming and suicide are nowadays of much less frequent occurrence than formerly. Of the former no case has taken place, and only one of suicide, since the arrival of the 49th in India, now upwards of seven years ago."(c)

It is here evident that this Medical officer was most willing to give credit for the improvements that had already been effected in the condition of the soldier. Adverting to the great extent to which drunkenness prevailed at some stations, however, and more particularly at Dinapore, he ceased not to urge upon the authorities the necessity of diminishing the facilities for indulgence enjoyed by soldiers who were quartered there. He pointed out that numerous huts which had hitherto been allowed to stand on the space which separates the barracks from the river were inhabited by persons who surreptitiously sold deleterious liquors to the soldiers; he noticed the facility with which they could obtain "toddy," and the difficulty of confining men to barracks, including these circumstances among the chief causes of disease.

While adverting to the subject of confining the soldiers to barracks during the hot part of the day, as is the custom in India, it seems to me that the measure has never been itself deemed to be an advisable one. It has, in fact, only been recommended as the less of two evils—the alternative one being the liberty to soldiers to wander about wherever led by their fancies or their passions, and thus be exposed to the usual risks from vice and disease in addition to those from climate. It was doubtless with a view to diminish, as far as practicable, the evils which Dr. Burke saw so long ago as 1828 were likely to be occasioned by this almost continuous confinement, that induced him then to advocate the addition to barracks of internal verandahs where the men could enjoy and amuse themselves, for, said he,(d) "the comforts of the soldiers cannot be too closely attended to in such a climate, and where they must be necessarily shut up in their barracks the whole day for several months in the year."

It seems that shortly after this time the order which rendered imperative the confinement of soldiers to barracks during the heat of the day was withdrawn; and I may add, with a view to render more clear what is about to follow, that still more lately it would appear to have been left entirely to the discretion of commanding officers whether men be so confined or not. With regard, then, to the first effects of the withdrawal of the order to confine men, we find it stated in the Report for 1836, in the words of the Inspector-General, "I stated on a former occasion that I thought the men of the 13th Foot wandered about and exposed themselves more, since the promulgation of the order prohibiting the confinement of European soldiers to barracks, than what they had been accustomed to do before. Further experience," he adds, "has convinced me that I was right; and I now feel satisfied that the increase of admissions for fevers and other diseases, so evident since that order was published in 1835, is mainly ascribable to their being so."

"Soldiers in cantonments," it is further remarked, "are seldom obliged to be out in the heat of the sun, and still more rarely are they necessarily exposed to the damps and dews of night. When they are so, every care is taken, as far as it is possible, to prevent the state of the weather from acting injuriously on their health; but when they wander abroad in search of spirits and other vicious indulgences it is impossible to secure them from its noxious influences, and the consequences are, that a great deal of their suffering arises from these acts of imprudence, and not from military discipline."(e)

"The propriety," so wrote Dr. Sandham in 1842, "of confining men to barracks from 8 or 9 a.m. until towards or after sunset at some seasons and in some parts of India has been a subject of discussion, and some have thought that this has been too rigidly insisted on. Much may be said on both sides; but, bearing in mind the irksomeness of such confinement in hot crowded barracks, with its tendency to mischief and all its evils, I am, after an experience of over thirty years in

(b) Report for that year.

(c) Report, 1835, p. 343. (d) Report, 1828, p. 309. (e) Report, 1839.

India, and in many parts of it, still impressed with the belief that such confinement is unavoidable and absolutely necessary for some months in the year, and I believe that all of much local experience are of the same opinion."(f)

(To be continued.)

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

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Hemispherical Co-ordination.

I wish briefly to state further reasons (see p. 208) for believing that *both* sides of the brain are educated in speech, and yet *that the left is the leading side, and the right the involuntary or automatic.*(a)

I have, then, to prove: 1. That disease of but one side of the brain—almost always the left—renders a man unable to speak; 2. That, contradictory as it may seem, the "speechless" patient's organisation contains processes for words; 3. That the essential defect underlying all the peculiarities of cases of speechlessness is an inability to reproduce words *voluntarily*, automatic reproduction being possible.

I think, to repeat, that these peculiarities may be accounted for by supposing that of the two pairs (1) Voluntary and Involuntary Expression and (2) Voluntary and Involuntary Perception, Voluntary Expression is lost, and that in consequence not only is actual speech wanting, but the internal speech also, which corresponds to it.

Both sides of the brain are doubtless automatic, motor and sensory, but one side [usually the left] in most people must differ from the other, since disease of but one side [usually the left] makes a person unable to speak. On one side [usually the left] occurs the "dawn of volition and the cessation of automatic action," which is, Spencer thinks, one and the same thing. I may here say that I do not make a total separation betwixt Perception and Expression by representing one as a complex development of sensation only, and the other of movement only. It is plain that, even in a spectral illusion, there are revived not only ideas of objects or colour, but of distance and solidity, and this necessitates a nascent excitation of the muscular movements associated in vision (*vide infra*).

I take the following propositions to be granted. I am not aware that any one denies them:—(*a*) We are not born able to speak at all, but we are born with anatomical possibilities (organised experiences) (see Spencer's "Psychology," p. 582), which can be trained in the acquirement of *any* language. Language is, like baking and brewing, an *art* handed down from generation to generation (Wedgwood). (*b*) We think by help of words—*i.e.*, by acquired arbitrary signs—and these are motor processes.(b)

I leave out of present consideration the occasional involuntary utterances in "speechless" patients, which I suppose (see *Lancet*, Feb. 13, 1866, also *Lancet*, Dec. 1, 1866, *Lond. Hosp. Rep.*, vol. i. p. 453, *Medical Times and Gazette*, June 23, 1866, and August 15, 1868) to be the result of action of the right side of the brain. *These utterances show that the man does utter words involuntarily who cannot talk voluntarily.* I would here remark again, however, that such utterances are nearly always formulæ which have, by frequent repetition and wide association, become automatic in an extreme sense of the word, and which, although possibly at first laboriously acquired by one [the left] side of the brain, have become "deposited" on both sides—in fact, have become historical—part of the organism, which is a two-sided one. Much of our talk is made up of acquired forms. There is mannerism on a very large scale. I might instance that speechless patients sometimes retain power to sing, which is at the least a more automatic process than speech (see *Lancet*, Feb. 17, 1866). I have also instanced that inherited automatic movements (such as those for respiration), emotional movements (as smiling), escape when a man is rendered speechless; and I have pointed out that, by the adoption of Broadbent's hypothesis, which I presume to have verified in cases of hemi-spasm, the inference is that the processes for all these have a [an equal?] representation in each cerebral hemisphere. I think the highest psychical processes have not an equal—at all events, not a similar—representation in the two hemispheres.

Now, Broca(c) and Moxon (*Med.-Chir. Rev.*, April, 1866) almost contemporaneously have advanced reasons for supposing that, although the two brains are alike at birth, the *left side of the brain* only is educated. M. Broca puts it that we are left-brained as well as right-handed. M. Broca thinks that the right side is altogether uneducated, except for the movements of articulation.(d)

Now, let us look at the facts. I do not speak of the mental condition of "aphasic persons" in general. It is especially important, I conceive, to bear in mind that Class 2 (see p. 209) is excluded. I speak of cases of persons who have lost speech altogether. I mean by a "speechless" person one who *is* in the following condition:—

(1) He cannot talk; (2) he can understand what we say, and can follow what we read to him; (3) he cannot write from himself; (4) he can copy; (5) he cannot write to dictation; (6) he cannot read to himself.

1. *The patient cannot Talk.*

The apparent exception is that a "speechless" patient can usually utter one or two words, like recurring decimals, always the same; and these words (in accordance with the view I hold) are frequently the semi-automatic words "yes" and "no." It may be a phrase, and there is some evidence towards the belief that this phrase is the result of the automatic action of the right side of the brain.

2. *He can understand what we say, and can follow what we read to him.*

When we speak or, let us say, when we read to a "speechless" patient, the sense does reach his understanding. When our words fall on his ears, they act on the sensory surface, by which he was educated to talk. They follow a beaten track, trodden for many, sometimes for very many years, and no doubt the aërial vibrations on the auditory nerve expansion provoke their associated movements by a complex reflex action, the brain being the "centre." The reproduction is easy. Indeed, if verbal signs are essential to thought (and no one denies that they are essential to elaborate thought), and if the patient is able to understand what we say to him, there

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(f) Report for 1842.

(a) To avoid as far as possible undue recapitulation, I must refer to what I have already written (*London Hospital Reports*, vol. i., *Medical Times and Gazette*, June 23, 1866, August 15, 1868, and August 22, 1868). In the second and fourth papers referred to I quote Gratiolet, and I now have to add that the observations of Vogt do not confirm Gratiolet's statement as to advanced development of the *left* frontal convolutions of the brain. Whether Gratiolet's statement that the sphenoidal and occipital convolutions of the *right* side are developed in advance of those of the left is denied, I do not know. Nevertheless, his name will still have some weight to keep the question open. M. Barkow, and after him M. Broca, find "que les circonvolutions sont notablement plus nombreuses dans le lobe frontal gauche que dans le droit, et que *tout au contraire le lobe occipital droit* est plus riche en circonvolutions que le gauche" (the italics are mine). Carrier (Etude sur la Localisation dans le Cerveau de la Faculté du Langage Articulé), from whose admirable paper I take this observation, goes on to say that Broca finds that the *left* frontal lobe is sensibly heavier than the right, and that, since the two hemispheres are nearly of the same weight, there must be compensation by difference in the two occipital lobes. These observations of Gratiolet, Barkow, and Broca will, if confirmed, have an important bearing. I think the crossed development they imply is in accordance with the view I hold as to crossed action of the brains, and which is, I imagine, foreshadowed by the relation of motor and sensory nerves in the cord.

(b) I have already quoted (June 23, 1866) Bain, Spencer, and Thomson on the need of *motor* signs for thought.

(c) "Du Siége de la Faculté du Langage Articulé," extrait des *Bulletins de la Société d'Anthropologie*, t. vi., Juin 1865.

(d) This distinction betwixt articulation and speech is, I think, an unreal one. (See *Lond. Hosp. Reports*, vol. ii. p. 314.) The "organ of language," if there be such a thing, will extend, I presume, from the articulatory muscles to its merging in general mind. The following is from the paper read at Norwich, of which a partial abstract is given, p. 274:—When my attention was first drawn to the class of cases (Class II.) I am discussing, I thought there was a fundamental distinction betwixt the mistakes of words and "ataxy" of articulation—the mistakes of muscular movements. I used to suppose there was a part for words, and, besides, a distinct co-ordinating apparatus for the movements for words, and that Broca's convolution was a sort of cerebellum for articulation. It is quite true that the defects I have recently mentioned ("ataxy" of articulation and mistakes in words) are very different, but then they are not altogether different. It was forced on me that the separation was one which observation of cases did not justify, and I soon concluded that, to use a crude expression in my first paper (*Lond. Hosp. Rep.* 1864, p. 471), "the ataxy of articulation was a quasi-mental defect—an inability to combine muscular movements in a particular mental *act*." Again, in a subsequent paper (*Medical Times and Gazette*, January 28, 1865), speaking of defects accompanying right hemiplegia, I remarked that "it was hard to say where obviously motor symptoms ended, and mental ones began." I have long believed it to be not only hard, but impossible, even using the words "motor" and "mental" in the popular sense. I now think that the only differences in ataxy of articulation, mistakes of words, and disorder of ideas, are differences of "compound degree." "The mental recollection of language is a suppressed articulation ready to burst into speech" (Bain). (See "Quotations from Spencer, Bain, Broca, and Thomson, June 23, 1866.)

must be reproduction of verbal signs *in him*. The reproduction is, of course, not actual—not outward speech; at least it is rarely so. (See, however, a case mentioned by Dr. Bateman, *Medical Times and Gazette*, September 5, 1868.) This is proof positive, I think, that although the patient is speechless he is not wordless. Whilst, however, these verbal signs may be *developed in him* by *our* talking, he cannot *initiate* verbal movements. The possible reproduction is automatic, or reflex, or involuntary. There is a great difference betwixt his echoing our words and a *voluntary* production of words *from himself*. The words lie, I imagine, in the *right* side. It may, however, be said that the internal reproduction occurs on the *left* side of his brain, and that the patient *does initiate* verbal movements, and would actually reply if the damage near the corpus striatum did not prevent words *getting out*.(e)

3. *He cannot write from himself.* Writing is *voluntary* speech in another form, and something more. Printed symbols are symbols of symbols. When we write, we revive the verbal (motor) signs, and next the sensory signs of those signs. We learn to write years after we have acquired words, and also after we have acquired marks for these words. Writing is then an acquirement on a double acquirement. It is obviously more artificial than speech, and—with the exception, proving the rule, that speechless patients who cannot write can often sign their names—plainly requires effort. The fact that patients who have learned to *use* a second language become from disease able to speak in their mother tongue is also in accordance with what follows.

If the difficulty were merely in getting the words down to the noise-making apparatus of the tongue, etc., how is it that the patient cannot write? It is plain that he can adapt visual to verbal signs, for he can copy writing accurately with his left hand. (See 4, on Imitation.) To write from himself, he would have *voluntarily* to reproduce the verbal symbols internally before he could make their representative marks on paper. In short, *he* would have to speak internally first, and in speaking there is something more than *involuntary* reproduction of words by sensations or perceptions. Thought is not exactly "internal speech."

4. *He can copy.* He usually copies the *printed* page in *writing* letters. In this case his copying is not, as has been said, mere imitation from educated eye to educated hand. *He obtains the caligraphic marks from his own organisation.* If he merely imitated conventional marks, it might be supposed that in copying there was no reproduction of *verbal* signs intermediate betwixt eye and hand.

If this be correct, we see again that *he* cannot reproduce verbal signs, but that they are reproducible in him by the impact of their permanent visual representatives, but only so long as, or as often as, these visual representatives strike on the looking eye. The process of copying developes no idea in the patient, for the reproduced words revive no images of "concepts" but the images of caligraphic marks, in themselves meaningless, and which to develope meaning would require *re-translation* into verbal signs. It is otherwise when words are spoken to him. There is possible then a revival of *real* images of things—concepts; the sounds of words usually give no other suggestion; moreover, there is possible a double revival of images (at first (left) involuntary, and then (right) *voluntary?*), the words in this process holding only a *subordinate* position betwixt these alternate reproductions. But when he puts his ideas in words for speech or for writing he has to reproduce the words *voluntarily* (or, as we say, *to find them*), the words then taking the lead in the active process. This the "speechless" man cannot do, as the side of *voluntary* revival, of verbal—motor signs—is wanting.

5. *He cannot write from dictation.* It may be asked, How is it that he cannot write words which we dictate to him, when this process is seemingly not so complex as writing from copy, and when the words are (see 2) really reproducible in him by the sounds of our words? When he copies, it will be observed that he mostly transfers each letter from the page to the sheet. The revival is but a momentary revival, but as the page is always before him it is, although an intermittent, practically a *continuous* revival. It is otherwise in dictation: here the revival is, as in the other, momentary, but, unlike in the other, it is not practically continuous, and even if the word be frequently repeated by us the patient himself does not govern the intermissions. Besides, although the dictated words do revive verbal signs, these automatically revive next not images of writing letters, but concepts (see 2). If writing is to occur, there must be a *further stage*. The patient would have to revive voluntarily the words in order that he may transfer them to paper. In other words, in dictating to, as well as in speaking to, a patient, we revive verbal signs, which next develope ideas. When he copies, verbal signs are revived too, but these develope merely the visual images of caligraphic marks. It is not possible for the "speechless" man to carry on at the same time (*i.e.*, in alternation) *two* such different processes as understanding the meaning by words and writing, as healthy people can. The right side of his brain is not leading as well as automatic, as is the left.

6. *The patient cannot read.* It is obvious that he cannot read aloud, but neither can he read to himself. This is not a defect of sight nor a defect of simple perception. He cannot read because he cannot voluntarily repeat the words internally.(f) He recognises printed words as *objects* probably as well as before—*i.e.*, just as I know Chinese words from Arabic words—for he identifies headings, handwritings (g)—but *he* cannot reproduce *the verbal associations*—the verbal after the visual symbol—which it must never be forgotten are *arbitrary* and acquired associations—acquired in the extreme sense of the word. They are learned by tiresome actual schooling, to which learning to speak is comparatively a simple process (see No. 3) If (see 1) we take the book and read to him, he understands so that an automatic reproduction of words is possible.

And it is not denied that (see 4) there is automatic reproduction of verbal signs by their representative visual signs on the printed page. There must be, or the patient could not copy; but from what is said of dictation and copying, it would seem that the defect in reading is that the patient cannot *voluntarily* reproduce words. It is, I am fully aware, easy to say this, but it seems to me that the facts really do lead to such a conclusion. It has been suggested to me that in copying the printed letters the "speechless" patient reproduces the caligraphic marks directly—*i.e.*, *without* the intermediation of verbal signs. A similar hypothesis would account for the inability to read. Still I do not think this easy explanation is satisfactory, and I have more to say of reading on another occasion from a larger point of view, which I can now only indicate in mere outline.

Spencer says ("Psychology"), "The difference between an involuntary movement of the leg and a voluntary one is, that whereas the involuntary one takes place without any previous consciousness of the movement to be made, the voluntary one takes place only *after it has been represented in consciousness.*" The voluntary is preceded by a nascent excitation of the parts to be moved. In the next communication I hope to show that in active psychical processes, motor and sensory, there is subjective reproduction prior to objective reproduction—a sensation, for instance, is first put in relation to its subject, and next considered in relation to its object—that there is something like a reduction of relations of sequence to relations of coexistence (*i.e.*, of alternate sequence) in the two terms of a proposition; and that what I have advanced as to the crossed differences of the two brains is in harmony with this view as regards both the related pairs, voluntary and involuntary Perception, and voluntary and involuntary Expression.

DEATH OF PROFESSOR MONNERET.—The Paris Faculty has just lost another of its most esteemed members in the person of M. Monneret, Professor of Clinical Medicine. In the midst of perfect health, he died quite suddenly, at the age of 58, it is supposed of rupture of the heart. He prohibited all funeral ceremonies.

(e) Of course those who think that the brain is a double organ, and that both sides are educated (which I believe), and who believe also that the two hemispheres are exact duplicates (which I do not believe), may think they have no need of this hypothesis. Those who think the hemispheres are alike may, however, be asked how it is that patients do not speak with the right side when the left is damaged, if one side will do; or why they speak with the left only when the right side is damaged, if two hemispheres are necessary to talking. The frequently quoted symmetry of the eyes does not, I think, bear on the point. We do not *see* the *same* field with each eye, and it may be that binocular vision is rapidly alternate.

(f) "It is not necessary to read aloud in order to transfer the work from the eye to the voice—a mere whispered or muttered articulation, a mere *ideal* rehearsal will become coherent. In fact, I believe we retain written language by the help of both methods, or by a combination of trains of *symbols*, as seen by the eye, with trains of *articulations* rehearsed by the voice." (Bain, "Senses and Intellect," p. 442.) I am not at all clear, however, that Professor Bain thinks there is a *necessary* reproduction of verbal signs in reading.

(g) I have recorded a case exemplifying this, *London Hospital Reports* 1864, p. 443. Besides speechless, they not only know objects, but recognise the names of the objects when uttered. I have a patient—the early part of her case is given *op. cit.* p. 447, case 26—who cannot read a word, and yet enjoys hearing tales read to her, and can find in a magazine volume the continuation of the "Brown Papers," from one number in the next by the look of the heading.

EPILEPTIFORM CONVULSIONS FOLLOWING A BLOW ON THE HEAD—TREPHINING—RECOVERY.

By ALFRED POLAND, F.R.C.S.
Surgeon to Guy's Hospital, etc.
(From notes by Mr. GEORGE EASTES.)

C. B., aged 14, a carpenter's apprentice, living at Kingston-on-Thames, was admitted into Guy's Hospital on January 21, 1868. The patient has always been quite well until his present illness. About nine weeks ago, at 4 p.m., a heavy wooden trestle fell from a height of seven feet, and its blunt edge struck him on the head, close to the median line, about two inches in front of the superior angle of the occiput, inflicting no wound, but occasioning slight subcutaneous swelling. He was rendered insensible for about three minutes, but he did not vomit. The same evening he could walk, and followed his occupation for three days subsequently. During that time, however, he was gradually losing his appetite. On the fourth day afterwards he had headache and remained in bed (except at meal times when he sat up). On the seventh day he first had twitchings of the muscles of his hands superadded to the other symptoms, all of which still continued. A Medical man being called in, stated that he thought the symptoms had nothing to do with the injury. On the eighth, ninth, and tenth days the headache continued, but there were no twitchings. On the eleventh day there was spasmodic contraction of the muscles both of the hands and feet; the limbs would become rigid, with the fingers extended, and he was jerked from his chair whilst sitting up at the side of his bed. These attacks lasted each from two or three to fifteen minutes; he was conscious during their continuance. Thus he remained during the twelfth and thirteenth days. On the twelfth day ice was applied to his head for two hours at a time, and then off for an hour, and this local treatment was persevered in for a week. Mercury was also administered internally for three days, sometimes every hour and sometimes every three hours, but not to salivation. On the fourteenth day, to the other symptoms was superadded temporary loss of consciousness with each muscular twitching; on the cessation of the muscular spasm he would become at once quite sensible.

All these symptoms remained until December 22 (the fifth week), when they altogether ceased. During their continuance he was not asked to stand up, but he thinks he could have done so had the attempt been made.

On December 22, therefore, he thought himself quite well, except a little muscular debility, but on Christmas day he was able to walk in the garden attached to his father's house. During the latter part of December he was very careful in his diet, taking no beer or wine whatever, and walking a little each day in the garden.

On January 1, 1868, he dressed himself in the morning, but very shortly afterwards, without any preliminary headache or other uneasiness, twitching of his muscles again came on, and he went to bed. Before the evening of the same day he became at times delirious and furious, and was violently and generally convulsed, so that it required two men to hold him in bed during the continuance of a "fit." Between the "fits" he was quite conscious.

2nd.—There supervened persistent headache (referred to the vertex), and he continued being every few minutes convulsed, but not so severe as yesterday. In this condition he remained until his admission into Guy's Hospital. He was during this time able to sleep four or five hours at night, when the convulsions would cease.

20th.—He bit his tongue for the first time in a "fit." During the days just preceding admission he had, on four or five occasions during the "fits," passed his motions and urine involuntarily into the bed.

On admission, January 21, the boy was carried into the surgery, where he had a very severe epileptiform kind of fit, affecting nearly all the muscles, but more especially those of the extremities and the back; this lasted about fifteen minutes, when he was carried up into the ward by his father. He had a vacant stare, and as the father asserted he could not stand, no attempt was made to place the patient on his feet. He could grasp equally with either hand, and his grasp was a moderately firm one. His head was cool; the pupils were equal, and acted normally to the stimulus of light. When spoken to and asked to point out where there was pain and where he had been struck, he moved one of his hands (sometimes one and sometimes the other) sluggishly to the vertex, and with his fingers traced a line some three or four inches long, commencing half an inch to the left of the superior angle of the occiput, and thence running forwards across the median line to a point about an inch to the right of the anterior extremity of the sagittal suture. When the Surgeon's fingers were applied to this same part, nothing abnormal was noticeable; the surface of the bone seemed quite even. There was no local tenderness, but upon pressing with the finger on the right parietal eminence, some peculiar nervous phenomena were developed. The boy became, as it were, slowly tetanised; his arms were thrust out straight, and his fingers became fully extended on the palms. His legs were were also irregularly affected, being mostly extended—occasionally, however, more or less flexed. The muscles of his face participated in these spasmodic contractions. Gradually all this muscular action would cease; the time occupied by the phenomena from beginning to end lasted from forty to ninety seconds. During a quarter of an hour the same cycle of phenomena was repeated eight or ten times, and always when the same spot on the right parietal bone was touched. But the "fits" also came on twice or three times without the scalp being touched at all. During the "fits" the boy seemed semi-conscious, but between them there was no deafness; he could protrude his tongue naturally; and the pulse and respirations were unaffected, except that they were both a little quickened.

He remained under observation for about twenty minutes. Mr. Poland decided to trephine the boy at the spot on the parietal bone whence the nervous symptoms seemed to start, and where the supposed seat of injury was situated. Accordingly, the scalp having been shaved, chloroform was administered, and Mr. Poland operated. He made a cranial incision and reflected back the flaps, and peeled off the pericranium, finding all the tissues external to the bone quite healthy. The largest-sized trephine was then applied at a spot on the right parietal bone one inch to the right of the sagittal suture, and one inch and a half in front of the superior angle of the occipital bone. A circular piece of bone was then removed. It was quite healthy, although a little denser than usual, requiring many turns of the trephine to cut through the tables; and there was a little adhesion to the dura mater, but not more so than is usual in skulls at the patient's age. The exposed dura mater, which pulsated with each beat of the heart, was to all appearance healthy, and did not bulge in the least into the trephine hole. The flaps of the scalp were then replaced, fixed in position with strapping and sutures, and the boy sent back to bed. An ice bag was applied over the seat of operation.

22nd.—Slept some hours during the night. Pulse 118 and full; respiration 26. He has had no fit since the operation. Headache quite ceased; skin of natural temperature; pupils active and equal; is a little weak, but can move his legs and arms. He has not vomited. He was placed upon milk diet.

24th.—Absence of all symptoms denoting brain disturbance; countenance cheerful and bright; pulse 110; respiration 26.

27th.—Ever since the operation, the patient has not had a trace of the cerebral symptoms which previously existed. Pulse 75; respiration 23; appetite good; tongue natural; and takes bread in his milk.

February 3.—For the first time, to-day he was dressed and sat up in a chair, and during this time the pulse was about 90 in the minute.

4th.—Just after having dressed and got up, and when the patient's face was apparently a little flushed, the pulse, whilst he was in the erect position, was 114.

5th.—Pulse 95. He was walking about the ward, and seemed quite well. Wound suppurating at its centre, but there had never been any bagging of pus beneath the flaps. Primary adhesion had nearly been completed.

14th.—The wound granulating, and but little pus discharged. The pulsations of the brain are distinctly visible. The boy seems to be as well as possible in his general health. In the erect position, the pulse is 75, and respiration 19.

26th.—The boy can run about without feeling any ill effects, but cannot carry weights, or even a chair, for any distance without pain shooting up to his head. Stooping very low also causes pain.

March 10.—He left the Hospital perfectly well.

He has been heard of so recently as August. He is well, and has never had any return of his complaint, and his intellect and movements are good and natural.

Remarks.—We have little to say on this peculiar and anomalous case. Here was a boy in perfect health, never having had the slightest approach to a fit or cerebral disturb-

ance before the accident. The corner of a heavy trestle falls on his head at a certain spot; from that time forth he has fits of an epileptic character. The spot struck seemed to be the source of all the effects which afterwards ensued. That spot and the bone corresponding to it were incised and removed by the trephine. All symptoms immediately subsided and never reappeared, the boy becoming perfectly free from all cerebral symptoms. There was no depressed bone, no fracture, no appreciable disease in the scalp, bone, or dura mater. Many conjectures and theories have been suggested. We offer this case to the Profession for their judgment in the matter. Would this boy have got well had the trephine not been used? Was the operation justifiable? All we can plead in defence of the practice is the ambiguous phrase—"The end justifies the means."

CASE OF ACUTE HEPATITIS WITH DOUBLE PNEUMONIA.

By W. J. TREUTLER, M.B., C.M. Edin.,
Surgeon, Royal Gardens, Kew, etc.

On May 29, 1867, at 8 p.m., I was called to see Mrs. C., a widow lady, aged 60, for what she called "another attack of biliousness." On inquiry I ascertained that she had been habitually subject to such attacks, characterised by intense headache, nausea, and often vomiting and constipation. These symptoms were generally relieved by a dose of castor oil, after which she again recovered. Her habits and mode of life had always been steady and regular. On this occasion I found her complaining of a bad headache and feeling of sickness which had come on during the afternoon of the previous day. She had taken the castor oil as usual; but, although her bowels had been slightly opened that morning, no relief had been obtained, and I was accordingly asked now to see her. The headache, which occupied the frontal region, was intense, as was also the nausea, though there had been no vomiting. She had had nothing but a little toast and tea during the last twenty-four hours. Tongue covered with a thick, yellow fur; pulse 82. Her manner restless and peculiar, which I fancied at the time was suggestive of something graver than a simple bilious dyspepsia. Administered gr. xx. of zinci sulph., and left gr. v. pil. hydrarg. to be taken about 10 p.m., to be followed by a full dose of castor oil in the morning.

May 30, 10 a.m.—The emetic acted well last night, but the headache this morning is little or no better. The castor oil was all thrown up again within a quarter of an hour after taking it. She slept badly during the night, and is said by her attendant to have been slightly delirious. She now complains of a frequent sharp lancinating pain in the right side, which comes on at intervals and causes her often to scream out on account of its suddenness and violence. On asking her whether she felt any pain anywhere else, she immediately replied, "Oh yes, in my shoulder here (pointing to the right scapular region). I think I have got rheumatism too." On applying pressure in the region of the liver, the pain was much increased. Pulse 86; temperature 100·2°; skin dry; some thirst; bowels confined; urine high-coloured, no albumen, no bile pigment, specific gravity 1020. To have a full dose of calomel et pulv. jalap. co., and six leeches to be applied to the hepatic region. 5 p.m.: Bowels acted twice; fæces clay-coloured and hard. Considerable tenderness in right hypochondrium. There is constant nausea, and once she vomited about a teacupful of dark fluid. Is troubled with a short sharp cough which causes her great pain in the right side. On percussion there was found an area of dulness 2½ inches by 4 inches laterally at the base of the right lung. In the hepatic region—where percussion produces much pain, and can, therefore, not be carried far—there is found a considerable extent of dulness, extending vertically 4¾ in., at about 1½ in. from the median line, and laterally from close to the middle line about 6 in. to the right. On auscultation there is found large crepitation at the base and lower half of the right lung, with increased vocal resonance. There is great restlessness, and her face has a pinched and extremely anxious appearance. Pulse 98. Temperature 102·4°. Ordered half-grain of opium every two hours till three grains shall have been taken; hot fomentations to the right side, followed by a hot linseed-meal poultice sprinkled with laudanum. Beef-tea and a cooling acid drink (acid. phosph. dil.).

31st, 9 a.m.—Was much relieved by the fomentations and poultice for a time, but towards morning the pain again increased. At the time of the visit she was in great pain; pulse 98; skin dry and hot. Continue poultice. To have beef-tea with port wine. 5 p.m.: Vomited several times to-day after taking the beef-tea. Pain in right hypochondrium worse than ever. There is no yellowness whatever of the skin and conjunctivæ. Cough very troublesome, accompanied by a brownish frothy expectoration, with pain sometimes in the left side, sometimes in the right. Percussion showed that the dulness had increased all over the right lung, and that there was also dulness in the left side about the middle, increasing in intensity downwards. Posteriorly no examination could be made. On auscultation there was found harsh crepitation all over the right lung and the lower half of the left lung. The vocal resonance was much increased on the right side, being almost bronchophonic about the right nipple; it is increased also in lower half of left lung, less so in the upper. The examination was necessarily imperfect from the difficulty of, and the pain caused by, moving the patient. The urine is dark brown, loaded with phosphates, also much bile pigment and oxalate of lime. Bowels confined. Ordered an enema of warm water and turpentine, also pulv. Doveri gr. xx. at bedtime. Pulse 104, temperature 103°.

June 1, 9 a.m.—Much worse this morning; was delirious during the night, and is still but half conscious. The injection last night passed off half an hour after administration, without bringing away any fæcal matter. Urine scanty and high-coloured, loaded with bile pigment and oxalates; sp. gr. 1033. Pulse 110. Skin covered with clammy perspiration. Countenance much sunken. From this time she continued to sink in spite of all efforts to support her by brandy, etc., etc. No medicine of any kind could be retained for more than a few minutes in the stomach. Even the beef-tea and small quantities of iced brandy and water were sometimes rejected. On the 2nd she was conscious only at intervals, and then but for a few minutes; the greater part of the day she was very somnolent and constantly talking and muttering, with frequent startings, and her face expressive of great pain. Towards evening she became deeply comatose, and died on the morning of the 3rd.

Autopsy Twenty-nine Hours after Death.—Body thin, but not particulariy emaciated. Permission was obtained to examine the thorax and abdomen only. Abdomen: The stomach contained about fifteen fluid ounces of a thin dark brown grumous fluid. The inner and posterior surface of the larger curvature presented a high degree of arborescent vascularity. The mucous membrane, both on this and the anterior surface, was almost completely removed; what remained was thickened and softened at the edges. There was not so much vascularity on the anterior as on the posterior surface. The congestion extended through the pyloric orifice into the duodenum and intestines, being still intense and arborescent in the former and gradually diminishing in the latter; both duodenum and intestines were almost filled with the same dark fluid as was contained in the stomach. Liver somewhat enlarged; weight 5¾ lbs. The whole substance of the gland was deeply congested throughout, and was softened and friable, being readily pierced by the finger in every direction. This was especially the case on the posterior surface of the organ, and most markedly so on the posterior surface of the larger lobe, which was of a most intensely dark reddish-brown colour, and so soft that it could scarcely be handled. The smaller lobe was also much congested and friable, but not nearly to the extent of the right lobe. The venæ portæ and hepatic veins were empty, and there was apparently nothing abnormal about the hepatic artery. The gall-bladder contained about half an ounce of pale clear bile. The kidneys were normal, their coats puckered. The spleen was small and soft, and the investing capsule shrunk and puckered, weight 3¼ ounces. Other organs normal.

Microscopic examination of the substance of the liver showed no traces whatever of hepatic cells in the portions from the large lobe, only molecules and *débris* of broken-down cells mixed with oil globules. In the portions from the lesser lobe outlines of hepatic cells could here and there be discerned, their contents consisting of granular matter and fat globules Thorax: Heart and pericardium normal. Lungs: Pleuræ adherent to both lungs at their bases. Right Lung: The upper and middle lobes were condensed and indurated, and in a state of grey hepatisation. Portions cut off sank readily in water. On section into their substance, pus was abundantly effused with the adherent lymph. The lower lobe throughout was deeply coloured and condensed. On section, a dark red

frothy mucus exuded from the cut surfaces, mixed with purulent matter and flakes of lymph. Left Lung: Upper and middle lobes considerably congested, especially at the posterior part, but no lymph effused between them and the pleura, which here was not adherent; lower lobe deeply congested throughout, the air tubes loaded with a reddish frothy mucus, pleura adherent.

I have thus entered somewhat fully into the details of this case, owing to several peculiarities and points of interest which it presents. It is remarkable for its completely intractable character, and for the rapidity with which the symptoms developed themselves and ran their fatal course. Further, we notice the severe gastric and pulmonary affections with which it was complicated. That inflammatory affections of the liver should coexist with typhus, puerperal fever, or pneumonia, is no uncommon thing; but here we have an intense inflammatory lesion of the stomach and greater part of the alimentary canal, which denuded the former almost completely of its mucous membrane: this can scarcely be conceived as being a sequence of the affection of the liver. As regards the liver itself, we have the rapid and complete process of disintegration. Noticeable is the slight increase in the weight of the organ, contrary to a diminution, as was expected. It seems there can be little doubt that the increase in weight was owing simply to the great quantity of blood in the liver, and the disease having been arrested by death before it and the detritus could be removed. Frerichs details two cases in which the liver was similarly enlarged. Remarkable, too, is the total absence of any yellow tinging of either skin or conjunctivæ. Icterus has been noted as a constant symptom, yet cases such as the present one show that we may have the most extensive and complete arrest of the function of the liver without the least tinging of those or other parts. To this arrest of the secreting and excreting function of the organ, too, must be ascribed the rapidly fatal issue of the disease, for the effete matters represented by the biliary matter, not being separated from the blood, poison it, and thus we have these cases dying with all the symptoms of blood-poisoning. It is true bile pigment was found in the urine, but, though copious there, the excretion by that channel was wholly insufficient. Regarding the pneumonia, the question arises—Was it in existence, but latent, before the hepatic affection developed itself, or did it arise subsequently, and had it any relation to the hepatitis as to cause? The advanced stage of the disease in the lungs, especially in the right one, would seem to indicate that it was of longer standing than merely six days. On the other, we have total absence, at the beginning, of all symptoms, either subjective or objective, of pneumonia; these, rather, were only manifested on the third day of the disease, and then in the usual manner. On the whole, it would appear, therefore, that the pneumonia and the gastric catarrh originated simultaneously with the hepatic inflammation, the three running an acute course in the strictest sense of the word. Although, at the commencement, there were no special signs of the nature of the disease, yet, as already noticed, there was something undefinable, yet unmistakable, in the patient's manner and appearance, which strongly impressed me at the time, and led me to give an unfavourable, or at least unsatisfactory, opinion from the beginning. The extreme anxiety depicted in her face—though she neither expressed nor seemed to feel any—the pinched appearance of the features, the closely compressed lips and restless eyes and manner—all these seemed to me so many indications of what was to come, and the result showed how true those indications were. I much regret having overlooked to search for leucin, tyrosin, etc.

Kew-green.

Libraries for Hospitals.— M. Ernest Godard, who died in 1862 at Jerusalem while on a Medical journey to the East, of which some of the results have been published since his death under the auspices of M. Robin, besides leaving prizes to the Academy of Medicine and other learned bodies, bequeathed 7000 fr. towards the foundation of libraries in the three Paris Hospitals in which he had officiated as interne. For some years past his intentions have been carried into effect, and in each of these Hospitals from 600 to 1000 volumes are circulated every month. This benefit, highly appreciated at the Charité and Necker, is especially prized at the Hôpital du Midi, where, from the nature of the cases received, the patient is left so much a prey to dangerous idleness.

ON THE

PRODUCTION OF ANIMAL HEAT,

WITH REMARKS ON CONGESTION, ON THE HEAT OF FEVER, AND ON THE COLD OF COLLAPSE.

By EDWARD T. BLAKE, M.R.C.S.

We are indebted to Professor Tyndall and to M. Donny, of Ghent, for some most interesting researches into the more occult properties of water in relation to cohesion. Many of these researches are in the highest degree suggestive to the physiologist. Professor Tyndall tells us in his very fascinating work, "Heat considered as a Mode of Motion," that de-aerated water behaves in a very curious way, and in fact acquires physical qualities not possessed by water which holds air in solution.

"All water holds a quantity of air within it in a state of solution; by boiling you may liberate this imprisoned air. On heating a flask of water, you see air bubbles crowding on its sides, long before it boils, rising through the liquid without condensation, and often floating on the top. One of the most remarkable effects of this air in the water is, that it promotes the ebullition of the liquid. It acts as a kind of elastic spring, pushing the atoms of the water apart, and thus helping them to take the gaseous form. Now suppose this air removed; having lost the cushion which separated them, the atoms lock themselves together in a far tighter embrace. The cohesion of the water is vastly augmented by the removal of the air. Here is a glass vessel, the so-called 'water-hammer,' which contains water purged of air. One effect of the withdrawal of the elastic buffer is, that the water falls with the sound of a solid body. You hear how the liquid rings against the end of the tube when I turn it upside down. Here is another tube bent in the form of a V, and intended to show how the cohesion of the water is affected by long boiling. I bring this water into one arm of the V; by tilting the tube, it flows, as you see, freely into the other arm. I restore it to the first arm, and now tap the end of this arm against the table. You hear, at first, a loose and jingling sound. As long as you hear it the water is not in true contact with the interior surface of the tube. I continue tapping; you mark an alteration in the sound; the jingling has disappeared, and the sound is now hard, like that of solid against solid. I now raise the tube, and turn the column of water upside down, but there it stands. Its particles cling so tenaciously to the sides of the tube, and lock themselves so firmly together, that it refuses to behave like a liquid body; it declines to obey the law of gravity."

Now, if, by depriving water of air, its cohesion be so greatly increased, it is probable that the blood deprived of oxygen is subject to a similar change of physical properties. It might be objected that—1st, blood is a very different fluid from water; and, 2ndly, that air is not oxygen. But blood is made up of 80(a) per cent. of water, and atmospheric air contains 21 per cent. of oxygen; and nitrogen, we know, is not a soluble gas. So that we may fairly argue, with suitable allowance, from these phenomena as premises. Have we not, then, here a very simple explanation of one of the causes (hitherto overlooked) of capillary congestion, and a reason why, in so many cases of pulmonary and cardiac diseases, where the blood is deficient in oxygen, we find local congestions and dropsies so common? Of course phenomena which are observed in connexion with rigid tubes are very different from vital processes carried on in living capillaries; yet the experiments of M. Poiseuille (b) sufficiently show that the flow of blood through the capillaries is regulated by definite physical laws.

Many ingenious and intricate theories of congestion have been broached; but all have proved more or less inadequate and unsatisfactory. Here is one certainly simple enough; and how often is simplicity the handmaiden of truth!

I would take this opportunity of suggesting that the hypothesis known as the "thermo-dynamic theory," and which, I suppose, we must now receive as a law, throws much new light on that most interesting of questions, left us as a legacy

(a) 795 parts of water in 1000 (Schmidt and Lehmann).

(b) "Rech. Expérim. sur le Mouvement des Liquides dans les Tubes de petits Diamètres. Paris. 1844. In-4." Poiseuille's experiments are extremely interesting; they go to show that alcohol retards the capillary circulation, thus tending to produce local congestions. In support of these views, we know that cerebral congestion is a constant symptom of alcoholism, whilst congestion of the kidney and of the liver are the recognised chronic results of that dyscrasia. I hope on another occasion to do more justice to the wide subject of Medical physics.

by Brodie, and which we have been compelled to acknowledge that Liebig has *not* settled—viz., the source of Animal Heat.

Were Brodie's theory true, we should be exposed to the most peculiar variations of temperature, depending merely on temporary innervation. Thus one part of a limb might be at fever heat, another torpid with cold: in similar manner palsy must inevitably produce speedy gangrene, because all nervous influence would then be cut off.

The refutation of Liebig's attractive "hydrocarbon theory" is well known to all the readers of this journal. With regard to a third view, the thought that heat is generated to any extent by the friction of the blood against the inner arterial surfaces scarcely requires notice: if it be sound, the subject of atheromatous arteries would enjoy a high degree of animal heat!

It has long been considered as axiomatic in chemistry that the reduction of a body from a rare to a dense state is accompanied by the evolution of sensible warmth; and, conversely, the expansion of any substance from a solid to a liquid, or to a gaseous condition, is associated with the simultaneous disappearance of sensible heat. The "thermo-dynamic theory" affords a simple explanation of these phenomena, discarding altogether the time-honoured doctrine of "Latent Heat."

All animal heat is no doubt produced in the neighbourhood of the capillaries; the main amount is probably due to the deposit of blood—a liquid—in the form of solid tissue during the process of molecular replacement; but, besides this, wherever in the system we can trace the reduction of a gas to a liquid, or a liquid to a solid, there we shall have the evolution of sensible heat as a necessary result. The rise of temperature indicated by the thermometer in fever, as well as the cold collapse of cholera, are easily explained by this view. In fever there is, from a given cause, a sudden arrest of all skin action; then the *heat* that would be used as *energy* to convert perspiratory water into vapour remains in the system as sensible heat. Thus, a labourer working in a cold damp atmosphere, his skin and pulmonary mucous membrane in a state of temporary congestion, is powerfully acted upon by the depressing influences of cold: what result ensues? All that *force* which was being used to convert the secretion of his sweat-glands into vapour—*i.e.*, all the energy employed in driving the particles of perspiratory water sufficiently asunder for them to assume the gaseous condition—remains pent up in the system in the correlative form of *heat;* the blood-temperature necessarily experiences an increment, of course exactly in proportion to the amount of force which was requisite to convert the labourer's sweat into vapour during a definite period. Just the converse of this obtains in the cold stage of cholera. Here is a disease in which the blood is notably aplastic; the assimilative process is entirely arrested (witness the disastrous, often fatal, effect of giving food); no oxygen (a gas) is absorbed by the blood from the lungs, for respiration is nearly extinct; no liquid blood is deposited from the systemic capillaries as solid tissue. It is not possible, therefore, that there should be any development of that form of caloric known as Animal Heat.

Wolverhampton.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

Few special institutions in London are doing a more useful or a more unostentatious work than the little Hospital for the Paralysed and Epileptic, in Queen-square. Outwardly there is but little to distinguish the Hospital from the neighbouring houses, and one would hardly be prepared for the amount of room and the extent of accommodation careful packing has managed to secure indoors. Probably the best assignable reason for the existence of a special Hospital is that its presence secures for the patient more numerous and more perfect appliances than would otherwise be attainable by him, and we conceive that in this way the Hospital for the Paralysed and Epileptic can give an ample *raison d'être*. Indeed, the most noticeable features connected with this institution are its admirably contrived baths, its electric room, and its gymnasium. These, however, being beyond the ken of the ordinary visitor, he would probably be most struck with the neatness and comfort—one might almost say luxury—of the wards. The great majority of the cases admitted are of such diseases as do not altogether incapacitate the sick individual; hence the sleeping-rooms or dormitories are rarely occupied during the day, and the patients collect into the day-rooms, some of which are most elegantly furnished, containing oak furniture, carpets, engravings, a piano, etc., all the fruits of the exertions of the ladies' committee. The dormitories are also extremely neat and clean, and, being provided with gaily coloured coverlids, present a very pleasant appearance. All the furnishings and decorations are in the mediæval type, with the exception of those in one or two smaller wards, which are nicely furnished in the ordinary fashion. But enough has been said of the mere externals of the place.

Besides the in-patients, for whose accommodation there are sixty beds, a large number are treated as out-patients, there being ordinarily about 800 or 1000 on the books at a time. This department is also very well managed. The waiting-room is large and well ventilated, and contains a provision which might be well added to all institutions of a similar kind—a drinking fountain. The Physician's room is also enough to make one envious when we compare it with the comfortless holes in which out-patients are ordinarily seen at the General Hospitals. In one corner, behind a screen, is one of Morell Mackenzie's lamps for laryngoscopic and ophthalmoscopic purposes. Almost every patient is examined by the ophthalmoscope, especially those under the care of Dr. Hughlings Jackson. There are also materials for testing urine or other fluid at the elbow of the Physician.

But to speak of the practice. In several cases of epilepsy attended with an aura Dr. Buzzard has found immediate benefit from the application of a blister between the starting-point of the aura and the nerve centres. There was recently in the Hospital a little girl who had had fits daily for eight months before admission, often as many as forty in a day, always preceded by tickling sensations near the insertion of one deltoid muscle. In the middle of last April the arm was encircled above this point by a blister, and there have been no fits since. In another patient of Dr. Buzzard's a still more powerful modification of nutrition has been employed with much advantage for a different condition. A man struck the lower part of his sacrum in April, 1865, in a fall from his horse. When admitted a few weeks since, he had never from the time of the accident been free from pain in the spot, which was very tender to the touch; he walked lame, and his left thigh had frequently given way with him. On May 4 the actual cautery was applied on each side of the tender spot. The patient has since been completely relieved, and has entirely lost the hyperæsthesia. The "firing" was very conveniently managed by thoroughly freezing the skin previously by Richardson's ether spray producer. Dr. Buzzard referred to this case as a very interesting one from a medico-legal point of view. There could be no doubt, he said, from circumstances, of the truth of this man's story that for three years he had suffered great pain, and had only been able to perform a small part of his duties as a groom. Yet the symptoms were almost entirely subjective, the only noticeable point being that the left thigh and leg are somewhat smaller than the right — a difference which may be attributable to disuse. Had this man got his blow on the back in a railway collision, he might have found it very difficult to prove his case.

Duchenne's observation that in hysterical paralysis there is loss of electro-muscular sensibility whilst electro-contractility is preserved, was remarkably confirmed in a girl of 15, who was recently under Dr. Buzzard's care for paralysis of both lower extremities and of the right arm. She had lain helplessly for nine months previous to her admission into the Hospital, and at first she could not move a finger of her right hand. The strongest current of Stöhrer's double induction battery, which is quite intolerable under normal conditions, was entirely unperceived by her, although the muscles contracted vigorously under its influence. After a fortnight's perseverance, however, she began to feel the current rather acutely. Her improvement has been steady, and she will in all probability recover, although some delay may take place owing to the wasting of her leg muscles from disuse.

(*To be continued.*)

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(*Continued from page 240.*)

Case 125.—*Multilocular Cyst—One Tapping—Ovariotomy—Recovery.*

A WIDOW, 44 years old, applied to Dr. Wynn Williams, and was first admitted in October, 1867. She was stout and florid, and the abdomen had been increasing in size for about six years, but only for the first six months with rapidity. The catamenia ceased twelve months before admission. No tumour could be felt by the vagina. The uterus was retroverted. In order to remove some doubt as to the uterine or ovarian nature of the tumour, Mr. Wells tapped on October 26, 1867, and removed upwards of eleven pints of an alkaline, reddish-brown, opaque, albuminous fluid, specific gravity 1023, containing a good deal of blood. So far diagnosis was not assisted; but under the microscope large and confluent colloid globules, some of them undergoing mucous metamorphosis, were observed, and were regarded as strong evidence in favour of ovarian disease. The patient went into the country, was readmitted in improved health in June, and ovariotomy was performed July 1, 1868. Professor Pancoast, of Philadelphia, was present. Chloromethyl was administered by Dr. Junker. After dividing a thick layer of fat to the extent of five inches, the peritoneum was opened for about four inches. Some very firm, but not extensive, adhesions to the abdominal wall were separated, principally by the hand, but one firm band was divided by scissors. A cyst was tapped and emptied; and, as the tumour was drawn out, some omental adhesions were separated, and a very firm band which extended to the sigmoid mesocolon. A thin pedicle was secured about two inches from the left side of the uterus by a small clamp, which was kept out without traction. Very little blood was lost. Three omental vessels were tied. The right ovary and the uterus were healthy. Seven pints of fluid and 1 lb. 9 oz. of solid matter were removed. There was some sickness and pain, requiring two opiates; but recovery was unchecked, and the patient left the Hospital twenty-three days after operation.

Case 126.—*Non-adherent Cyst—Never tapped—Ovariotomy—Recovery.*

A farm labourer's wife, 27 years old, sent by Mr. Balding, of Royston, was admitted July 13, 1868. She had three children, the youngest 16 months old. After the birth of this child the catamenia had not reappeared, and the abdomen remained large; but there was no considerable increase in size until two months before admission. Mr. Wells diagnosed a free multilocular ovarian cyst, and performed ovariotomy two days after admission. Chloromethyl was administered by Dr. Junker. An incision of four inches exposed a non-adherent cyst, which was tapped, emptied, and withdrawn without any difficulty. A long pedicle to the right of the uterus was secured in a small aluminium clamp. Scarcely any blood was lost. The left ovary was healthy. Fourteen pints of fluid and 1 lb. 4 oz. of solid matter were removed. There was no sickness. One opiate on the day after operation was all the medicine given, except some citrate of potass on the third, fourth, and fifth days. Metrostaxis commenced on the day after operation, and continued during three following days. This was rather remarkable, as there had been no uterine discharge for sixteen months previously. The clamp did not come off until the eleventh day, but the patient left the Hospital quite well twenty-one days after operation.

Case 127.—*Adherent Multilocular Cyst—Ovariotomy—Recovery.*

A labourer's wife from Wantage, 35 years of age, mother of five children, the youngest 8 months old, was sent by Dr. Gray, of Oxford, and was admitted July 20, 1868, suffering from a large multilocular ovarian cyst, which had only been detected a month before. She had remained large in size after her last confinement, and in three months the catamenia reappeared and recurred at short intervals. Severe pain in the right lumbar region became increasingly distressing. The uterus was high, but mobile, and its cavity was not more than three inches and a half long.

Ovariotomy was performed July 22, 1868. Dr. Junker gave chloromethyl. After exposing the tumour by an incision five inches long, some adhesions in front were easily separated. A large cyst was tapped and emptied, some inner cysts were broken up, and the tumour then drawn out, after separating a piece of adherent omentum and a shred of vascular tissue which united part of the tumour to the left side of the uterus. A short pedicle on the right side was secured in a middle-sized clamp barely an inch from the side of a small uterus. The clamp was kept out with sufficient traction to fix the uterus very close to the abdominal wall. The left ovary was healthy. Very little blood was lost. A shred of omentum was tied and cut off, and a vessel in the shred separated from the left side of the uterus was also tied. Both ligatures were cut off short and returned. The fluid measured twenty-six pints. The more solid portion of the tumour weighed two pounds ten ounces.

The day on which this operation was performed was one of the hottest days of this hot summer. Mr. Allnatt, writing to the *Times*, gave the temperature in the shade at 3 and 4 p.m. as 88·0°, and the mean of seven hours, from 10 a.m. to 4 p.m. inclusive, as 85·4°. At night the temperature in the ward, with all the windows open, was 88°. But no sickness nor any other bad symptom followed the operation. Only two opiates were given. The clamp was removed on the fifth day. The bowels acted spontaneously on the seventh, and the patient left the Hospital on the twenty-second day in good health.

Case 128.—*Multilocular Cyst—Two Tappings—Ovariotomy—Recovery.*

A farmer's wife, 52 years old, sent by Dr. Broomhall and Mr. Hayes, of Beech Cliff, Staffordshire, was admitted July 27, 1868. She had been married twenty-one years, but had no children. The catamenia had always been scanty, irregular, and painful. In the autumn of 1867, she began to increase in size slowly, and without pain, but in the spring of this year enlargement was more rapid, and she was tapped by Mr. Hayes on May 18, 1868, seventeen pints of dark coffee-like fluid being removed. The cyst soon filled again, and at a second tapping on July 19 fifteen pints of a lighter-coloured but more viscid fluid escaped. She came to town a week after the tapping, and ovariotomy was performed on July 29. Professor Kühne, of Amsterdam, was present. Chloromethyl was given by Dr. Junker. After making an incision four inches long midway between the umbilicus and pubes, and separating a few loose adhesions around the trochar punctures, a large cyst was tapped, emptied, and drawn out with some groups of secondary cysts. Rather a broad pedicle was secured in a large clamp to the left of the uterus, and fixed outside with some tension of the sigmoid mesocolon. There being some prolapse of the pedicle behind the clamp, the stump was held up, the clamp loosened and reapplied lower, and a ligature was also applied. From the surface of the right ovary a cyst projected as large as a walnut. This was punctured and emptied. Two pints of fluid and one pound fourteen ounces of more solid matter were removed. The weather was cooler than when the preceding case was under treatment, but was still very hot, the temperature in the ward often being about 78°. But there was no sickness, very little pain, and steady recovery. Metrostaxis commenced during the night after operation, and continued till the fourth day. The bowels acted on the sixth day, the clamp came off on the eighth, and the patient returned to Staffordshire quite well twenty-three days after operation.

This was the last case of ovariotomy performed before the usual annual closing of the in-patient department for cleansing and repairs. Towards the latter end of August all the in-patients are discharged, and the month of September is devoted to such repairs as are necessary, whitewashing, a complete cleansing of all bedding, etc. The Medical staff attribute much of the success of their treatment to the observance of this custom, which year after year has been carried out with greater regularity and exactitude. Since the reopening in October, 1867, till the annual closing in August this year, Mr. Wells has completed the operation of ovariotomy in thirty patients. The result has been twenty-eight recoveries and only two deaths. The results of the 106 cases from 1858 to 1867 inclusive may be found in our number for Feb. 22, 1868. The gradually increasing success and diminishing mortality are there very conclusively demonstrated. And the long series of successful cases which have appeared in this and our previous volume this year afford still more striking evidence of the remarkable success which may be hoped for from ovariotomy.

While the thirty completed cases, of which we have published full details, have been in progress, Mr. Wells

has also successfully performed a second operation on the same patient, and has had two incomplete operations. In one a portion of the cyst was removed, and the patient died on the fourth day. In another a small exploratory incision was made, and a quantity of ascitic fluid removed. But nothing more was done, as both ovaries were diseased and were closely united with the uterus in a very feeble patient. She did not suffer more than after a tapping, but died eventually from the natural progress of the disease. The proportion of one incomplete operation and one exploratory incision to thirty-one completed ovariotomies must certainly be regarded as an encouraging sign of increasing accuracy in diagnosis.

(To be continued.)

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 26, 1868.

THE TREATMENT OF THE INSANE.

To those not personally concerned in the treatment or management of the insane, the annual Bluebook issued by the Commissioners, and the reports published by each asylum, are marvellously dull productions. The dry details they contain are, however, full of interest to those engaged in lunacy practice, whilst now and then a kernel may be extracted which will interest the whole body of the Profession. The position of the alienist is a peculiar one; the constant attention to a somewhat restricted and not in all cases a pleasant line of duty tells upon him, and there is, perhaps, a tendency on his part to become isolated from his fellows in the Profession. His asylum is his world, in which he naturally desires to reign paramount—whence not unfrequently arises a kind of internecine warfare between him and the lay authorities, in which one or other must go to the wall. Most frequently, although not invariably, the Medical superintendent gets the victory, and henceforward, in all probability, his mind is actively engaged in solving the problem as to whether the pauper lunatics shall be kept on 6s. 9d. or 9s. 6d. a week, to the exclusion of what we might consider more strictly Professional duties. Hence it is, perhaps, that certain scientific aspects of insanity have been less studied in this country than abroad, although in most practical matters our asylum superintendents are second to none.

Without doubt *non-restraint* is the keystone of the fabric constituted by our British system of treating the insane—the shibboleth by which a man is tested, and his views pronounced sound or unsound—the alpha and the omega of the doctrines taught by writers of the English school. To such a length is this carried, that a servant who looks after an insane individual must no longer be called a *keeper;* he is an *attendant,* and it is almost a crime to call him by the former name in a modern asylum. In this dread even of words there would be something very ridiculous were there not something also that is of moment as concerning the welfare of the unfortunates contained in these institutions. We are thoroughly convinced of the soundness of the non-restraint doctrines if they are not carried too far, which we are heterodox enough to think possible; but there is something absurd in allowing an outrageous lunatic to smash all the windows in a ward rather than interfere with his personal liberty, and there are other cases which, if not equally telling, are at least equally important from a Medical point of view. Just as in ordinary practice we now and again allow our dread of bleeding and our system of stimulation to carry us too far, so in lunacy practice there are cases where a little personal restraint would be the best plan of dealing with an excited patient.

As we have already remarked, the annual reports of lunatic asylums are too frequently filled with dry and uninteresting details; but in the last report of the Glamorgan County Asylum Dr. Yellowlees, the Superintendent, has broken through this routine system, and added to his report some extremely interesting Medical observations on the giving of narcotics and sedatives and of stimulants, and on the management of destructive patients. *Apropos* of these last he tells us that digitalis, the remedy recommended in all such cases, has not in his hands been altogether satisfactory (a statement not without corroboration from other sources), in some instances, although given in small doses, producing dangerous depression; he therefore goes on to say "that, rather than push these measures to what I think an injurious and perilous extent, I would, if all other means failed, resort to the use of gloves, which should enclose the whole hand, and make tearing impossible, but yet leave the patient free and unrestrained." The cases which are probably most difficult to manage are those of epileptic maniacs and of general paralytics, when excited; the former are probably the more dangerous, the latter the more destructive. Now, under ordinary circumstances the mode adopted for keeping these quiet is by giving them sedatives, as chloroform, morphia, or opium, with or without tartar emetic. Sometimes, indeed, a bottle containing a mixture of these is kept in the wards, and, it would appear, administered according to the discretion of the attendant. In other cases, again, digitalis is administered in large and repeated doses, and this is perhaps the favourite remedy; but some superintendents rather rely on packing in the wet sheet or keeping the patient for a length of time in a warm bath, as a means of calming their excitement. Still there are cases where all of these remedies fail, and the question comes to be what to do next. Dr. Sheppard, of Colney-hatch, advises the detention of ungovernably destructive patients in warmed and padded cells, being themselves in a state of nudity. This is neither more nor less than a departure from the grand principle of modern treatment—non-restraint, coupled with intelligent supervision. Others seem to have no such remedy, but leave the excitement to exhaust itself as well as the patient.

Again, to restrain some epileptic maniacs, particularly before an acute attack of their malady, from injuring themselves or others, great force may be necessary. Attendants' tempers are apt to wear out like those of other people, and not infrequently greater violence is employed than is actually essential. Shaking the head by its hair until the owner is quiet is not a particularly pleasant process, but it is said to be very efficacious; and garrotting is well known not to give rise to lively sensations of pleasure, yet it has been known to be resorted to when a patient is particularly unruly. That attendants do exercise unnecessary violence in some cases cannot, we think, be denied, although such cases are usually hushed up as far as the public is concerned, just as are other matters which would not be agreeable to people outside the asylum walls. It is the old question, *Quis custodiet ipsos custodes?* We must therefore decide whether the modes adopted for restraining such patients are really the best—whether the plan of keeping patients under the

deadening influence of sedatives, of making his body black and blue with the finger-prints of attendants, of restraining him by the depressing wet sheet, or in the still more weakening warm bath, are the means most consonant with modern Medical views. We are no candidates for the reintroduction of chains and strait-waistcoats, but if it becomes necessary to keep a patient quiet by force, it is better that this force should be equally diffused over all his body than limited to one particular spot—by a sheet rather than by the hands of the attendants. The essential feature of the modern system is intelligent supervision—a feature not at all inconsistent with a certain amount of judicious restraint—although non-restraint has, we think, been erroneously elevated to a first place. We entirely agree with Dr. Yellowlees when he says that "non-restraint is a good thing *only when* and *just because* it is the best thing for the patient;" when it ceases to be so, non-restraint becomes undoubtedly an evil. We repeat we have no love for the system of restraint, but it seems to us that we have been falling under the domination of a name, that of restraint having become a perfect bugbear. One superintendent has had the courage to speak out. We know that there are others of his opinion, but, in reality, the Commissioners have the matter in their own hands. Undoubtedly the present system has been dictated by regard for the comfort of the insane—a regard ever paramount with those in charge of them. Possibly, however, the suggestions we have made may not be without their use in eliciting opinions and directing attention to a matter of extreme importance.

THEORIES OF CHOLERA.

THE FUNGOUS THEORY.—MR. SIMON'S VIEWS.

Thus far we have followed Dr. Farr in his description of the zymotic theory of cholera, and we have seen that the zymotic element of the disease is held to lie in "a conquering host of innumerable particles" of living organic matter in molecular form.

Of the fungous theory, Dr. Farr appears to have but small opinion, judging from the fact that he is content with the bare mention of its existence. We shall therefore derive our materials from the lucid reports of Mr. Simon.

During the outbreak of cholera in this country in 1849, communications addressed to the Medical journals by Drs. Brittan and Swayne, of Bristol, stated that in their examination of choleraic discharges they had, "independently of one another," observed, often in very large number, certain peculiar forms—"annular bodies," "cholera cells," etc.—which they believed to form a connected series, and to be characteristic and causative of the disease. Mr. Quekett, the microscopist, attested, as the result of his examination of specimens of these bodies supplied to him by Dr. Brittan, that, "in his judgment, they were successive stages of development of the same body, which he believed to be of a fungoid nature." Dr. Budd, of Bristol, gave additional interest to the fungoid hypothesis by announcing that he had found the same peculiar microscopic objects, "which seem to be of the fungus tribe," in great numbers in almost every specimen of drinking water obtained from cholera districts; and he advised as a measure of precaution the disinfection of the discharges of the sick by "some chemical fluid known to be fatal to the fungus tribe."

Shortly afterwards the fungoid theory was thus disposed of by a report made on the subject to the College of Physicians by Drs. Baly and Gull:—

"Bodies presenting the characteristic forms of the so-called cholera fungi are not to be detected in the air, and, as far as our experiments have gone, not in the drinking water of infected places. It is established that, under the terms 'annular bodies' and 'cholera cells or fungi,' there have been confounded many objects of various and totally distinct natures. A large number of these have been traced to substances taken as food or medicine. The origin of others is still doubtful, but these are clearly not fungi. All the more remarkable forms are to be detected in the intestinal evacuations of persons labouring under diseases totally different in their nature from cholera. Lastly, we draw from these premises the general conclusion that the bodies found and described by Messrs. Brittan and Swayne are not the cause of cholera, and have no exclusive connexion with that disease, or, in other words, that the whole theory of the disease which has recently been propounded is erroneous, as far as it is based on the bodies in question."

After some protests, the verdict, Mr. Simon says, appears to have been finally accepted by the observers themselves, inasmuch as in neither of the subsequent epidemics have they attempted to reopen the discussion.

In his ninth report (1866) Mr. Simon refers to the recent discovery ("or rather rediscovery") of two independent German observers, Dr. Thomé, of Cologne, and Professor Klob, of Vienna, that the stomach and intestines of cholera patients contain within them microscopical fungic bodies, innumerable and vehemently multiplying, whereof swarms are shed, with prolific and infective power, in each characteristic evacuation of the sick.

At the International Conference held at Weimar last summer, Mr. Simon had an opportunity of meeting not only Dr. Thomé and Professor Klob, but also Professors Hallier and De Bary, two of the leading mycologists of Germany. A report on the observations of Drs. Thomé and Klob was drawn up by Professor De Bary for the information of the Conference, of which Mr. Simon gives the following as the substance:—

"Both observers find in cholera evacuations and in the intestinal mucus of the dead body definite organic structures —*zoo-glœa*—consisting of excessively fine granules, clustered more or less densely in the interspaces of a jelly which more or less abundantly surrounds them. The granules divide and subdivide themselves, to form beaded threads, which interlace in immense numbers into felted masses in the mucus. The further development of these organisms has yet to be determined. Dr. Thomé, by sowing them, has got, after some time, larger round cell-like bodies which rapidly multiplied, and also abundant filamentous fungi (*cylindro-tænium*) on which grew cylindrical spores capable of developing again to filaments. Views as to the mutual relation of these cells, filaments, and spores, are, for various reasons, to be expressed only with reserve, and the study of them is so immensely difficult that definite results cannot at once be expected. The significance of these fungi would be greatly increased if they should be shown to exist in the blood as well as in the bowels of the sick; but this, though from some inquiries it seems probable, must at present be deemed questionable."

Subsequently, Mr. Simon was informed by Professor Hallier that he had himself succeeded in finding a fructifying fungus in choleraic discharges, and that by forty-four different experimental cultivations he had made himself cognisant of all its forms. The fact that this fungus required a high temperature (25°—35° R.) for its fructification went to prove that it could not be of European origin.

In the appendix to his ninth report, Mr. Simon gives an abstract (by Dr. Buchanan) of Hallier's researches, from which it appears that in the stools of two cholera patients Hallier discovered a fine fungiform matter, consisting of small cells of micrococcus, which floated, and highly developed spore cysts, which sank to the bottom. These spore cysts are described as yellow or brownish bodies, consisting of a pale membrane enclosing highly refracted coloured spores, which were set free by the rupture or solution of the cyst wall. By progressive partition, the spores resolve into very small cells, grouped into balls and heaps, which Hallier calls "colonies" of micrococcus. Besides these two elements, torula-like bodies were found to develope themselves from the micrococcus cells. Epithelium was seen in the stools and vomita of one of the cholera cases, in which the process of invasion by the micrococcus could be watched. The little cells fastened themselves upon the epithelium, and increased in size as the epithelial elements wasted, in the same way that fungal para-

sitic cells grow at the expense of the nitrogenous organic substance which they attack.

We cannot give an account of the experiments of Hallier in the artificial cultivation of the "cholera fungus." Suffice it to say that he believes that he has never produced a certain form of fungus (cysts of *Urocystis*) except from cholera stools; that this is not indigenous in Germany; that it has travelled with cholera from India; that a high temperature, like that of India generally, and of the summer in Europe, is needful for its development out of the body; that it may be maintained in activity by the high temperature of the intestine.

Hallier's experiments to determine whether the cholera cysts in their native soil were not parasites to some graminaceous plant—just as the form *Tilletia*, which can exist in a European climate, is a parasite upon the imported cereal, wheat—led to the positive result that, although he obtained no proof of the identity of the parasitic fungus with the cyst-bearing plant, he produced a form, at any rate, of the same type in rice watered with cholera evacuations.

It is clearly admitted that further experiments are required before an answer can be given to the question whether the cholera fungus is identical with the matter of contagion of the disease, such experiments being made on a scale to neutralise exceptional circumstances.

In his observations upon these fungoid researches, Mr. Simon shows that Hallier's supposition of identity between his "spore cysts" and the "annular bodies" and "cholera cells" of Drs. Brittan and Swayne is altogether mistaken. The high authority of the Rev. M. J. Berkeley is quoted in proof of the dissimilarity between the two forms, and further Mr. Berkeley discovers in the spore cysts a resemblance to some which were represented by himself in the *Journal Linn. Soc.*, 1864, as belonging to the fructification of *Chionyphe Carteri*.

Indeed, at the recent meeting of the British Association, Mr. Berkeley advanced some criticism on Hallier's investigations, which shows that, at present, the fungoid theory has a very unsubstantial foundation. Mr. Berkeley says:—

"When Hallier observes that he has raised from cholera evacuations such a parasite as *Urocystis occulta*, he should have been content with stating that a form of fructification occurred resembling, but not identical with, that fungus. Indeed, a comparison with authentic specimens of that species, published by Rabenhorst under the generic name of *Ustilago*, shows that it is something very different, and yet the notion of cholera being derived from some parasite on the rice plant rests very much on the occurrence of this form. But even supposing that some *Urocystis* (or *Polycystis*, as the genus is more commonly named) was produced from cholera evacuations, there is not a particle of evidence to connect this with the rice plant. In the enormous collections transmitted by Dr. Curtis from the Southern United States, amounting to 7000 specimens, there is not a single specimen of rice with any endophytic fungus, and it is the same with collections from the East. Mr. Thwaites has made very diligent search, and employed others in collecting any fungi which may occur on rice, and has found nothing more than a small superficial fungus nearly allied to *Cladosporium herbarum*, sullying the glumes exactly as that cosmopolitan mould stains our cereals in damp weather. Rice is occasionally ergoted, but I can find no other trace of fungi on the grains. Again, when he talks of *Tilletia*, or the wheat bunt, being derived from the East—supposing wheat to be a plant of Eastern origin—there is no evidence to bear out the assertion, as it occurs on various European grasses; and there is a distinct species which preys on wheat in North Carolina, which is totally unknown in the Old World."

Mr. Simon shows by direct reference that if the doctrine of a cholera fungus should hereafter be substantiated, the credit of having first published (in 1838) a thoroughly valid account of phenomena of cryptogamic vegetation in choleraic intestines and discharges must be given to Boehm, and that Hallier's researches do not better join on to the recent essays of Thomé and Klob than they might have joined in 1838 on to those of Boehm. But before the exact value of the fungoid theory can be determined, an immense amount of study and experiment must be brought to bear.

Of the general importance of the theory itself in regard to its pathological and sanitary bearings upon the causation and limitation of cholera, Mr. Simon thus briefly expresses himself:—

"The doctrine of the cholera fungus—the alleged discovery that the specific zymosis of cholera, the bowel fermentation in respect of which it is contagious, has essentially associated with it, and perhaps as its immediate cause, a definite multiplying organic form—is not only of the utmost philosophical interest, but, should it be substantiated, may also hereafter be found capable of very important practical application. For as one reflects on the doctrine in all its bearings, specially as one considers Professor Hallier's conjecture (based on botanical considerations) that perhaps the cylindro-tænium is originally a blight of rice, something like a clue is for the first time suggested for investigations which may hereafter conduce to the prevention of cholera in its eastern centres of origination. But for us in Europe, meanwhile, the doctrine may be absolutely sterile of results. In its broad signification, indeed, the discovery would not be a surprise to pathologists. The possibility has for some years past been recognised that perhaps every fermentatory or putrefactive change of organic material has with it, and maybe as its cause, a characteristic molecular living thing; and however sure it may have become that the choleraic zymosis answers to that possibility, it remains yet untried whether disinfection (which, after all, is but a doubtful resource) can deal better with the process on that basis than on the purely chemical basis which has hitherto been the ground of our proceedings."

ON CHOREA IN PREGNANCY.

Dr. Barnes has done good service to the Profession by bringing this subject before the consideration of the Obstetrical Society (see *Medical Times and Gazette*, August 1, 1868). If further evidence than that which he has adduced were required to corroborate his statement that "the relations of chorea with pregnancy had been almost entirely overlooked," it may be found in the fact that in the latest memoirs on chorea (those, namely, by Dr. Jules Simon in the *Nouveau Dictionnaire de Médecine et de Chirurgie*, tome vii. 1867, and of Dr. Radcliffe in Reynolds's *System of Medicine*, vol. ii. 1868) the subject is passed over by the former with the brief remark that, "lastly, a *chorea of pregnancy* has been described; gestation is not a cause *sine qua non*, but, by the alteration which it impresses on the blood, and the nervous susceptibility which accompanies it, it may evidently favour the development of all the neuroses, and of chorea amongst the number;" while the latter makes no allusion to it. In two recent works, on the other hand, neither of which is referred to in the discussion on Dr. Barnes's paper, the connexion between chorea and pregnancy is fully recognised—namely, in Dr. Bedford's *Principles and Practice of Obstetrics*, fourth edition, 1868, pp. 729-35, and in Jaccoud's *Leçons de Clinique Médicale*, 1867, pp. 470-92; and we shall endeavour, with the aid of these works, and especially of the latter, to supplement certain parts of the inquiry which were only imperfectly brought forward in the paper and in the able discussion that ensued on its reading, or that were omitted in the report. Dr. Bedford has met with two cases of chorea complicated with pregnancy, and, unfortunately, he only gives any details of one of them. A lady, aged 19 years, in the fourth month of her first pregnancy, for two weeks before he was called in (October 19, 1861) had been annoyed with irregular spasmodic contractions of the muscles on both sides of the body. At the time of his visit the muscles of both the upper and lower extremities were in a state of more or less constant contraction, and the face was flushed. The bowels being very torpid, a cathartic powder of calomel, jalap, and antimonial powder, to be followed in six hours by a black draught, was first prescribed. Although this medicine acted freely, there being still a good

deal of headache and a congested state of the conjunctiva, dry cupping was applied to the upper third of the spine. On the third visit the general appearance of the patient was improved, but the chorea remained as before, and Dr. Bedford and the family attendant concurred in expressing their belief that it would not disappear till after delivery. The same treatment was persisted in, but with no relief to the chorea, which yielded spontaneously after the birth of a boy in the following March—this yielding being, as Dr. Bedford adds, the general rule. This is virtually almost all that Dr. Bedford says on the subject from his personal knowledge. Dr. Jaccoud treats the question in a far more complete and masterly way, although he seems to have had only a single case under his care. We shall first briefly sketch the leading points of this case, and then give in a condensed form his views on the disease generally. In the lecture of which he makes this patient his text, he describes her as being 23 years of age, and as being at the end of the third month of pregnancy when she was admitted, five weeks previously, into the Hospital. At that time her symptoms were more intense than at the date of the lecture; she had then so far lost control over the upper and lower extremities of the left side that she could not grasp objects with her left hand, and that her locomotive powers were interfered with, while the muscles of the left side of the face were, by their involuntary contractions, throwing the countenance into a continuous series of grimaces. The symptoms are now more localised, the convulsions of the face having ceased, although the involuntary movements of the left extremities continue.

"In the sitting as in the standing position the movements of the arm consist of a rapid elevation of the shoulder, with flexion of the forearm and of the hand, with slight projection forward of the whole limb; when she walks the measured and regular elevation of the left limbs, which are involuntarily jerking in all directions, gives to her gait a characteristic peculiarity which at a glance indicates the nature of the disease. The abnormal movements of the arm are at present from twenty-eight to thirty in a minute. Sensibility in all its manifestations is intact, but the reflex excitability of the spinal cord is notably increased; excitation of the skin of the right limbs immediately occasions exaggerated choreic movements of the left limbs. This rapid and distinct propagation of the mutual excitation from one side of the cord to the other is inconsistent with the normal or physiological state, but constitutes one of the laws formulated by Pflüger touching the transmissions of reflex movements—namely, the law of symmetry."—P. 472.

It is deserving of notice that for two or three weeks before the commencement of her illness she had led an anxious life, and that, on the evening before the convulsions began, she had had a serious altercation with her husband.

The chorea of pregnancy seems to differ in no essential point from that of youth. In the two forms of the disease the movements exhibit the same characters, and the convulsions may be either trifling or severe. In this instance they are comparatively mild, while in some pregnant women they are of such extreme violence as to lead to dangerous accidents. Frank, Romberg, Ingleby, and Scanzoni have recorded cases of the latter kind. In a woman under Scanzoni's care the general agitation or motion was so great that she was obliged to be kept in bed, as upon two occasions when she sat upon a chair she was violently dashed to the ground.

M. Benedick (in his "Allgemeine und spinale Neurosen") has studied the electrical action of the spinal cord in the chorea of youth, and, partly because Benedick's works are little known in this country, and additionally because Jaccoud finds that the state of the spinal cord in his case is in no respect different from that described by the Viennese Physician, we shall briefly give his conclusions on this interesting point:—"There is considerable augmentation of the electric excitability, both in relation to sensation and motion, and extreme impressionability of the skin, especially along the length of the vertebral column; electricity applied to this region excites reflex contractions in the trunk and even in the members." Jaccoud employed an induction machine in place of the constant current used by Benedick, and observed that the reflex actions were only excited in the left or choreic side.

Is Dr. Hughlings Jackson's statement, made at the discussion on Dr. Barnes's paper, that "choreal movements were often unilateral," correct, if he is considering simply cases in association with pregnancy? Romberg asserts, doubtless too strongly, that "the chorea of pregnant women is almost always bilateral," while of thirty-one cases collected by Jaccoud the disease was bilateral in all but six. The examination of these thirty-one cases led to the conclusion that in most of them the disease showed itself during the first four months; in only four was the disease known to show itself after the end of the sixth month. There is undoubted evidence that this complication tends to excite abortion or premature labour. "Out of 29 cases," says Jaccoud, "deliveries at the normal period only occurred in 21; in 5 of these cases abortion took place between the fourth and sixth months, and in 3 cases miscarriage occurred between the seventh and the beginning of the ninth month." On the part of the mother the mortality is very high; while in the ordinary chorea of youth the mortality is about 1 in 17, in this form 1 death occurs in 8 cases. After delivery the convulsions gradually lose their severity, and become more limited, and in a few days gradually disappear. Sometimes, but only rarely, decided amendment takes place before delivery; and lastly, the disease may survive delivery and remain incurable.

Dr. Jaccoud is unable to make any addition to our knowledge of the post-mortem appearances of this complication; indeed, he is acquainted only with four autopsies, being those recorded by Ingleby (in the *Lancet*), Levick (in the *American Journal of Medical Science*, 1862), and Kirkes (in this Journal, June 1863); and he remarks that they teach us little or nothing regarding the state of the nervous centres in this affection.

The sole treatment in Dr. Jaccoud's case was the administration of bromide of potassium. Commencing with one gramme (15·4 grains), he soon raised the quantity to four grammes (whether this refers to a single dose or to a dose taken three times a day is not stated), and rapid improvement ensued. Three weeks after the delivery of the lecture the patient left the Hospital perfectly cured, having taken the bromide till she left. This is probably the most rapid cure on record, and we deem it well worthy of a place in our pages. Dr. Brunton's evidence as to the value of this salt is recorded in the report of the discussion on Dr. Barnes's paper, and he agrees with Dr. Jaccoud. On the other hand, Dr. Radcliffe states that in ordinary chorea the bromide, like the iodide, of potassium is useless.

WHAT IS PAROCHIAL RELIEF?

The question whether, in particular cases, persons claiming to vote are disqualified by the receipt of Medical attendance at the expense of the parish has already frequently arisen during the present sessions of the registration courts. The enactment now in force on this point (2 Will. IV. c. 45, amended by 30 and 31 Vict. c. 102, sect. 40) is as follows:—

"No person shall be entitled to be registered in any year as a voter, etc., for any county, city, or borough, who shall within twelve calendar months next previous to the last day of July in such year have received parochial relief or other alms which by the law of Parliament now disqualify from voting."

The authorities establish beyond the possibility of doubt that Medical attendance, paid for by the parish, is parochial relief within the meaning of this Act, the voter in one case having been held disqualified, although it did not appear that the payment by the parish was with his consent or knowledge. A somewhat imperfect report given by the *Times* of a decision of Mr. Le Breton, the revising barrister for the borough of Lambeth, has,

we believe, been read with some surprise by members of the Medical Profession, but need cause no uncertainty as to the law. In the case of a man who had, as the overseer stated, been the recipient of parochial relief in the shape of Medical relief orders, the revising barrister is said to have passed the claim. Assuming the report, so far as it goes, to be accurate, the decision may be quite in accordance with law. The statement of the overseer may, on examination, have turned out incorrect, or the relief orders may have been received before the commencement of the period prescribed by the Act. On the other hand, should there have been a miscarriage in this case on the part of the learned gentleman above named, it is satisfactory to remember that the decisions of revising barristers are not authorities governing future cases. Each of those functionaries exercises his own judgment independently of the opinions of his brethren in office, guided merely by the decisions of the superior court.

CRANIOMETRY.

Recent controversies in which cranial contour has been used as a means of estimating the amount of "Celtic" or "Teutonic" blood possessed by the early inhabitants of our "long" or "short" barrows, have been so important to ethnologists, that we feel no hesitation in recalling the attention of our readers to the main canons of investigation by which the study of modern craniometry is guided. And, in this task, we have to refer to such an extent to the labours of such writers as Welcker,(a) Lucae,(b) Aeby,(c) Von Baer,(d) Broca, and Pruner-Bey,(e) that we can only allude to the principles which have guided research in general, while we cannot assign to particular authors the special merits which undoubtedly appertain to them.

Perhaps the most convenient test of the relationship of any nation has been the generalisations which have been derived from an examination of the measurement of the skull. The last century brought this method of investigation into existence, and the labours of Camper and Blumenbach will be indissolubly associated with the progress of cranioscopy. The fact is, however, most curious, that, in the popular notions on the subject, the labours of those writers who have most tended to advance the science have been almost passed over. Unquestionably, the most philosophical treatise which has been published on the principles of cranioscopy is that which a Dutch Physician of Gröningen composed as his inaugural thesis; and any one who commences the study of the human skull as a test of race, and who neglects to peruse Crull's "Dissertatio de Cranio, ejusque ad Faciem Ratione," neglects the very alphabet of the science.

Various theorists have proposed, on more or less plausible grounds, systems which work for good and for evil on the progress of anthropology.

The Abbé Frère, in order that the skulls to be compared should be all placed in one uniform position, the better to examine their minor points of difference, drew a line from the junction of the sagittal and coronal sutures to the external orifice of the ear, thereby giving one uniform vertical plane to the skull. This upright line has been adopted by Professor Busk. It has many advantages to recommend it, and is extensively adopted by those who follow the teachings of that esteemed craniologist. But, as the exact position of the upper point, to which this line is drawn, whether behind or in front of the coronal suture, especially in artificially deformed skulls, is variable, other observers have preferred to take a horizontal line drawn from the glabella (*i.e.*, between and above the eyebrows) to the most prominent part of the occipital bone. This horizontal line is highly convenient to use, as, in the vast majority of human skulls, the salient point of the supraoccipital bone forms a more or less definitely recognisable spot. In skulls, however, like those of the coast Peruvians—"*déprimées par derrière*," as Gosse terms them—the salient point of the occipital is so obliterated as to render it worthless as a fixed point whence to measure a uniform "basicranial line." Other observers have selected lines transverse to the axis of the occipital foramen, or parallel with the *tentorium cerebelli*, as equally convenient lines. The great anatomist of St. Petersburg, Von Baer, took the whole line of the vertebral axis of the skull as a definite base-line, subtending the length of the skull, and composed of a line drawn from the extremity of the peripheral vertebra of the cranium to the hindmost part of the occipital bone. An English anatomist (f) has proposed to accept this line of Von Baer, and to mark on it four distinct points, representing the centres of ossification of the nasal, frontal, parietal, and occipital vertebræ, drawing from these four points diverging radii to the peripheral portions, or "neural spines," of each vertebra. To those who, ignoring the facts as to the development of the skull in the lower *Batrachia*, deny the vertebrate composition of the skull, such systems are naturally distasteful. Professor Huxley, in one of the most striking passages of his "Man's Place in Nature," has inaugurated an entirely new system of craniometry, which we believe to be original. He says, "I have arrived at the conviction that no comparison of crania is worth very much that is not founded upon the establishment of a relatively fixed base-line, to which the measurement in all cases must be referred." The base-line selected by Professor Huxley is one drawn from the anterior end of the presphenoid to the hinder and lower edge of the basioccipital. To apply this system, it is necessary that the skull should be longitudinally bisected, a procedure not yet universally adopted in public collections. Professor Huxley complains strongly of this negligence, and we hope that the measurement of the bisected skull, as used by Crull and other justly celebrated men, will ere long be more generally prevalent.

Retzius's (g) investigations led him to classify the races of man, according to the form of the skull, into two great groups —the "brachycephalic," or short-headed, in which the short diameter of the skull is to the long diameter in a greater proportion than 8 to 10; and the dolichocephalic, or long-headed, in which the short is to the long diameter in a less proportion than 8 to 10. These two categories were each in their turn subdivided amongst the prognathic forms, in which the muzzle protruded, and the orthognathic varieties, in which a line drawn along the fore-edge of the jaws would be almost straight. The advantages of the classification of Retzius have been vast and manifold. More than any other mode of the classification of human skulls has it tended to reduce the wild confusion which prevailed upon the subject; but, like most other systems, it has been overstrained by its followers. Men have so interpreted the teachings of the immortal Swede that the mere descriptive terms which he invented have been construed as implying an imaginary great primary division of the races of man into brachycephalic and dolichocephalic. Nothing is further from the true signification of Retzius's teaching than this forced interpretation of his thoughts. The late Edward Forbes used to say that a genus of animals was "an abstraction, a divine idea." We are Manichæans enough to be confident that the inspiration whence most anthropotomical terms have been derived is due to a different source, whence evil may be appropriately promulgated. To guard against similar future confusions

(a) "Zur Morphologie der Rassenschädel."
(b) "Morphologie der Rassenschädel."
(c) "Eine neue Methode zur Bestimmung der Schädelform von Menschen und Säugethieren."
(d) "Crania Selecta."
(e) "Résultats Craniologiques."

(f) Ethnological Society, December, 1862.
(g) "Ethnologisches Schriften." 4to. Stockholm.

M. Paul Broca has proposed a *tertium quid*, which, we doubt not, will be extensively adopted by philosophical workers. Skulls are termed by him "mesaticephalic," which oscillate between the two divergent poles of brachycephalism and dolichocephalism; and to this middle class (the "oval skulls" of Huxley?) the majority of European skulls are referable.

But for practical purposes it has been found convenient to adopt a yet more minute method of classification, and accordingly Professor Huxley(h) has proposed to subdivide brachycephalic skulls into two divisions. Those whose cranial index is at or above ·85 he terms "brachistocephali;" those in which it is below ·85 and at or above ·80 are "eurycephalic skulls." Again, the great group of dolichocephalic skulls are classified by Dr. Thurnam,(i) and by his follower, Professor Huxley, into four great groups. Those whose index is below ·80 and at or above ·77 are "subbrachycephali;" those of below ·77 and at or above ·74 are "orthocephali;" those of below ·74 and at or above ·71 are "mecocephali;" whilst all below ·71 are "mecistocephali." This classification is so elegant and so precise that we doubt not it will be generally adopted in England. If it is deficient in expressions which denote the forms which aberrant types of skull present, other and definite words may easily be coined for such peculiar forms—as, *e.g.*, that of the abnormal "Tartar" skull, No. 5484, in the Royal College of Surgeons, which Professor Huxley(k) has recently described, and which might be termed "hyperbrachistocephalic." The index of this skull is ·97. And, on the other hand, such skulls as those of the New Caledonians, which Barnard Davis has termed "hypsistenocephalic,"(l) and whose index is often not higher than ·65, deserve some more definite section than that which is denoted by the somewhat general term "mecistocephalic."

All these classifications, however, have merely to deal with the outward surface of the skull. The proportion of length to breadth, although it is undoubtedly a great factor in all natural arrangements, is merely one factor out of many. The circular arcs which are presented by the respective frontal, parietal, and occipital arches have been recorded by Dr. Pruner-Bey with a fidelity and accuracy which leaves nothing to be desired. Professor Aeby has measured the transverse angles of the skull by a method which is ingenious and complete; whilst the adoption of the measurement of the mesial line as a basis for internal measurement by Von Baer, Welcker, and Huxley will, no doubt, when sufficient materials are before us, lead to important and valuable results. At present, however, we are in possession of few facts and fewer students; whilst the characteristically English distaste for any investigation of which the precise result cannot be at once seen precludes much efficient progress in the science of craniometry. At present we can only say it matters little what system or what nomenclature an inquirer may employ; by the time he has measured a few hundred skulls, some facts at least will be acquired to the science whose cause he professes to have at heart.

(h) Laing and Huxley, "Prehistoric Remains of Caithness." 8vo. London. 1867.
(i) "Memoirs of the Anthropological Society of London," vol. i.
(k) *Journal of Anatomy and Physiology*, part i. 1866.
(l) *Anthropological Review*, 1866.

THE WEEK.

DR. HUMPHRY SANDWITH FOR MARYLEBONE.

Marylebone is sure to return a Liberal candidate, and if the Liberal members of the Medical Profession take the matter up in good earnest they may have a Liberal Medical man for their future representative. To us mere Whig and Tory are as nothing in consideration of the claims of our own Profession. Party politicians do little or nothing for us; so party politics may be put aside. Dr. Humphry Sandwith (of Kars, as we venture to call him) comes of a family favourably known in the Medical Profession. His services and abilities command the respect of the country, and his knowledge of the Army Medical Department would cause him to be listened to on all questions relating to that much-vexed body.

ARMY MEDICAL PROMOTIONS.

The *Gazette* of the 22nd inst. contains the announcement of the promotion of Surgeon John Lumsdaine, Bombay Army, to be Surgeon-Major, in consideration of his valuable services with the Abyssinian expeditionary force. The fixed establishment in the inspectorial ranks of the Indian Medical Service has probably prevented any promotion in that direction. The same cause in the British Medical Service will render necessary the retirement upon temporary half-pay of Inspector-General of Hospitals Dr. Currie, C.B., lately promoted for service in Abyssinia. It appears to be a strange system of reward which promotes and temporarily shelves a man at the same time.

VACCINATION LAW.

Some points of law relating to vaccination have been cleared up this week by decisions of police magistrates in consequence of the activity with which parochial authorities are prosecuting defaulters. At the Lambeth Police-court on Friday, before Mr. Elliott, a man named Bramley was summoned for neglecting to have his child vaccinated. All the required notices had been served by the registrar. The defendant pleaded, first, that "a parent ought not to be obliged to have his children inoculated with poison;" and, secondly, he produced a certificate from a Medical man to prove that his child was not in a fit state to be vaccinated. It may be remembered that the Vaccination Act (30 and 31 Vict. cap. 84, sec. 18) enacts that if any duly registered Medical Practitioner shall certify that the "child is not in a fit and proper state to be successfully vaccinated he shall *forthwith* deliver to the parent or other person having the custody of such child a certificate," according to a form annexed to the Act, that the child is then in a state unfit for successful vaccination, which certificate shall be in force for two months, and be a sufficient defence against legal proceedings for neglect of vaccination. In the case before us, the certificate of unfitness was dated *only the day before* the case came on for hearing in the police-court. This was held to be no defence. The parents' duty (according to section 16) is to take the child to be vaccinated *within* three months from its birth, and if the vaccinator or some other competent authority shall decide that the child is not fit, he shall give a certificate to that effect *forthwith*. Thus, if, as in the case before us, a child ought to have been vaccinated before the end of April, a certificate dated in September, on the eve of a hearing in the police-court, is no defence against the consequences of past neglect, although a "reasonable excuse" may be accepted (Sect. 29) if any can be proved. The defendant was fined 20s. and 2s. costs. At the Bletsoe Petty Sessions, on September 15, Mary Hulatt, of Milton Ernest, was charged on summons by R. S. Stedman, of Sharnbrook, Surgeon and Public Vaccinator, for resisting and refusing to allow him to abstract certain lymph from the arm of her child on the 11th inst. for the performance of other vaccinations, the said child having been vaccinated on the 4th inst., whereby she was liable to a fine of 20s. Mr. Stedman said he did not wish to have a conviction, but merely to convince people that the Vaccination Act must be complied with. The defendant was cautioned, and ordered to pay 4s. 6d. costs.—Samuel Solesbury, of Milton Ernest, was summoned by Mr. Stedman for neglecting to take, or cause to be taken, his child to the station appointed at Milton Ernest for inspection on the 11th inst., after having been vaccinated on the 4th inst. Solesbury pleaded ignorance of the Act, and was ordered to pay 4s. 6d. costs. The next case of interest under the Vaccination Act will be the issuing of an order

by a justice, under his hand and seal, for the vaccination of some person under 14, and the proceeding against the parent for neglect to obey such order.

ANTI-VACCINATORS.

A VERY satisfactory meeting of the Anti-Vaccination League has been held at Brighton. The chair was occupied by Dr. Stowell, who asserted that vaccination was all a delusion—that Jenner, who had been praised as one of the benefactors of the human race, was an impostor—that Mr. Simon, who was backed by the Government, was a tyrant, who shackled him (the Chairman) as a member of a profession, who shackled the people of the town—and that the Board of Guardians were slaves. He pitied those who were carrying out the Act, an evil instead of a good, a curse instead of a blessing, spreading disease instead of removing it, increasing the poor-rates and wasting the money. He had now four children unvaccinated, and dared a vaccinator to come into his house. Let them put the penalty on him again and again, as this accursed Act permitted, let them imprison him—he and every one who loved their children and their liberty would go to prison. Mr. R. B. Gibbs observed that "history repeats itself." One hundred years ago it was the fashion to say that Lady Mary Wortley Montague was the greatest benefactor of the English nation, for she introduced the practice of inoculation from Turkey, and yet it was now admitted on all hands that that practice was a delusion, and since 1840 it had been forbidden. And before vaccination becomes as old as inoculation, that will be forbidden. Dr. Rowley compiled a list of no less than 500 cases, which had come under his own observation, of the evil effects of cow-pox. And most horrible were the details in that pamphlet. Dr. Birch died in 1815, but his sister had inscribed on a tablet to his memory in a London church, that "the practice of cow-poxing, which first became general in his day, undaunted by the overwhelming influence of power and prejudice, he firmly and perseveringly opposed, concientiously believing it to be an infatuation fraught with most mischievous results to mankind, whether right or wrong time will most surely determine." If it was founded on truth, he believed the whole Profession would adopt it without being compelled by law. But there was not a man in England who held the doctrine Jenner did. Jenner was a gross impostor; for his great-nephew, Stephen Jenner, of Berkeley, Gloucestershire, had written a letter to the *Times*, in which he stated that his uncle was careful to vaccinate his patients every year to keep them secure, and yet at that time he was telling the world that, once vaccinated, they were protected against small-pox for life. Jenner operated on his eldest son Edward, and he died of consumption; and how many thousands since! It was generally held now by Medical men that tubercle was inoculable, and that phthisis was communicable by vaccination. Jenner did not want to lose another son, and so he did not vaccinate him, but he inoculated him. Mr. Joseph Wood said his children were as healthy as any he had ever seen till they were vaccinated. Did Medical gentlemen vaccinate their children? The son of the Medical gentleman who attended him was 21, and yet was not vaccinated. He called on all mothers not to allow their children to be infected with this "physical witchcraft." A neighbour of his had four children ill with small-pox; two were vaccinated and died; two were not and lived. Dr. Beard now addressed the meeting, and said he was entirely opposed to the opinions expressed by Mr. Gibbs, and that they were contrary to facts. For during the years 1836 to 1855, the percentage of deaths of unvaccinated persons was 37; of those who were stated to be vaccinated, but there was no mark, 28·57; with two cicatrices, 4·70; with three ditto, 1·95; with four ditto, 0·55, or less than ½ per cent. Those facts would speak for themselves. Then from 1853 to 1864, of 1537 unvaccinated persons admitted to the Small-pox Hospital, 528 died, or 31 per cent.; of 5622 who had been vaccinated, 459 died, or only 8 per cent. The Profession did not say vaccination prevented small-pox, but it did mitigate it. In 1864-65, there was an epidemic in Brighton. He was connected with the Dispensary at the time, and found from the books that seven died who had not been vaccinated, and only four who had. He could not understand these statistics except as proving most conclusively the value of vaccination. His children were vaccinated, and during the time he was at the Dispensary he took care to be re-vaccinated himself. If they had four cicatrices on the arm, they were well vaccinated; if not, it was not done well. He appealed to them to consider these facts, which he believed must come home to them. The Chairman said he was pleased at the calm and dispassionate manner of Dr. Beard. But during the epidemic, he (the Chairman) did not have a single case of death occur amongst those he treated. But he had a brother scarred deeply, though he was vaccinated.

We have called the meeting satisfactory, because the calm and unanswerable statement of Dr. Beard was evidently well received, and in the published report contrasts favourably with the declamatory speeches of Dr. Stowell and Mr. Gibb. For our own parts we look upon compulsion as a disagreeable necessity, and should witness the conversion of the Anti-vaccination League with great pleasure. They should remember that nothing short of the accumulation of evidence of the value of vaccination through two generations could have induced the House of Commons to pass a compulsory Act. If they have evidence sufficient to outweigh the fact of the great diminution of small-pox, or sufficient to prove any positive ill results, why don't they bring it forward? Why harp upon Rowley's vituperative pamphlets and Dr. Birch's epitaph, instead of giving us facts, names, and dates? Where are the cases of phthisis traceable to vaccination? As to the cruelty and slavery argument, every community has a right to exact of its own members obedience to laws for the general safety and advantage; and till some better arguments are brought forward against it, we are sure that the English community will enforce the practice of vaccination.

THE EX-LORD-ADVOCATE AT ABERDEEN.

ON Tuesday, September 1, Mr. Moncrieff addressed a meeting of members of the General Council of the University of Aberdeen in the Music-hall-buildings of that city. A perfect copy of his speech having only just reached us, we think it not improper to make some remarks on it. We have already remarked on the nature of the contest in this University conjointly with that of Glasgow. The struggle is a purely political one between two political men for the representation of the two Universities. Neither of the candidates has any special claim on Medical men as such; nor, may we add, have they any special claims on the Universities. Any attempt at making capital out of who did or did not give the franchise to the graduates is a mere electioneering trick, nothing more. If Medical men have any political bias which would incline them to vote for a Conservative or for a Liberal, let them follow this bias; there is no special inducement to abstain from so doing.

We have uniformly and consistently advocated the return of Medical men for the Scotch Universities, and this we shall continue to do. The Medical graduates constitute a great majority of the constituency, and surely a Medical man may as well represent clergymen, lawyers, and schoolmasters, as a lawyer can Medical men. In his speech Mr. Moncrieff makes some gratuitous and offensive remarks as to delegates of certain professions being returned to Parliament, objecting to put himself in such a position. This he does, well knowing that he has no special claim on any of the professions. But be that as it may, it no more follows, should the Medical Profession unite in returning one of their own number to Parliament,

despite any political bias this candidate may possess, that he would therefore of necessity be a delegate of this body, than that, should the Liberals, uniting heartily, place Mr. Moncrieff at the top of the poll, he would be the delegate of that party rather than the representative of the whole body of graduates, both Conservative and Liberal. We have neither opposed Mr. Moncrieff nor favoured Mr. Gordon. We repeat that neither has any claim on our body. On objections to either we have been judiciously silent. It would have been well had Mr. Moncrieff exercised an equally sound discretion with regard to what he was pleased to term Professional delegates. Later in his speech Mr. Moncrieff attempted, but very lamely, to clear himself with regard to the Scotch Registration Act, in as far as it concerns Medical men. By this Act, undoubtedly the work of Mr. Moncrieff, he contrived to introduce a new principle into legislation —viz., responsibility without any corresponding advantage. The Medical man is liable to a fine if his death-certificates are not sent in within a given time; but when sent in he reaps no benefit, either by his punctuality or his labour—he is not paid for his work. To console him, Mr. Moncrieff tells the Medical Practitioner that the statistics he has helped by his gratuitous services to prepare are excellent, and that the penalty inflicted is only for the non-performance of a statutory duty. Still, praising the excellence of his work affords a poor consolation to an unpaid worker, and as to the statutory duty, why that is the very thing complained of. Was it not Mr. Moncrieff who made it such? We cannot see that Mr. Moncrieff has by his appearance at Aberdeen at all improved his position with regard to our Profession as a body. A few sops are thrown to us as to the wants of the Profession not being understood, and the willingness of Mr. Moncrieff at this advanced period to undertake the study of these wants; but words cost little, and electioneering professions are notoriously of little or no account.

HYDROPHOBIA.

Mr. Holmes Coote has been writing to the *Times*, practically asserting that there is no such disease as hydrophobia, that the ordinary manifestations supposed to be significant of the disorder are in reality identical with those of tetanus. In other words, Mr. Coote would have us believe that there is no specific poison in ordinary cases of hydrophobia, but we suspect it would be easier for him to prove the converse—viz., that all cases of tetanus are due to some peculiar agent introduced into the system or generated within it. The whole train of symptoms are so different in the two cases, that one could conceive almost any other spasmodic affection than hydrophobia being confounded with tetanus. One of the most marked peculiarities about hydrophobia is its prolonged period of incubation, with the peculiar sadness and love of solitude which affect the victim previous to his attack, but we see nothing of the kind in tetanus. From what the *Times* publishes in another part, it will be seen that no deaths have taken place recently from this cause—a consequence, no doubt, of the clearing of the streets of stray curs and the muzzling of the worse-conditioned ones. It must not, however, be forgotten that rabies is probably quite as common in the cold as in the hot months, and that if the immunity from this disease has been the consequence of muzzling during the warm weather, logically the same precautions ought to be adopted in the colder months. M. Trolliet, by an investigation into 140 cases, came to the conclusion that the disease was most common in the mild months of May and September. Probably, however, the most interesting statistics collected with regard to this disease are those of M. Tardieu, the well-known French authority. Of 239 cases of hydrophobia, 175 were in males and 64 in females. The bite of the dog was the cause in 188 instances, that of the wolf in 26, of the cat in 13, and of the fox in 1. Of 181 cases, 66 occurred in summer, 44 in spring, 40 in winter, and 31 in autumn. About 4 in 10 of those bitten escaped altogether. Van Swieten speaks of an old woman who died with all the symptoms of hydrophobia after having been bitten by a cock; Malpighi of a woman (his own mother) who was bitten by an epileptic, and so died. But in these cases no doubt the disease was tetanus, not hydrophobia. As a crumb of comfort for Sir Richard Mayne, who has been so roundly abused, we may state that whereas in Berlin, from 1845 to 1853, 278 mad animals were captured, in 1854, when muzzling was introduced, only one was caught; and that from the above date, the system being in full operation, not one was taken up to 1861. During the first six months of the present year no death from hydrophobia has been registered in London. In the year 1867 there were three deaths—viz., one in the first quarter, one in the third quarter, and one in the fourth quarter of the year. In 1866 eleven deaths were registered—viz., two in the first quarter, three in the second, three in the third, and three in the fourth. In 1865 the deaths registered in London from hydrophobia numbered nine. In 1864 no death occurred; in 1863 there were three deaths. From 1858 to 1862 inclusive no deaths were registered in London. In 1857 two deaths are recorded; in 1856 there was no death; and in 1854 and 1855 the number of deaths was 7 and 2 respectively. The returns for England show that hydrophobia was the cause of an unusual number of deaths during the three years 1864-6, when 12, 19, and 36 deaths respectively were registered; whereas the average annual number in the seven preceding years, 1857-63, was only 3. Glancing at the results for England during a period extending over 20 years, 1847-66, it is found that in the first 10 years, 1847-56, the deaths were 128—viz., 5, 7, 17, 13, 25, 15, 11, 16, 14, and 5 respectively. In the second 10 years, 1857-66, the deaths numbered 88—viz., 3, 2, 4, 3, 4, 1, 4, 12, 19, and 36 respectively. Is the reduction from 128 deaths in the first period to 88 deaths in the second period the result of improved police regulations? The difference in the proportion of the sexes of those who die from hydrophobia is probably due to the greater exposure of men to the bites of rabid dogs in the streets. Thus, of the deaths from hydrophobia in England in the year 1864, 11 were those of males, and 1 was that of a female; in 1865, 15 males and 4 females died; and in 1866, 27 males and 9 females died. Of the 36 deaths in that year, 6 were those of children under 5 years of age, 9 were of the age of 5 and under 10 years, and 2 were of the age of 10 and under 15; of the remaining 19 fatal cases, 15 were those of males aged 15 and under 45 years.

THE TWELFTH ANNUAL CONGRESS OF THE NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

The twelfth annual congress of this now popular and influential Association will be held at Birmingham. The proceedings will commence on Wednesday, the 30th inst., with a meeting of the Council, at 1 p.m., at the Reception-room, Exchange-buildings. At 3 p.m. there will be service in St. Philip's Church, followed by a sermon from the Bishop of Worcester; at 8 p.m., a general meeting of members in the Town-hall, with the opening address of the session by the Earl of Carnarvon. On Thursday, at 10 a.m., the Chairman of the Council, Mr. G. W. Hastings, will deliver an address in the "Friends'" Meeting-house; and at 8 p.m. there will be a reception in the Town-hall by the Mayor. During the day the various sections will meet in their respective rooms for the discussion of their appropriate subjects. On Friday, October 2, there will be, at 10 a.m., an Address by the Right Hon. W. N. Massey, President of the Jurisprudence Department, in the Friends' Meeting-house. At 8 p.m., working men's meeting in the Town-hall; and at the same hour, an address by Miss Carpenter on "Education in India," in the Lecture Theatre, Midland Institute. On Saturday, October 3, at 10 a.m.: Address by the Right Hon. Lord

Lyttelton, President of the Education Department, in the Friends' Meeting-house. In the afternoon: Excursion to Dudley. On Monday, October 5, at 10 a.m.: Address by H. W. Rumsey, Esq., M.D., President of the Health Department, in the Friends' Meeting-house. At 8 p.m.: Soirée in the Town-hall. On Tuesday, October 6, at 10 a.m.: Address by Professor Fawcett, M.P., President of the Department of Economy and Trade, in the Friends' Meeting-house. 6 p.m.: Dinner of Members and Associates. On Wednesday, October 7, at 11 a.m.: Meeting of Council at the Reception-room, Exchange-buildings. At 1 p.m.: Concluding meeting of Members and Associates in the Town-hall. The Departments meet daily at 11 in their respective rooms, viz.:—I. Jurisprudence and Amendment of the Law. Section A—International Law: The Library, Queen's College, Paradise-street. Section B—Municipal Law: Midland Institute Lecture Theatre, Paradise-street. Section C—Repression of Crime: Guardians' Board-room, Parish Offices, Paradise-street. II. Education: Reference Library, Ratcliff-place, Paradise-street. III. Health: Friends' School-room, Bull-street. IV. Economy and Trade: Friends' Meeting-house, Bull-street. Return tickets, for first or second class to Birmingham, available from September 29 to October 8 inclusive, will be issued by the following railway companies at an ordinary return fare, on production of a voucher, which may be had by Members and Associates on application at the local office:—The Caledonian; the Great Western; the London and North Western; the Lancashire and Yorkshire; the Midland; the North British; the Great Northern; the Manchester, Sheffield, and Lincolnshire; the North Eastern; and the North Staffordshire railway companies. A special train to Worcester and the intermediate stations will leave New-street at 10.15 p.m. during the Congress. The Reception-room, Exchange-buildings, New-street entrance, will be open on Tuesday, September 29, at noon, and on subsequent days at 9 a.m. It will contain the ticket offices of the Association, a post-office, tables with newspapers, writing materials, etc.; and in the lobby adjoining will be found the offices of the General Secretary, and of the local secretaries, retiring rooms, ladies' room, etc. On Sunday, October 4, the post-office only will be open from 9 to 10 a.m. Register of Members: Members and Associates are particularly requested, as soon after their arrival in Birmingham as convenient, to call at the Reception-room, Exchange-buildings, New-street, and to enter their names and addresses in a book provided for the purpose. Of the Health Department, the President is H. W. Rumsey, Esq., M.D. Vice-Presidents: John Birt Davies, Esq., M.D.; William Farr, Esq., M.D., F.R.S.; Charles Hawkins, Esq.; George Lloyd, Esq., M.D.; A. P. Stewart, Esq., M.D. Secretaries: William Clode, Esq., and William Hardwicke, Esq., M.D. Local Secretaries, T. H. Bartleet, Esq., M.B., and Balthazar W. Foster, Esq., M.D.; with a very powerful Local Committee. The President, Dr. Rumsey, will deliver his address on Monday at 10. The various special questions for discussion are—1. "What ought to be the Functions and Authority of Medical Officers of Health?" which will be treated of in papers by Mr. Hayward, of the "Black Country," Mr. Liddell, and Dr. Mapother; 2. "Can the Public Hospitals and Dispensaries of this Country be so administered as to conduce more to the Welfare of the Community?" will be treated of by Miss Garrett, Dr. Dobell, Mr. Matthews, and Dr. P. Leslie. 3. "What is the relation of the Water Supply in large towns to the Health of the Inhabitants?" by Dr. Monckton, Mr. Alfred Hill, and Dr. Gairdner. Further papers are promised by Mr. Haviland, "On Heart Disease;" Mr. Plant, "On the Public Health of Birmingham;" Mr. Furneaux Jordan, "On the Contagious Diseases Act;" Dr. Stewart, "Sanitary Notes of Two Years;" Dr. Martin, of Warrington, "On Intemperance;" Mr. Brooke Smith, "On Sewage of Birmingham;" Dr. Prince (H.M. Bengal Army), "On Stamping out Contagious Disease;" Mr. Manning, of Clifton, "On Health and Food;" and Mr. Rawlinson, "On River Pollution and Obstruction by Manufactures."

STATISTICS OF THE ROYAL COLLEGE OF SURGEONS.

From the annual report of the Council of the Royal College of Surgeons of England, which has just been published in the *Calendar* of that institution, it appears that during the past collegiate year the receipts have amounted to £11,744 14s. 4d., derived principally from fees paid for the different diplomas granted by the College, and which realised £9358 11s. The rents derived from the two houses in Lincoln's-inn-fields amounted to £932 18s. 6d.; the disbursements to £11,557 11s., the largest item under this head being fees to members of Council, courts, boards, etc., and amounting to £3525 11s., exclusive of £200 15s. 6d. paid to the College of Preceptors for conducting the Preliminary Examinations in Arts, etc. The next largest payment was £2995 19s. 10d. for salaries and wages, exclusive of extra assistance in the College, museum, and library departments. The sum of £498 12s. appears as pensions to the widows and children of old servants. The Government taxes, stamps, and parochial rates amounted to the large sum of £1080 12s. The Council granted during the year £214 10s. for prizes and lectures. The trust funds amount to £5335 13s. 11d., divided under the following heads:—The Hunterian Fund, £1684 4s. 4d.; Clift Annuity Fund, £1518 6s. 6d.; Gale's annuity, £689 16s. 5d.; Arris's bequest, £510; Jacksonian Prize Fund, £333 6s. 8d.; Sir C. Blicke's bequest to the library, £300; and Sir Gilbert Blane's naval medals, £300. There are now exactly 1323 Fellows, in whom is vested the election into the Council of members of their own class. This body is composed of 363 gentlemen who have obtained the Fellowship by examination, 220 on whom the honour was conferred at the establishment of this distinction, and 740 elected by the Council on the recommendation in each case of six Fellows. The number of those who attended and recorded their votes at the last election into the Council was 339—viz., 145 Fellows by examination, 42 honorary, and 152 by election. There appear to be about 15,000 Members. The number of candidates seeking the Midwifery licence is greatly decreasing, owing no doubt to the increasing number of gentlemen taking the licence of the Royal College of Physicians, the examination for which degree includes Midwifery. There appears also a great decrease in the number seeking the Dental diploma. The Court of Examiners for the diploma of Membership consists of ten members elected by the Council from the Fellows of the College, but up to the present time the selection has been confined to the ranks of the Council. Although two gentlemen, now members of the Court, are no longer on the Council, they were members of it when deservedly elected—we allude to Messrs. Skey and Partridge, both of whom have served the high office of President. At present, owing to the resignation of Mr. South, there is a vacancy in the Court, which will be filled up on the 15th proximo by the selection of Mr. Busk, a choice which will give general satisfaction. During the past collegiate year the Court has held five meetings for the examinations for the Fellowship, and forty-eight meetings for the primary and pass examinations for the Membership. For the former distinction there were 67 candidates for the first examination, of which number 61 passed; the remaining six were referred for as many months. At the second examination there were 25 candidates, all of whom passed. For the primary examination in Anatomy and Physiology for Membership, there were 500 candidates, of which number 390 passed, and 110 were referred for three months. For the pass examination in Surgical Anatomy and the Principles and Practice of Surgery, there were 398 candidates, when 340 passed, and 58 were referred for six months. The Board of Examiners in Midwifery consists of four members. During the past year the Board met four times,

and examined 45 candidates, of which number 32 passed, 6 were referred for a written examination, and 7 were altogether referred. The Board of Examiners in Dental Surgery, which consists of six members, have only been called on to examine four candidates during the year, all of whom passed. For the first time the examination of Naval Surgeons disappears from the records of the College; this duty now devolves on a Board at Somerset House. The Council, or governing body of the College, consists of twenty-four members, three of whom, when no vacancy, either by resignation or death, has occurred during the year, go out in rotation annually in July, but are eligible for re-election by the Fellows of the College. All proceedings of the Court of Examiners, the Midwifery and Dental Boards, and the several committees, are reported to the Council for approval and confirmation. The meetings of the Council are generally held every month; during the past year there have been thirteen meetings. There are now only two life members —viz., Messrs. Swan and South. The President of the College is Mr. Richard Quain, F.R.S., of University College Hospital, the Vice-Presidents being Mr. Edward Cock, of Guy's Hospital, and Mr. Samuel Solly, F.R.S., of St. Thomas's Hospital. There appears a new appointment, that of *Lecturer* on Anatomy and Physiology, filled by Mr. J. W. Hulke. The Calendar of which the above is a slight analysis contains much valuable information, especially for those students about to undergo their respective examinations, as it publishes all the questions submitted to the candidates on their primary and pass examinations, together with the names of those who have passed the first, and, of course, those admitted Members. An important change in the Calendar is the price; published originally at 5s., it was subsequently reduced half, and is now published at only 1s., in order to place it more especially before the students—an act of liberality on the part of the Council which will no doubt be fully appreciated.

EDUCATING EFFECTS OF THE FRANCHISE.

We learn from more than one quarter that one effect of the present political excitement has been to induce "working men" to abstain from seeking parochial Medical relief. "Strike me off the parish list, and I'll pay for myself," is what they say to the Doctor. In many parishes no applicant for a "Medical order" is refused, not even if the father of the family be in receipt of good wages; and this is as it should be, for the relieving officer had better give orders to twenty persons who do not need them than deny one to one who does. The desire of possessing the franchise, however, will be a true instrument of education if it induce the "working man" to abstain from the receipt of parochial relief, even in the mitigated form of Medical attendance, medicine, and Medical comforts, and to be as sparing of beer and spirits, as ready to work every day and all day long, and as chary of taking holidays as the poor parish Doctor is obliged to be. As things now are, Hospitals and Dispensaries "supported by voluntary contributions" are the necessary appendages to flaring ginshops, also "supported by voluntary contributions." The riotous crowds who fill pleasure vans and excursion trains on Sundays and Mondays help to fill the fœtid waiting-rooms of Dispensaries and parochial Medical officers with cases of bronchitis and dyspepsia, and they who listen to speeches on political rights seem to forget that one of the dearest rights of man is that of keeping his pockets closed against contributions to the idleness, profligacy, and wrongheadedness of his fellow-citizens.

FROM ABROAD.—CONTAGION OF PHTHISIS—VACCINATION.

The *Union Médicale* of September 15 reports an interesting discussion on the contagion of phthisis which took place recently at one of the Paris Medical Societies. M. Bonnet said that he had observed several cases tending to establish the reality of contagion between married people. He especially referred to three cases in two of which the wives, younger than the husbands, and never having been pregnant, died soon after them of phthisis. In the third the husband died six months after the wife. In all three cases the spouse who died last had not exhibited any signs of the disease prior to marriage. The facts are so conclusive to M. Bonnet's mind that he interdicts absolutely sexual intercourse when either of a married couple is the subject of phthisis. M. Briau also stated his conviction to be that phthisis may be contagious in married couples. He has met with more than twenty such cases, and prohibits intercourse between the two persons when one is phthisical. M. Piogey believed that some care was required before coming to this conclusion. We are often very ill-informed of the exact condition of the prior health, and at the period of marriage morbid antecedents are often concealed. We must also bear in mind coincidences; while, again, phthisical subjects often intermarry. We must, moreover, not overlook the analogies which are likely to be observed in the health of two persons living for years together in the same media, with the same habits and passions, and who may easily acquire the phthisis from the same source. Before we can admit the reality of contagion we must bear all these circumstances in mind, and especially the possibility of hereditariness. This is often only detected with difficulty. Thus, a child dies of tubercular meningitis, its mother dying after it at the age of 35 of phthisis, and, later still, its grandmother of tubercular bronchitis. Analogous facts are often observed. Then the particulars are often very badly acquired. "A young man, after a pleurisy, married a young girl to all appearance in very good health. Her sister, however, coughed, and I had from the beginning suspected phthisis. The bride, in fact, died of it soon after her marriage, and the husband also died of the same disease. Contagion might be here invoked, but for my part I believe both of these young people were predisposed to phthisis." M. Dufour observed that for a disease of such frequent occurrence as phthisis the number of cases of this supposed contagion was very few. Why should we resort to the supposition of contagion when we know that about two-thirds of the cases of phthisis are acquired? Coincidence has much to do with the matter in a disease so prevalent. Besides, too, the common media, we must bear in mind the excessive fatigue, watching, etc., due to the cares bestowed on the sick spouse. M. Archambault referred to a discussion on the subject on the occasion of a *concours* for the Chair of Pathology in 1851, when Beau maintained that contagion of phthisis was highly probable, citing similar reasons to those now brought forward, and supporting them by the opinions generally entertained in Italy. On the other hand, MM. Grisolle and Monneret maintained that in all these supposed cases of contagion hereditary influence had prevailed; and parents who were supposed to have been very healthy have died tuberculous at an advanced age. In fact, judging from the pulmonary cicatrices met with in the autopsies of old persons, there must be many more persons the subjects of tubercle than is generally supposed. M. Causit believed that this question must remain insoluble as long as we are ignorant of the cause of tubercle. At all events, contagion can only be admitted with the greatest reserve. There are two principal objections. First, there are a great number of phthisical persons married, and yet how frequently does it happen that the survivor is not tuberculous; and, next, phthisis is transmitted as a part of the organisation, and its hereditary manifestation often skips a generation, or it may not show itself in the parents until a very late age. M. Piogey referred to the case of a woman seized with hæmoptysis shortly after the death of her husband from tubercle, she having before all the signs of perfect health. Her father afterwards came to consult him for an habitual cough, and died of tubercular bronchitis. In the case of this young

woman, contagion might easily have been admitted. Phthisis is often caused by watching, fatigue, prolonged moral emotion, sedentary occupation, etc. The diathesis, existing only in the latent state, may become developed under the influence of even slight occasional causes.

At a recent meeting of the Société Médicale d'Emulation, M. Ferrand read a report upon the mode of vaccination advocated by M. Martinecq, which, he states, prevents failure, as well as some of the unfortunate results which sometimes attend the ordinary procedure. He makes a kind of artificial division of the pustule into three stages, placed over each other —viz., a superficial, a middle corresponding to the most external layer of the Malpighian mucous body, and a third corresponding to the really vascular part of this body. M. Martinecq recommends that the virus should be taken only from the most superficial layers of the pustule—the medium layers, and still more the deeper-seated ones, containing the anatomical tissue impregnated by the vaccine virus, and the special serosity of the vaccinated subject. It is this serosity, in fact, that is the vehicle of infection if the vaccinifer is in anywise contaminated. M. Lagneau observed that this was no new division of the vaccine pustule, as Viennois had already indicated it when he advised the virus not to be taken from the deeper portions of the pustule when the child from whom it was taken was the subject of syphilis. M. Gouraud referred to a case in which this practice of vaccinating from the superficial parts of the pustule was adopted, and no result ensued. In following M. Martinecq's plan for its prophylactic object, we risk the success of the vaccination altogether. M. Linas related a similar case, and insisted on the importance of M. Chauveau's recent experiments, which proved that, when the virus was collected in a test-tube, vaccination with the superficial portion produced no effect whatever, while success was nearly constant when the lower portion, containing the deposited solid particles, was employed. M. Hallé considered that we could draw no conclusion from these instances of failure selected, as the children might be refractory to the vaccine influence. M. Gallard considered that the conditions necessary for a preservative vaccination, with a certainty of not entailing infection, are as yet not definitively established. The wisest plan would seem to be to adopt the opinions of M. Chauveau, and make use of that part of the virus which is supposed to contain the granules, and not merely the transparent portion. M. Tenneson considered, with M. Hallé, that in these discussions we must always take into account the aptitude of the children, for some are certainly refractory. He has lately vaccinated a child six times without result with the same virus that succeeded perfectly in other children. M. Simonot, in support of this view, offered his own personal experience. He had been vaccinated fifteen or sixteen times without any result, and yet he had not been able to escape variola. In connexion with the subject of vaccination, M. Perrin related the following case:—Two vaccine punctures practised on the arm of an infant a month old only gave rise at the end of a week to the development of one pustule of the most miserable appearance. The family feeling doubtful of the preservative power of such a vaccination, M. Perrin vaccinated the child once more with virus taken from this dubious pustule, and at the same time another infant of the same age with the same. At the end of the week the good quality of the original pustule was proved, as the arm of the new child exhibited a crop of the finest pustules, while no result followed as regarded the auto-inoculated infant.

New Prizes at the Académie des Sciences.—The necessary authorisation has been received for the disposal of the legacies of MM. Serres and Poncelet. The interest of the former, which amounts to 60,000 francs, is to be devoted to a triennial prize to be bestowed on the author of the most remarkable work in general physiology. That of the other, amounting to 50,000 francs, will be given annually to the author of the most useful work on pure or applied mathematics.

REVIEWS.

JACCOUD'S CLINICAL LECTURES.

No Medical books, if they are good of their kind, are of such practical value to Professional men of every degree of age and standing, from the senior student to the old Practitioner, and from the humble country Doctor to the leading London Physician, as those on Clinical Medicine. When a difficult and obscure case comes before our notice, we turn for help to the pages of Graves, Trousseau, Bennett, and Todd, rather than to the systematic works of Watson, Aitken, or Wood, excellent as they are; and now Dr. Jaccoud,(a) who has fairly earned the position of being one of the leading Physicians of Paris, has presented us with a volume of clinical lectures delivered at the Hospital of La Charité, which are entitled to take rank with those to which we have already referred.

Amongst the subjects discussed in these pages, we may mention pneumonia, dilatation of the bronchial tubes, pulmonary sclerosis, and cancer of the lung; insufficiency of the aortic valves, aneurism of the arch of the aorta, and pericarditis; icterus, sclerosis, and amyloid degeneration of the liver; progressive muscular atrophy, progressive nervous atrophy, sclerosis of the spinal cord, paralysis, chorea during pregnancy, lead poisoning, variola, intermittent and typhoid fevers, chronic rheumatism, albuminuria from disease of the heart, Bright's disease, uræmia, and diabetes.

The first subject to which we shall refer is his treatment of acute pneumonia. With respect to the much-vexed question of venesection—a mode of treatment which was formerly carried to excess, but is now too completely rejected in this country—he very sensibly observes that bleeding can only be advantageously prescribed under one of the three following conditions:—(1) Intense dyspnœa and an elevated temperature; (2) mechanical disturbance of the pulmonary circulation, hyperæmia, and œdema; and (3) phenomena indicating congestion of the brain. Having fully discussed the above question, he next considers tartar emetic and digitalis, "two agents which are daily employed with advantage in pneumonia." With regard to the administration of tartar emetic, he observes that if the temperature does not exceed 103° F., if the pulse is only moderately rapid and strong without being hard, if there is no perceptible dyspnœa, and if there is comparatively little fever, tartar emetic is not required; if, on the other hand, the opposite conditions are present, if there is much febrile disturbance, and the patient suffers acutely, this remedy may be given with great benefit, and will often check the progress of the disease in from eighteen to twenty-four hours. On the first indication of a failure of the vital powers as indicated by the state of the pulse, etc., this mode of treatment must be suspended, and must be replaced by tonics—as, for example, quinine and perhaps a little wine. Our author lays great stress on the point that the tartar-emetic treatment should not be persisted in for a longer time than from forty-eight to sixty hours, and more than once repeats that, in deciding upon trying this mode of treatment, we must be influenced in no degree by the condition of the lung, but solely by the general state of the patient and the amount of febrile disturbance that is present. These remarks are equally applicable to digitalis, which is now largely employed in the French Hospitals in the treatment of pneumonia. "It is a febrifuge, and nothing more. It lowers the pulse and the temperature more rapidly than tartar emetic, and, like the latter, induces, although in a less degree, a state of nausea. With digitalis, as with tartar emetic, you diminish and sometimes suppress the most painful element of the disease—namely, the fever." In this mode of treatment, as in that by tartar emetic, we must carefully guard against overdepression of the vital powers. Notwithstanding the undoubted benefit that is derived from the administration of digitalis, the comparative researches of Thomas of Leipzig (published in the *Archiv der Heilkunde* for the years 1864 and 1865, and referred to by Dr. Jaccoud) show that, notwithstanding its marked influence on the pulse and the temperature, it does not diminish by a single hour the duration of the disease, nor does it in any way modify the period at which the disease begins to subside, and the heightened temperature to fall towards the natural or healthy standard. To this period, which corresponds with the *crisis* or *critical period* of the

(a) "Leçons de Clinique Médicale, faites à l'Hôpital de la Charité." Par S. Jaccoud, Professeur-Agrégé à la Faculté de Médecine de Paris, etc., etc. 1867. Paris: Delahaye. London: Williams and Norgate.

olden times, the term *defervescence* is now frequently applied. The phenomenon of defervescence is one of the most characteristic traits in the thermometric history of pneumonia, to which our author attaches very great, but not undeserved, importance. "You have left your patient," he observes, "with the temperature proper to the period of the disease, the fever being at its highest point. On returning, after a lapse of twelve hours, you find that the temperature has fallen nearly 3 degrees (1·5° C.). From that moment the heat continues to diminish, with merely a very slight evening exacerbation, and in the course of thirty-six, or at most forty-eight, hours you have the normal temperature, a cessation of fever, and, in short, the pneumonia has run its course." Our author subsequently points out that three phenomena of considerable importance take place simultaneously with the occurrence of defervescence. In the first place, the coagulated fibrinous exudation in the lung begins to liquefy, and that organ begins to be again permeable by air. Secondly, the patient ceases to lose weight. Up to that period the fever causes an abnormal destruction of the tissues, and in a case observed by Wachsmuth more than 2 lbs. weight was lost in twenty-four hours, while, in the twenty-four hours succeeding the beginning of defervescence, the loss of weight amounted to only one-fourteenth part of the loss experienced in the preceding twenty-four hours, and in the next twenty-four hours there was an augmentation of weight to the amount of about 6 oz. Thirdly, and lastly, the urine presents important modifications; but as they are sufficiently described by Parkes and other English writers, it is unnecessary to notice them on the present occasion.

We must not conclude our notice of Dr. Jaccoud's mode of treating pneumonia without a reference to his prudent remarks on the administration of alcohol and the application of blisters. Most of our readers will agree with him in denouncing the universal treatment of pneumonia by alcohol as "a grave error," and at the same time in admitting with him that in the cases of what is termed adynamic pneumonia it is the most appropriate remedy.

He frankly admits (and so, we may observe, does Dr. Gubler in his recently published commentary on the French Pharmacopœia) that the experiments of MM. Perrin, Lallemand, and Duruy, which, a few years ago, were hailed with rejoicing by most physiologists as settling the great alcohol question, are imperfect, since the elimination of the alcohol, which was supposed by them to be complete, is very partial, and he refers to the authors quoted in the footnote(b) as having established the true state of the case. The very decisive experiments of Dr. Anstie and Dr. Dupré have been published too lately to admit of their being noticed by Dr. Jaccoud in this place. He regards the therapeutical action of alcohol as being of a complex nature, and considers that this agent acts partly and in the first place as an immediate and temporary stimulant, and partly as a highly combustible element (according to Liebig's view) which tends to limit the increased waste of tissue caused by the febrile excitement. The following cautions regarding the use of alcohol are well deserving of our best attention :—

"Even in cases in which this medicine is in all respects indicated, it must be administered in carefully regulated doses. If you give it too largely, you will induce intoxication, and that the more readily from the weak state of the patient. If you continue its administration in too large doses, or for too long a time, you may induce a special form of asphyxia, for you impregnate the organism with an extremely combustible matter, of which only a portion is eliminated, while the remainder is burnt by the oxygen in the blood. The absorption of this gas, moreover, falls below the normal limit, in consequence of the disease; and thus there are two coincident conditions which tend to diminish the total quantity of the oxygen. The danger arises, not from the organism burning too much of the combustible material, but from the greatly increased consumption of oxygen which the combustion of our medicine necessitates. The oxygen will soon become insufficient for the due carrying on of the interstitial exchange which constitutes *la respiration à distance*, the aeration of the blood will become more and more imperfect, and asphyxia will at length result. These dangers, which have been foreseen by physiology, have been demonstrated by clinical observation."—Pp. 76-7.

The quantities of alcohol which he prescribes daily are very small as compared with Todd's mode of treatment, being from two to three ounces. His views regarding blistering are much the same as we entertain in this country. Blisters promote the absorption of the exudation as it begins to liquefy, and are of undoubted use in the case of feeble patients whose organic functions are discharged in too torpid a manner; but their application should be restricted to the period of defervescence.

That Dr. Jaccoud is no blind disbeliever in the efficacy of treatment in this disease, when treatment is really called for, is sufficiently obvious from the preceding remarks. There are cases where almost entire non-interference on the part of the Physician is most conducive to the welfare of the patient, and we heartily endorse his outspoken recommendation that, "if the disease is normal in its course, regular in its different stages, and moderate in so far as its symptoms are concerned, for God's sake (*pour Dieu!*) leave the case alone, and do not disturb it by your blind and untimely intervention" (p. 80).

The seventh lecture, *on aortic insufficiency*, is deserving of careful study, and contains twelve sphygmographic tracings of the pulse in the principal cardiac lesions. It concludes with a reference to the frequency with which sudden death occurs in cases of this affection. Dilatation of the left ventricle, with subsequently more or less hypertrophy, is the natural compensation for aortic insufficiency; but if the degree of compensation is not duly regulated, the phenomenon of sudden death admits of a ready explanation. "The left ventricle is dilated and feebler in its action; under the influence of a muscular effort, a mental shock, or any cause that can act directly or by reflex action on the innervation of the heart, the movements of the ventricle are suddenly arrested, the cavity can no longer contract, and the double blood-wave—namely, that from the auricle and that from the aorta—is instantly precipitated into it, and occasions its distension; but the altered muscular walls have lost their contractile power, the momentary stoppage of the heart's action becomes a definite paralysis, and the apparent fainting-fit becomes a fatal syncope." (P. 222.) Out of 113 cases of sudden death from disease of the heart, Dr. Aran met with twenty-five in which the only lesion was in the aortic valves, and with nine in which there were simultaneous lesions of the valves and the aorta.

With these remarks we close our present notice of Dr. Jaccoud's valuable lectures, reserving for a future opportunity the observations which we have to make on his views regarding progressive muscular atrophy and certain other topics.

(b) Strauch, "De Demonstratione Spiritus Vini in Corpus ingesti." (Dorpati. 1862.) E. Baudot, *Union Médicale*, 1863. Schulinus, "Untersuchungen über die Vertheilung des Weingeistes im thierischen Organismus" (*Archiv der Heilkunde*, 2, 1866).

Catalogue of the United States Army Medical Museum. Prepared under the direction of the Surgeon-General U.S. Army. Washington. 1866.

Disastrous as were the immediate results of the great American struggle, and complicated as is the present position of political parties, science at least seems likely to reap a grand harvest from the field of carnage and suffering. Never before has a government devoted itself with so much zeal and with such liberality to the advancement of Medicine and Surgery. We have already noticed from time to time the very admirable reports which have issued from the Surgeon-General's Office at Washington, and from the Sanitary Commission, and we have now before us the catalogue of the Army Medical Museum, a rich storehouse of facts, which is unsurpassed, and probably unequalled, in Europe. The arrangement and classification of the subjects reflect the highest credit upon the officers of the Museum, and especially upon Assistant-Surgeon Woodhull, who has undertaken the arduous duties of editor. When we inform our readers that the catalogue forms a ponderous quarto volume, containing nearly 1000 pages, they will appreciate the labour involved in its production, and the impossibility of doing more than merely indicating the general character of the contents in the limits of a review.

About two-thirds of the volume are devoted to Surgery, and the remaining third is divided between Medical pathology, hygiene, and microscopical anatomy. The contents of the Museum are not limited to the materials obtained during the great civil war, but include specimens illustrative of Indian and other warfare, and even of ordinary pathology and anatomy.

The value of a museum as a means of education and as a record of the progress of science depends so much upon the classification adopted that it may be desirable to point out the method here employed.

In the Surgical department, injuries and diseases of the bones and joints naturally occupy the first place, and are considered in the following order—viz., the cranium, face, ver-

tebræ, thoracic parietes, shoulder-joint, shaft of the humerus, elbow-joint, and so on; then follow the injuries to the internal organs and the soft parts. As an appendix to this portion of the work is a catalogue of weapons and projectiles, materia chirurgica, and miscellanea. To give an example of the very careful and exhaustive character of the classification adopted, we may take injuries and diseases of the cranium. These are placed under four heads—*A*. Gunshot injuries of the bones; *B*. Other injuries of the bones; *C*. Injuries of the soft parts; *D*. Diseases of the cranium. The class *A* contains four subdivisions—1. Contusions and partial fractures; 2. Penetrating fractures; 3. Perforating fractures; 4. Fractures by *contre-coup*. Of these subdivisions, the first illustrates the following conditions:—

a. Injuries primarily fatal.
b. Operations of trephining.
c. Injuries secondarily fatal, without operation.
d. Sequestra removed.
e. Other cases.

Each of these conditions is illustrated by valuable specimens, several of the more interesting of which are represented by woodcuts in the catalogue. Each group is subdivided in a similar manner, according to the material in hand; but as the classification possesses the important quality of being practically without limit, any number of new conditions may be added at any future time. Some very interesting cases may be noticed in glancing through these pages. For instance, a drawing is given of a fracture of the cranium in which a depressed fracture of the internal table has resulted from the impact of a musket-ball, whilst the external plate does not exhibit any trace of injury except a slight bruise. The depressed portion consists of three triangular pieces, and gave rise to fatal meningitis. Very curious specimens are described and figured of conical bullets split by striking the cranial bones obliquely, half the missile remaining on the inner, and half on the outer side. Amongst the injuries not produced by gunshot is a remarkable example of sabre wound. The skull of an Araucanian Indian, killed in action by Chilian troops, presents as many as nine sabre cuts, one of which actually sliced off a portion (one square inch and a quarter) of the outer table of the left parietal bone. A considerable number of specimens of injuries to the long bones have the advantage of not only representing very remarkable and curious forms of injury, but of exhibiting the results of excellent Surgical practice and the great advantage derived from the introduction of excision in the treatment of such cases. One of the most successful of these is that of a private soldier, wounded at Culpeper by a fragment of shell weighing nine ounces and a half, and from whom the head and five and a half inches of the shaft of the right humerus was removed by Surgeon D. W. Bliss. The patient, who is now an orderly in the Army Medical Museum, feeds himself, can use his arm with tolerable facility, and is able to lift and carry very heavy weights without the assistance of an apparatus. Some interesting specimens illustrating the effects of frost-bite are described, especially a case of dry gangrene of the toes of both feet produced by this cause. The Museum contains a large collection of bullets, exhibiting the various alterations in form which they undergo after striking against bones or other resisting structures. In addition to these are some Indian arrow-heads and other missiles.

The Medical and microscopical section of the volume has been compiled by Assistant-Surgeon Woodward, and exhibits equal care in its arrangement. The subject of enteric fever is illustrated by some large plates showing the condition of the small intestines, and by a considerable number of specimens in the Museum. Dysentery also occupies a very important place, as might be expected from the ravages it committed amongst the armies of the Potomac.

We have, however, already said enough to indicate the importance of the collection, and we hope that this may prove an additional inducement to some of our readers to follow the example set by a distinguished *confrère* last autumn, and pay an occasional visit to our transatlantic brethren.

Gunshot Wounds of the Wrist.—Professor Podrazki, while giving an account of what he believes to be the only case of excision of the wrist performed for a gunshot wound, mentions the remarkable circumstance that, among the 6000 wounded who came under his notice after the battle of Custozza, this was the only example of gunshot injury to the wrist met with, although injuries to the other joints were unusually numerous.—*Wien. Med. Woch.*, No. 39.

PROVINCIAL CORRESPONDENCE.

BIRMINGHAM.

September 23.

It will be perceived from the issue of September 19 that Dr. Anthony has taken exception to some observations of mine of the previous week, which he designates as a "tissue of impudent falsehoods." To one immaterial mistake I plead at once guilty—that is, in having stated that he had not resigned—but we shall now see how far that alters the real spirit of this business. A precise statement of the case, without Dr. Anthony's name, appears in the columns of the *Lancet*, in a letter from Dr. Nelson to the Club Surgeons concerning their successors, in which that gentleman says:—"My view of the matter may be illustrated by a somewhat parallel, but far stronger case, which has recently occurred here, in which six gentlemen resigned collectively their honorary offices, unless they each received an honorarium for their services. The common understanding amongst them was, as some of them have informed me, that no one of them should act for himself without the consent of the rest. Yet one of them did accept office, with a salary, to the exclusion of all the others. These others might justly complain of a breach of faith, but they do not pass a resolution such as yours, interdicting, under a threat, all the Profession from acting with that individual, if other Medical assistance or a Surgical operation were required to save the life perhaps of one of his patients." Now, our little mistake, or "impudent falsehood," gave a more charitable picture; for Dr. Anthony had an undoubted legal and moral right to decline resignation, and take what terms he pleased; but, although legal, he had no moral right to resign, conjointly with the above mutual understanding, and then break faith with the rest of his colleagues. He goes on to say that, having gained the principle of payment for service, he could not thereby damage his former colleagues, and instances his not taking payment for individual calls, but making a bargain to do all the work for 100 guineas a year, as an unanswerable proof that such supposition would be "absurd." But this proves the very contrary; for had he taken payment for individual calls as they came, others of his colleagues might have had the chance of a stray fee or so; but as he did it, he, by taking all that might arise, effectively shut all the others out. He three or four times repeats in his letter that he was a "martyr" by formerly giving his services for nothing, and twice over in the same breath, as it were, he asks Why? and then answers for himself "Because I like it?" The logic of this is somewhat incomprehensible. Some old martyrs ended their earthly troubles by a passage through flames of fire; but here is a martyrdom that culminates in an ill-composed letter and one hundred guineas a year by regular trade contract. We may presume this to be a sort of *diamond* as distinguished from *club* practice.

LIVERPOOL.

Liverpool, September 23.

Owing to the decline of summer diarrhœa, the mortality of Liverpool has been steadily diminishing for some weeks past, and is now at as low an average as in several other large northern towns. During the three weeks ending August 15, when the epidemic was at its height, the average weekly mortality from this disease was 108, infants and young children being by far the greatest sufferers. In the next week but one, the mortality from diarrhœa was reduced to 87, in the next week to 58, and in the one ending on the 19th inst. it was as low as 24. The epidemic of summer diarrhœa may therefore be considered at an end. Concurrently, however, with this decline, the number of fatal cases of typhus has week by week been creeping up, till they have reached 23, the latest and highest weekly return for the year. It is perhaps worthy of notice that a smaller proportion of those deaths than usual have occurred in the more crowded parts of the town, and in the neighbourhoods principally inhabited by the poorer Irish—a circumstance which seems to point somewhat clearly to the value of the close sanitary inspection to which these quarters have been submitted during the summer. The prevalence of diarrhœa, and the anticipation of an outbreak of cholera, led to the adoption of very prompt and thorough

measures of cleansing and disinfection of those districts where cases appeared, and where epidemics have always hitherto been most fatal in Liverpool. The value of those measures is now manifesting itself in the comparative freedom from typhus of the quarters to which they were applied.

An epidemic of a somewhat serious character is reported as having broken out at Bootle, a large and populous suburb of Liverpool. Bootle, though a village, contains 21,000 inhabitants, and its sanitary arrangements appear not to have kept pace with the rapid growth of its population. The ground on which it is built is very flat, rising gently from the western bank of the Mersey, and was, a few years ago, a marsh. The present outbreak has the character of typhoid fever. It cannot, however, be of a very severe character, as, out of 375 cases treated from the Dispensary, only two have been fatal. It is by no means limited to the poorer parts of the village, but has entered many of the best houses, situated in what seem to be the healthiest localities. From inquiries we have made, it seems probable that many of the deaths among children, which rumour has attributed to this disease, have been really due to scarlatina, which is also very prevalent in Bootle at present. It may be worth while noting that in September, 1862, an outbreak of typhoid fever of a severe character took place in this village.

GENERAL CORRESPONDENCE.

SPEAR *v.* DOIDGE.

LETTER FROM MR. ALFRED POLAND.

[To the Editor of the Medical Times and Gazette.]

SIR,—As a new trial in the above case is very probable, I shall refrain from making any further comments until afterwards. I wish merely to answer the statements of your correspondents of Sept. 5 as far as regards myself. Your first correspondent states—"If Mr. Poland will afford us an opportunity of reading his peculiarly unsuccessful treatment, we will carefully avoid it." Now, I offered no suggestion whatever as to the mode of reducing the dislocation. I quoted from a well-known book and from an article written by the ex-President of the Royal College of Surgeons of England; therefore it is to him, and not to me, the kind remarks apply, and I think the perusal of that article may benefit your correspondent, although during his thirty years' practice he cannot call to mind a single case of unreduced dislocation of the radius. With respect to your second correspondent, I am glad he admits he "was an unwilling witness," and "that nothing could be more distasteful to him than to be called upon to give any evidence which might by any possibility be used to injure the reputation of a Professional brother." I beg to assure him that I had extended my reading from the *Guy's Hospital Reports* even to line 5 of page 233 of the fourth edition of the "Manual of Surgery," where the practical Surgeon remarks that the excision of the head of the bone for the accident in question had never been performed as far as he was aware. I was very guarded in my expression when I stated that no practical Surgeon would ever excise the head of the bone, knowing, as he does, that the parts will accommodate themselves to a very great extent. This is borne out by the fact that there has never been any necessity for such an operation at present. I am, &c. ALFRED POLAND.

27A, Finsbury-square, E.C., September 7.

NEW INVENTIONS.

INDIA-RUBBER SPONGE.

(*Manufacturers, Messrs. P. B. Cow, Hill, and Co., 46 and 47, Cheapside, London, E.C.*)

THIS seems a very ingeniously contrived substance. It is an artificial sponge, made apparently by filling india-rubber in a fluid state with bubbles of gas, and then allowing it to harden, the result being a mass of india-rubber as full of holes and pores as a French roll. It is very elastic, will take its fill of water easily, and may be used for many purposes instead of stiff sponge—as, for instance, in the bath as a flesh brush, for cleaning paint, windows, etc. But it also seems capable of being made into pads for fracture, hernia, etc., and, if so, its lightness, pliability, and elasticity may make it of great service.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 23, 1868.

HENRY LEE, Esq., F.R.C.S., Vice-President, in the Chair.

Dr. JAMES HINTON related a case of

PERFORATION OF THE MASTOID PROCESS.

The patient was a clergyman, aged 58. Severe inflammation of the tympanum followed a chill in church in January, 1867. There was a small perforation of the membrana tympani, with profuse discharge, and at the end of three months, after long-continued pains in the head, there ensued great swelling and pain over the mastoid process. The periosteum was incised, but with only partial relief; and the next day, the bone being felt partially softened, it was penetrated by a trocar, and at a depth of six or eight lines there ensued a gush of matter, nearly an ounce being evacuated. The relief was now nearly complete, and in three days the orifice in the membrana tympani was healed. The wound ceased to discharge in about five weeks, but shortly after, on exposure to the wind, pain returned in the head, and after some attacks of shivering a large swelling formed beneath the sterno-mastoid muscle. This was first opened by a trocar and canula, and large quantities of matter discharged daily, with great relief to the pain in the head, which returned severely whenever the evacuation of the matter was delayed. After three or four weeks the abscess was laid freely open in its whole extent, a distance of about seven inches, the occipital artery being divided. The wound healed rapidly, and the patient regained his former health, and nearly his former degree of hearing. Of fourteen cases of perforation of the mastoid cells for the evacuation of matter reported by various authors twelve were successful; and of the two in which death followed there can be little doubt that one would have succeeded if pyæmia had not already set in. The operation is suitable to two classes of cases—1. Those in which pus collects in the dependent mastoid cells; and 2. Those in which caries takes place in the roof of the pyramid—the position suitable for the perforation being the centre of the mastoid process in the former case, and in the latter the upper part of it, about on a level with the roof of the meatus, the instrument employed being directed somewhat forward. In conclusion a case was related in which the perforation of the mastoid process might very probably, as shown by dissection, have averted a fatal issue. On this case also a suggestion was founded in favour of enlarging a small orifice in the membrana tympani, if symptoms of cerebral irritation arise in apparent connexion with the disease of the tympanum.

A paper by Dr. ZACH. JOHNSON and Mr. J. LOCKHART CLARKE was read on a remarkable case of

MUSCULAR ATROPHY, WITH EXTENSIVE DISEASE OF THE SPINAL CORD.

The patient was a peasant, in whom the muscles of the shoulders and arms had almost entirely disappeared, while the muscles of the forearm were apparently unaffected. Those of the ball of each thumb had wholly disappeared, but those of the fingers were of normal size. The lower extremities were well developed. The heart's action was extremely irregular, and very feeble. The patient, who was thirty-two years of age, had been inoculated with the natural pock when a year old. Hitherto he had been perfectly healthy, but he had suffered much from the effects of the inoculation, and then gave evidence of severe indisposition. When the eruption was at its height, the left arm was observed suddenly to droop and become powerless. Soon after the right arm followed the same course, and both hung by his sides powerless for some time. It was long before he appeared to regain any power in either. From this period the muscles already mentioned ceased to be developed, or fell into a state of atrophy. The spinal cord was examined by Mr. Lockhart Clarke, who found in it unequivocal evidence of extensive lesions in both the white and grey substances. In part of the cervical enlargement, the superficial layers of the posterior columns were somewhat softened and infiltrated with granular exudation, so that the posterior roots of the nerves at this point were more or less destroyed. These

alterations were accompanied by a more superficial softening of the anterior columns, where the pia mater was thickened and infiltrated with fluid exudation. Nearly all the anterior roots in the cervical region were in a state of extreme atrophy. In the grey substance, extensive lesions and alterations of form were discovered at several points. At one part the posterior horn on the right side was displaced and damaged, while in the anterior grey substance there was an extensive area of disintegration of tissue, with a dilated blood-vessel in the centre. On the left side the disintegration was limited chiefly to the central part of the anterior grey substance. The anterior fissure was filled with granular exudation and the *débris* of the contiguous borders of the anterior columns. A great number of the nerve-cells were in different states of atrophy. Some were reduced to at least one-eighth or one-tenth of their natural size. In other instances they had lost their sharpness of outline, and consisted of an uneven aggregation of granules. In the nerve-cells of the ganglia, on the posterior roots of the nerves, little or no alteration was observable.

NEW BOOKS, WITH SHORT CRITIQUES.

Diseases of the Womb. Uterine Catarrh frequently the Cause of Sterility: New Treatment. By H. E. Gantillon, M.D. London: John Churchill and Sons. Pp. 88.

*** In the former part of this *brochure* we do not recognise much that is not generally known. Neither probably is the plan of intra-uterine injection, so much vaunted by the author, altogether unknown; but we confess that the introduction into the uterine cavity of an injection consisting of equal parts of nitrate of silver and distilled water is something beyond what is seen in everyday practice. Dr. Gantillon admits that this practice, as illustrated in one case, is not altogether free from danger; still, he would seem to be deeply impressed by its value, if one may judge from the number of publishers whose names are attached to the work, for it would appear to be simultaneously issued in London, Paris, New York, Philadelphia, Baltimore, and Savannah. Of course the results of no method of procedure can be with safety predicted by *à priori* reasoning. Experience is what is necessary; still, we have seen much simpler remedies and modes of procedure perfectly successful in cases essentially similar to those described by Dr. Gantillon, and we should like to have some corroborative evidence as to the exceedingly great value of his method before abandoning what we think simpler and safer plans of treatment. If the cervix uteri be narrow, injections into the cavity of the womb may pass into the peritoneum through the Fallopian tubes, and create very alarming symptoms.

Injuries and Diseases of the Jaws. By Christopher Heath, F.R.C.S., Assistant-Surgeon to University College Hospital, and Teacher of Operative Surgery in University College, London, etc. London: John Churchill and Sons. Pp. 416.

*** The subject of Injuries and Diseases of the Jaws was selected as that for the Jacksonian Prize in 1867. Mr. Heath became a competitor, and was successful. He now lays his valuable essay before the public. The work in every way reflects the highest credit on its author, who has evidently spared no pains to render it as complete as possible. It is extensively and beautifully illustrated, many of the drawings being from original specimens.

Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy. By Charles Murchison, M.D., F.R.S., Physician to the Middlesex Hospital, Lecturer on the Practice of Medicine at the Middlesex Hospital Medical College, etc. London: Longmans. Pp. 556.

*** The excellence of Dr. Murchison's clinical teaching is too well known to need any eulogy here; it is enough for us to say that in these lectures he has elucidated some of the most obscure diseases to which the human being is subject. A certain portion of the lectures have already been published in the columns of a contemporary, but the greater part now see the light for the first time. Already well known in this department of Medicine as the translator of Frerichs' valuable treatise, Dr. Murchison has by the present publication enhanced an already high and deserved reputation.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 17, 1868:—

Hart, Walter, King's College Hospital.
Hill, Philip Edward, 14, Cumberland-place, Bayswater.
Lovett, Samuel Robert, 23, Southampton-street.
Norton, George Everitt, Middlesex Hospital.
White, William Leavens, Dundee Royal Infirmary.

The following gentlemen also, on the same day, passed their First Examination:—

Hopkins, John, St. Mary's Hospital.
Taylor, William Bramley, Camberwell.

PROFESSOR BROCA.—M. Broca, Professor of Surgical Pathology at the Faculty of Medicine, has just been nominated Professor of Clinical Surgery.

BIRTHS.

BIGGS.—On September 17, at Springfield, Tooting, S.W., the wife of J. Strange Biggs, M.D., of a daughter.

CHAMBERS.—On September 13, at 2a, Sutherland-street, S.W., the wife of Thomas Chambers, F.R.C.S.E., prematurely, of a son, stillborn.

GIBBON.—On September 15, at 39, Oxford-terrace, Hyde-park, the wife of Dr. Gibbon, of a daughter.

HENRY.—On September 18, at Stratheden House, Rutland-gate, the wife of Mitchell Henry, F.R.C.S., of a daughter.

LEVICK.—On September 18, at West Ham, Essex, the wife of George Levick, M.R.C.S.E., of a son.

MOLLOY.—On June 1, at Rangeview, Balmoral, Victoria, Australia, the wife of W. T. Molloy, J.P., L.K. and Q.C.P. Ireland, of a daughter.

MOSELY.—On September 16, at 11, Upper Westbourne-terrace, Hyde-park, the wife of B. E. Mosely, M.R.C.S., of a son.

SANSOM.—On September 23, at 29, Duncan-terrace, City-road, N., the wife of Arthur Ernest Sansom, M.D., M.R.C.P., of a daughter.

SMITH.—On September 21, at Enfield, the wife of Abbotts Smith, M.D., of Finsbury-square, of a son.

MARRIAGES.

DAVIES—LAMBERT.—On September 17, at St. Michael's Church, Two Mile-hill, Gloucestershire, T. H. W. Davies, M.R.C.S., of Gloucester-road, Bristol, to Ellen Matilda, youngest daughter of Charles Lambert, Esq. of Fillwood House, St. George's, Gloucestershire.

GREGORY—HOTHER.—On Sept. 16, at St. Stephen's, Tunbridge, Charles Foster Gregory, Surgeon, of Leigh, to Catherine, second daughter of the late John Hother, Esq., of Lewes, Sussex. No cards.

MORTIMER—SCHOLFIELD.—On Sept. 15, at St. Michael's, Forden, the Rev. Christian Mortimer, of Grinshill, Salop, to Lucy, elder daughter of H. D. Scholfield, M.D., of Nant Cribba, Montgomeryshire.

RAY—ENGELHARDT.—On September 17, at St. Giles's, Camberwell, by the Rev. the Master of Dulwich College, Alfred J. Carver, D.D., assisted by the Rev. Thos. R. Drake, M.A., vicar of St. John's, Clapham, Edward Reynolds Ray, M.R.C.S., eldest son of the late Edward Ray, M.D., F.R.C.S. Eng., of Dulwich, to Alice Evelyn, second daughter of Frederick Engelhardt, Esq., of Dunsford Lodge, Clapham-rise. No cards.

ROWELL—GALE.—On August 4, at St. Andrew's Church, Singapore, T. J. Rowell, M.D., to Maria Grace, daughter of John Gale, Oakfield, Cheltenham.

DEATHS.

MOORE, YORK JAS., M.R.C.S., at his residence, Brunswick House, Torquay, on September 19, aged 41.

REDWOOD, CHARLOTTE ELIZABETH, the beloved wife of Theophilus Redwood, Ph.D., of 39, Russell-square, London, and Boverton, Glamorganshire, at the latter place, on September 17.

SIBBALD, JOHN ROBERTSON, M.D., F.R.C.S.E., at 8, Newington-terrace, Edinburgh, on September 19, in his 69th year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Lichfield Union.—Mr. Henry Edwards has resigned the Alrewas District; area 12,811; population 2777; salary £35 per annum.

Manchester Township.—Mr. Joseph Westmorland has resigned the appointment of Assistant Medical Officer at the Workhouse Hospital, New Bridge-street; salary £130, and £40 for board.

Newport Pagnel Union.—Mr. Wm. Heygate has resigned the Second District; area 5888; population 1411; salary £14 10s. per annum. Mr. Nathaniel Godfrey has resigned the Eighth District; area 4051; population 714; salary £10 10s. per annum.

St. Pancras Parish.—Mr. E. T. K. Evans, Medical Officer for Males at the Workhouse, has resigned; salary £100 per annum.

APPOINTMENTS.

Alcester Union.—Joseph R. Buck, L.R.C.P. Edin., M.R.C.S.E., to the Inkberrow District.

Horncastle Union.—Thomas A. Roberts, M.R.C.S.E., L.S.A., to the Tattershall District.

Malling Union.—John W. Fry, M.R.C.S.E., L.S.A., to the Fourth District.

St. Giles in the Fields and St. George's, Bloomsbury, Parishes.—William Henry Platt, L.R.C.P. Edin., L.R.C.S. Ire., Resident Assistant Medical Officer at the Workhouse.

THE late Field-Marshal Sir Edward Blakeney left to his nephew, Surgeon-Major Edward Blakeney, an iron snuff-box, made out of the shoe of a favourite horse.

HABEEB RISK ALLAH BEY, M.R.C.S. Eng., and Associate of King's College, whose name has been made very familiar to the public in connexion with the death of his son-in-law, Readly, at Brussels, and various trials connected with that event, has contracted a second marriage with a second widow, a Mrs. Wogan, of Malvern.

AT a meeting of the directors of the Aberdeen Ophthalmic Institution, Aberdeen, held on Friday, the 11th inst., to elect a successor to Dr. Wolfe, who had just resigned the appointment of Surgeon to the Institution, Dr. Alexander Dyce Davidson was elected to the vacant post by a majority of seven. On leaving Aberdeen for a larger field of practice in Glasgow, Dr. Wolfe received a vote of thanks from the directors of this Institution, a vote proposed in highly flattering terms by Dr. Angus.

THE LATE DR. VINCENT.—The death of this gentleman has created several vacancies in the Surgeonship of mines, clubs, etc., in the neighbourhood of Camborne. These are eagerly sought after by the Surgeons of the town, and among the appointments made are, Dr. Hutchinson to the Oddfellows' Club and to New Seton Mine, and Dr. C. Butlin is appointed parish Surgeon. Several other posts of much greater emolument remain yet open.

WE have received information that for some time back fever has been rife in the Bedminster Workhouse, near Bristol—that indeed it has extended to the families of some of the officials. The deplorable condition in which this workhouse was found some time ago renders this report all the more probable, and the fact, if true, all the more culpable. Inquiry should certainly be made and steps taken to put an end to the possibility of similar outbreaks of preventible disease in future. So much has been said of the condition of this workhouse already, and so little, as we understand, has been done to improve it, that an outbreak of zymotic disease, if once introduced, is not to be wondered at.

ANDERSONIAN UNIVERSITY.—At the quarterly meeting of the managers and trustees of this institution, James Young, Esq., of Limefield, the newly elected president, in the chair, there was a large attendance. The chairman thanked the managers for his appointment to the office of president, expressing his desire to promote by all means in his power the best interests of the University. The scientific education of the people was engaging more and more the attention of all classes, and now even Government was adopting new and influential agencies for carrying on this important and useful work. He hoped the Andersonian Institution in the future, as in the past, would prove itself a powerful auxiliary in such movements. The meeting then proceeded to the election of a successor in the Chair of Medical Jurisprudence to Dr. Leishman, recently appointed Professor of Midwifery in the University of Glasgow. The result of the balloting was in favour, by a majority, of the appointment of Dr. P. A. Simpson, of Brandon-place. The other candidates were Dr. James Dunlop and Wm. Macgill. Dr. Simpson was then formally declared elected to the vacancy. The vacancies among the Trustees were filled up as follows:—Artists: Mr. Rochead, architect, Mr. James H. Hutchison, R.A. Medicines: Dr. Lyon. Divines: Rev. Mr. Gray, St. John's. Kinsmen and Namesakes: James Anderson and James M'Call. The managers reported in favour of Mr. W. F. King being awarded the Whitworth Scholarship of £25, with a view to preparation for competing in the exhibitions of next year. The thanks of the meeting were accorded Dr. Scoular, Dr. Martyn Paine, and Robert Brown, Esq., of Fairlie, for valuable donations to the museum and library.

MUNIFICENT DONATIONS.—The debt on the Andersonian University, which amounted to £4000, has been cleared off in the most unostentatious yet satisfactory manner through the munificent liberality of Mr. Wm. Euing, late president, and Jas. Young, Esq., the new president, of the University. It was announced at the meeting that these gentlemen had given the secretary (Mr. Wm. Ambrose) cheques for £2000 each, thereby clearing off the entire monetary incubus on the institution.

SURGEON-MAJOR HINTON'S CASE.—We have received a copy of a memorial from Surgeon-Major H. B. Hinton, of the Bengal Army, to the Secretary of State for India, dated August 14, 1868. It appears that he entered the service in 1839, and served continuously for twenty-six years, until he contracted a fever in the Bhootan campaign, in May, 1865, which nearly caused his death—first, during the continuance of the fever; again, during the voyage to Australia, from seasickness; and, thirdly, from great subsequent enlargement of both the liver and spleen. Under the bracing effects of that climate he gradually rallied, but, feeling unfit for further duty, returned to England in September last, with the intention of retiring from the service in March last, on attaining his fifty-fifth year of age, under the pension rules of June 4, 1861, as applicable to his case. He states that, in a despatch from the Secretary of State to the Government of India, dated August 22, 1860, the following paragraphs occur:—"It has been found necessary, even in the climate of Europe, to limit the age of regimental Surgeons to fifty-five years of age; and it cannot be supposed that a wider limit of age is admissible in the more exhausting climate of India. I should not object to relax the rule in cases where superior Medical authorities certify the perfect competency and fitness of any individual for the performance of Surgical duty." In another despatch, dated April 24, 1861, are the following paragraphs:—"In my despatch No. 326, dated August 22, 1860, with reference to the objections which had been made to the 8th clause of the Warrant under which all Medical officers below the rank of Deputy Inspector-General will be placed on the Retired List when they shall have attained the age of fifty-five years, I expressed my willingness to consider any plan that your Government might suggest for reconciling the efficiency of the public service (which must be the primary object) with a fair consideration of the claims of the Medical department." "I am willing to assent to the adoption of this plan, provided that the perfect competency and fitness of the Medical officers be in all cases certified by a board." "A Medical officer who may be unable to obtain the certificate of competency above referred to, will be placed on the retired list, receiving, as recommended by your Government, the rate of pension next above that to which his period of service in India may entitle him, provided that he be not already entitled to retire on the higher rate—viz., £700 a year." Under the above conditions he appeared before the Medical Board at the India Office on March 12 last. He declares that the members made no inquiries regarding his perfect competency to perform any more Surgical duty, but merely interrogated him regarding the state of his health, and, on March 17, the Military Secretary informed him that the board reported "that you are fit to discharge the duties of your Profession in the East Indies. You will, therefore, not now be compelled to retire in consequence of having attained the age of fifty-five. The certificate granted by the board will hold good for three years." No mention is made of any previous communication having taken place between the Military Secretary and the board, but another question was intimately connected with it, that of a Medical annuity of £300 a year, which was eventually decided by Sir Stafford Northcote in his favour; but this was immaterial, as, in the month of June, after his sick leave had expired, he was allowed to retire from March 7, the day he was fifty-five years old, when the annuity could not be withheld; but he was deprived of the age pension of £100 a year for the rest of his life. It appears that, during his lengthened duty in India, he has served in six campaigns, and twice zealously volunteered his services to go to Arracan and China. Upon Dr. Hinton's showing, the Secretary of State for India in Council would appear to have treated this old servant of Government in an ungenerous manner.—*Army and Navy Gazette*, September 19.

ON HOT BATHS AS A CAUSE OF TRISMUS NASCENTIUM.—Dr. Reher makes a very curious communication on this subject. For some time past Dr. Busch, of Elbing, Prussia, had observed fatal trismus of new-born infants occur with great frequency in his practice, he having met with no less than twelve such cases in three years and a half. On inquiry, it was found that other Practitioners had met with similar cases, although in less numbers. All the cases were found to have been the infants of mothers attended by one and the same midwife, the most employed one in the place. Together, the Doctors reckoned up thirty-seven cases in 1863-65 in a population of 27,000, and on the midwife herself being questioned, she gave a much more alarming statement, as she said many had died before there had been time to send for a Doctor. She admitted, in fact, that in 380 confinements she had attended during 1864-65 she had met with ninety-nine cases—every third or fourth child, in fact, dying of trismus. In 1866 and 1867 numerous cases still occurred, although attention had been drawn to the matter and the practice of this midwife scrutinised. It eventually turned out that the cause of the mischief was the practice which the midwife had of placing the infants immediately after birth in baths far too hot; and the reporter suggests whether the screams which infants often emit during washing may not be due to the water employed being too hot for the purpose, although not sufficiently so to induce such serious results as here adverted to.—*Monats. f. Geburtsk.*, June.

CASE OF LYMPHORRHAGE.—Dr. Scholz relates a curious case observed during the present year in one of the Vienna garrison Hospitals. Its subject was 22 years of age, and from his second year had been liable to irregularly periodical discharges of a clear fluid from the right inguinal region. There were observed on his admission two cicatrices of old abscesses long since healed, and, towards the inner surface of the thigh, some twenty vesicles the size of a pin's head, which on puncturing discharged a clear fluid. The patient stated that every week or fortnight one or more of these vesicles would burst and continue to discharge fluid for from one to three

days. No abnormal condition of the limb or of the skin existed. While he was in the Hospital the secretion began to be discharged from one of the vesicles on March 12, and continued to flow for sixteen hours. On the 15th another vesicle was opened with a needle, but the discharge that ensued soon ceased. But on the 21st—*i.e.*, nine days from the 12th—it reappeared spontaneously, and flowed continuously for forty-four hours. A portion was collected in watch-glasses, and it was calculated that during the forty-four hours between nine and ten ounces must have been discharged. Eleven days later (April 3) it reappeared, and continued during thirty-six hours, nearly sixteen ounces flowing away. The flow took place from so minute an opening that it was quite invisible, and could not be penetrated by a bristle. The fluid when discharged was quite clear and colourless, and after long standing a soft white coagulum separated from it. It contained much albumen, manifested a strong alkaline reaction, and showed under the microscope a few lymph-corpuscles. Dr. Scholz gives a summary of the cases resembling this which have been recorded. —*Wien. Woch.*, Nos. 63 and 64.

Amputation by Lightning.—A lad, aged 12, riding during a thunderstorm, the horse took fright, and he fell to the earth unconscious. On recovering his senses, he found himself deprived of his right leg, which lay neither beside nor under him. He was found asleep, with his clothes and shirt partially burned. He was brought to the town (in South Russia) in a cart, which caused him great suffering. Bleeding also came on, but ceased spontaneously. A week afterwards he was brought to the Hospital, and Dr. Rogowitch found, with a wound just like that produced by amputation, good granulations existing at the circumference, and some gangrenous cellular tissue at the centre. The amputation had taken place at the upper part of the leg, neither the patella nor the femur being injured. The wound was regularly round, with clean edges and an even base, and cicatrisation proceeded quite favourably. The limb was found a few days after not far from the spot. It had a mummified appearance, with scarcely any smell. The bones were quite black, their ends being pretty even. From the place of fracture to nearly the half of their length they were laid bare, apparently owing to the strong contraction of the muscles.—*Berlin Wochenschrift*, No. 21.

Paper as an Economical Substitute for Lint.—Dr. Hewson, observing that during the Prussian campaign paper had been used as a dressing in place of lint, gave it a trial at the Pennsylvania Hospital, and, after numerous experiments, comes to the conclusion that the common newspaper forms the best substitute for lint, muslin, linen, or rag. It is just as useful as a dressing, while its cost is nothing in comparison. He also uses Manilla paper coated with a thin layer of yellow wax in place of oiled silk, with a saving of from 400 to 600 per cent., and the advantage of being able to discard the dressings every day, instead of replacing them as when silk is used.—*Boston Journal*, July 9.

Health of Ireland.—During the quarter of the year ended June 30 there was a comparative freedom from epidemic diseases of any great severity; the health of the community was satisfactory, the number of deaths registered being 1833 less than in the corresponding period of last year. Though to the mildness of the season must be chiefly ascribed the diminished mortality, yet we may safely infer that the improved sanitary condition of many localities has checked the development of preventible diseases. Scarlatina, hooping-cough, and fever were the zymotic diseases which prevailed most during the quarter. A few cases of purpuric fever scattered throughout the country proved fatal, in some instances the disease receiving the inappropriate name of "Black Death." The Registrar of the Downpatrick District says, "One well-marked case of 'febris nigra' terminated fatally in twenty-four hours." The Registrar of the Maghera District records two deaths from purpura hæmorrhagica. The Registrar of Ballyragget District, Castlecomer Union, reports that "one death was caused in a strong healthy young labourer having well-marked symptoms of cerebro-spinal meningitis, commonly called 'Black Death.' He was sent to this town from a distance of six miles in a state of insensibility, lived for six days, and before death the whole surface of the body became remarkably livid, with patches of purpura on many parts of the trunk." Two other deaths from purpuric fever are reported, one from Parsonstown and the other from Kilmallock.—*Quarterly Return of Marriages, Births, and Deaths in Ireland.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

By a mistake on the part of the Edinburgh University authorities, notice of Professor Spence's class of Operative Surgery, taught during the summer session, was omitted from our Students' Number.

Trean.—If a *strong* wine be chosen, the Tarragoneso, just as good as common port; if a light wine, try the Beaujolais, of the Beaujolais Wine Company, Rood-lane, an excellent wine, not cold nor thin, which they are now selling very cheaply.

Inquirer.—A truss consisting of a pad of wood or vulcanite, confined with elastic straps instead of steel spring, may be had of any respectable maker of Surgical instruments and apparatus.

H.—Licences for keeping and selling petroleum must be applied for at the office of the Metropolitan Board of Works, Spring-gardens, before December 31. There you may learn who has applied, and the manner in which such application may be resisted, and may suggest any additional precautions against your neighbours which you may think necessary for your own safety.

A Fellow.—The Council of the College will meet on the 15th proximo to elect a member of the Court of Examiners in the vacancy occasioned by the resignation of Mr. South, when in all probability the choice will fall on Mr. George Busk, F.R.S.

A Pupil and Dr. G. M.—Apply at once at the Hall, and, if successful in passing the Arts Examination, the Professional studies can be commenced the following month. We cannot recommend any particular Hospital. Consult the Students' Number of this journal.

Half a Member.—We cannot undertake to search our pass-lists for your name. Why not invest 1s. in purchasing the Calendar of the College, where you will find it duly recorded, and also the questions submitted on that occasion?

Prizes.—The following are the subjects for the Collegiate Triennial and Jacksonian Prizes of the Royal College of Surgeons. The former consists of the John Hunter Medal executed in gold, to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of £50. The Jacksonian Prize is twenty guineas. There are two for the present year. The subject for the Collegiate Prize is "The Anatomy and Physiology of the Organs of Taste and Smell in the Mammalia; the dissertation may be illustrated by Preparations and Drawings." The subjects for the Jacksonian Prizes for the present year are—"Pyæmia after Injuries and Operations: its Pathology, Causes, Symptoms, Prevention, and Treatment; the dissertation to be illustrated by Cases and Drawings," and "Amputations of the Limbs: the various Modes of Operation now practised, their relative advantages, and the Methods of arresting Primary Hæmorrhage, and of dressing the Stump; the dissertation to be illustrated by Cases, Drawings, and Casts." The subject for the prize for the ensuing year 1869 is "Aneurism by Anastomosis: the various Forms of this Disease, and the different Methods of Treatment, with the Author's Experience and Views thereon; the dissertation may be illustrated by Drawings, Photographs, Preparations, and Casts."

Black Sheep.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It is a well-known fact now that the authorities wish to be more civil to the Medical Department, and that it is only requisite for Dr. Logan to bring to their notice the black belt question to get this hideous and shameful stamp of inferiority removed from the breasts of the Medical officers of the army, and replaced by something less obnoxious. There is in reality but one opinion regarding this article of dress, and no one is perfectly indifferent to the matter, although he may publicly say he is, or that it is beneath the dignity of a Professional man to think about it. He certainly is anything but dignified in appearance with his black, or generally his rusty brown, strap on. I once remember an army Surgeon who said, "Oh, I don't care." Yet this same *insouciant* was seen at one of the Lord-Lieutenant's *levées* at the Castle to go and hide his cocked-up hat in one of the gorgeous curtains, and walk about without it. The time has surely come, with the change in the infantry dress, for the Director-General to act in the matter, and to get his department respectably dressed, and so render himself still more popular than even he is already.

I am, &c.

Black Sheep.

Ovariotomy in Dublin.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It may be interesting to some of your readers acquainted with the Profession in Dublin to learn that a very successful operation for ovariotomy was performed by Dr. W. Stokes at the Richmond Hospital yesterday. The woman was middle-aged, spare in frame, but of good spirit, and anxious for the relief promised by removal of her burden, for she appeared as if pregnant with quadruplets. Chloroform was readily taken, and produced no bad effects during the protracted period required for the proceedings. A black sheet was laid over the abdomen, and the longitudinal incision made into the mesial line, and carefully dissected down to the peritoneum. This was opened, setting free some serous fluid, and exposing the surface of the tumour white and glistening. A large-calibred trocar, with caoutchouc tube attached, was then thrust into the tumour, and the fluid contents allowed to drain off into a bucket. These were of a coffee-coloured appearance, and amounted to some gallons. No adhesions of any moment were found on the introduction of the hand into the abdominal cavity round the tumour. This was then gently extracted through the incision, like a large collapsed sac, till the whole appeared externally hanging by the pedicle. The folding hinge-clamp

was then applied to the root at the line of incision, and the sac cut off by the scalpel. The abdominal opening was then accurately sutured together by wire ligature, and various pads, strapping, and bandages were applied over the sunken wall of the belly, which lay in folds. The woman was then carefully placed in her couch, and appeared to be in good spirits on the dawning of consciousness. No hitch took place throughout the proceedings. Amongst those who rendered assistance to the operator, we noticed Drs. Beattie, Lyons, Fleming, and Macdonnell. I am, &c.

Dublin, Sept. 16. VIATOR.

Testimonial to a Midwife.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—My attention has been called to a newspaper report of a case tried at the Brompton County Court, in which I am stated to have given a testimonial to a midwife. Will you allow me to take this opportunity of explaining that the testimonial I gave the plaintiff was as to her competency to act as monthly nurse, in which capacity only had I met with her? I enclose the newspaper, and am, &c.

London, September 21. R. Druitt.

*** The case referred to is Flamm *v.* Stapylton, reported in the *West Middlesex Advertiser* of August 1, of which the following is an abstract. It is of some interest as bearing on the right of a Practitioner to his fee if engaged by a patient, even though she may change her mind and discard him without due cause.—Ed.

Flamm v. Stapylton.—Jury Case.

Mr. Smyth appeared for the plaintiff and Mr. Sleigh for the defendant. This was an action to recover the sum of £15 15s. for breach of contract. Mr. Smyth said his client was a midwife and nurse, residing in Nice. She had received her diploma for Midwifery from Dr. Keiller, 21, Queen-street, Edinburgh, and signed by Sir James Simpson. In November last, at Nice, she was applied to by the defendant's husband to attend his wife. She submitted several very high testimonials as to her capabilities, amongst others from Henry D. Littlejohn, F.R.C.S., 40, York-place, Edinburgh; Arthur Farre, M.D., 12, Hertford-street, Mayfair, W.; R. Druitt, 37, Hertford-street, Mayfair, W. She went to see the defendant and his wife, who agreed to engage her. In January the plaintiff received a letter from defendant breaking off the engagement. He would vouch to say that his client was a woman of great experience, and far surpassed many of the men who pretended to act as Doctors. The plaintiff's evidence was to the purport of the above statement. Mr. Sleigh severely cross-examined her, and in answer to that gentleman she denied ever having administered drugs to any of her patients that were injurious; that she had never, without sufficient justification in her own mind, used any drug or medicine that would do her patients harm. She had used ergot of rye in cases of hæmorrhage, but only in a very small dose, as she was well aware of the nature of the drug; she never used it for the sake of abortion; she had used belladonna to a lady's breast to disperse the milk. "Some complaint was made about my using muriate of iron, but I considered it beneficial to my patient." In re-examination the plaintiff said that she had used ergot of rye, and at the time she used it Mrs. Ash's pulse was up to 110, and after taking it she was considerably relieved, and the hæmorrhage stopped. Mr. Sleigh said his client had sufficient grounds for not engaging the plaintiff, as he had received a very unsatisfactory account of the plaintiff. He stated she was in the habit of getting the worse for liquor, and administering medicines that were totally unfit for ladies in the condition described. His Honour having reviewed the evidence, the jury returned a verdict for the plaintiff for £10 10s. His Honour, on the application of Mr. Smyth, granted costs.

COMMUNICATIONS have been received from—

Dr. Barnes; Mr. Spencer Wells; Mr. J. Chatto; Mr. Alfred Poland; Surgeon-Major Madden; Dr. C. A. Gordon; Viator; Black Sheep; Dr. Muspratt; Mr. Thomas Gilbert; Mr. W. J. Marsh; Mr. James Lane; Mr. W. J. Smith; Mr. Bruce; Mr. F. A. Goodenough; Dr. Thomas Warden.

BOOKS RECEIVED—

Heath on Injuries and Diseases of the Jaws—The Church of Christ at Broad Church, by a Physician—Heiberg on the Effects of the Syphilitic Virus—MacCormac on Amputation of the Thigh—Dalton on Physiology—Hodge on Diseases peculiar to Women—Dr. C. Murchison, Clinical Lectures on Diseases of the Liver (Longmans).

NEWSPAPERS RECEIVED—

Cambridge Independent Press—Medical Press and Circular—The Dominion Medical Journal, No. 1—Journal of the Irish Medical Association, No. 35—Indian Medical Gazette—Brighton Times.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 19, 1868.

BIRTHS.

Births of Boys, 1011; Girls, 1069; Total, 2080.
Average of 10 corresponding weeks, 1858-67, 1876·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	623	597	1220
Average of the ten years 1858-67	585·8	552·8	1138·6
Average corrected to increased population	..	..	1252
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	...	..	17	2	3	6	15	..
North ..	618,210	1	7	17	6	4	19	12	1
Central	378,068	..	4	5	..	2	2	11	..
East ..	571,158	..	4	18	3	8	20	16	..
South ..	772,175	3	7	17	4	15	9	32	..
Total ..	2,803,989	4	22	74	15	32	56	86	1

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·638 in.
Mean temperature	57·1
Highest point of thermometer	69·3
Lowest point of thermometer	46·5
Mean dew-point temperature	47·3
General direction of wind	N.E. & E.
Whole amount of rain in the week	0·27

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 19, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Sept. 19.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Sept. 19.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2080	1441	1220	69·3	46·5	57·1	0·27	27
Bristol (City)	167487	35·7	90	75	*60	..	..	..	..	..
Birmingham (Boro')	352296	45·0	254	171	156	66·0	45·4	53·0	0·33	33
Liverpool (Borough)	500676	98·0	374	290	286	66·0	44·1	53·4	0·16	16
Manchester (City)	366835	81·8	263	208	*255	..	..	..	..	..
Salford (Borough)	117162	22·7	89	59	68	67·5	38·7	52·2	0·40	40
Sheffield (Borough)	232362	10·2	158	122	117	65·0	42·8	51·9	0·59	60
Bradford (Borough)	108019	16·4	79	55	62	..	..	..	..	..
Leeds (Borough)	236746	11·0	148	120	149	61·0	44·0	51·9	0·79	80
Hull (Borough)	108269	30·4	83	50	70	64·0	35·0	50·8	0·36	36
Newcstl-on-Tyne, do.	127701	23·9	78	68	67	58·0	43·0	49·1	0·41	41
Edinburgh (City)	177039	40·0	123	85	91	55·7	43·0	50·3	0·80	81
Glasgow (City)	449808	88·9	335	262	240	57·7	36·5	49·7	0·45	45
Dublin (City and some suburbs)	319985	32·8	178	157	140	65·2	44·7	55·4	0·36	36
Total of 14 large Towns	6391080	34·7	4332	3163	2981	69·3	35·0	52·3	0·45	45
					Week ending Sept. 12.	Week ending Sept. 12.				
Vienna (City)	560000 (1863)	..	..	..	222	..	..	65·3†	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·638 in. The barometrical reading decreased from 29·87 in. at the beginning of the week to 29·33 in. on Saturday, Sept. 19.

The general direction of the wind was N.E. and E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 64·0°.

APPOINTMENTS FOR THE WEEK.

September 26. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

28. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

29. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

30. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

October 1. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

2. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

OPENING OF THE LONDON MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

The Introductory Lecture was delivered by Mr. Thomas Smith. After a few introductory remarks and some words of greeting, the lecturer addressed himself to the new students as follows:—That you may study your profession aright, I would have you think of it nobly, and now, if ever, justly to appreciate its dignity. It may seem to you, as I dare say it did to me when I sat for the first time on those benches, that you have chosen, as a means of livelihood, a profession as good, and perhaps better than others. You look now, as I did then, at these things from a distance; but, believe me, a nearer view and a more intimate acquaintance with your life's work will make such of you as are in earnest regard it with very different feelings.

Is it nothing to us, gentlemen, that He whose name I scarcely dare mention here deigned, when in our nature, to be called one of our craft, and by his superhuman cure of disease chose chiefly to attest his divinity? Is it nothing that, notwithstanding the delusion of a few amiable women and, perhaps, some fools, the practice of our profession engenders and fosters within us true humanity, helpful sympathy, and Christian charity, as motives of action; and that though pity, as a mere emotion, ending in sighs and tears, withers away, yet the higher and brighter graces and gifts of our human nature are purified and strengthened by frequent exercise? I count it no drawback that our Profession exacts from us even laborious work, since the primeval curse pertains not to work like ours, and He who, as part of that curse, condemned man to get his bread by the sweat of his brow, has, in these latter days, mercifully remitted this part of our punishment. He has even brought it about that idleness is a curse, a sin, and a shame; while the necessity of earning our bread by the sweat of our brains is, to all but the most ignoble natures, an inestimable blessing—nay, even a keen and enduring pleasure. Nor do I count it any drawback that our Profession is little likely to bring us wealth or high social rank; it will at least secure to us and ours a competency, and will gain us high rank in the esteem and love of our patients.

After some further remarks in the same strain, the lecturer proceeded:—Gentlemen, why do I tell you all this, and thus, as it may seem, unduly magnify our office as Doctors? Not surely that we may think more highly of ourselves, but that you may the more earnestly devote yourselves to your work, seeing how worthy of your highest energies and of a life-long devotion is the Profession to which we have the happiness to belong.

Medicine, as a whole, as it comes to us in the present day, is not a science properly so called, though it presses into its service many sciences. It has none of the exact laws of a true science, nor are its doctrines capable of demonstration. Medicine is an art, the art of healing; and, though in the course of your work you will have to master some of the more exact studies, such as Anatomy, Chemistry, and Botany, it is none the less to be borne in mind that these are but handmaids to Medicine, and are subservient to the great object of your work, the aim and end of your Profession—namely, the art of healing. This art, though broadly based on science, in its direct application to its legitimate object, the cure of disease, is mainly founded on empiricism—that is, observation and experience. The true artfulness of our Profession lies in the skilful application to the treatment of disease of the various means supplied us both by science and empiricism. The art that you are about to learn in its practice will require chiefly the exercise of the higher intellectual gifts, but you will have to cultivate in no mean degree the more material faculties of sight, touch, hearing, and the muscular sense. And this is no small advantage, since all useful knowledge that you may have been at the pains to acquire, and even many accomplishments, may be turned to good account, while the muscular precision and the quickness of hand and eye acquired in school games and field sports will find their use in the practice of your Profession. Begin your work here with the thorough determination to do your duty as Christian gentlemen and earnest students; cherish an admiration for honest hard work, and you will soon learn to love it, and to appreciate its true dignity and helpfulness. Despise and hate idleness, for you will too soon see its accursed folly and helplessness. So will you best supplement and strengthen those principles with which your home teaching has supplied you, and to which you must turn as your chief safeguards and supports in the temptations that will assail you as young students.

The importance of a careful and considerate choice of friends was pressed upon new students; the advantage of combining practical with systematic work was insisted on; students were urged to question their teachers, and cautioned not to depend exclusively on their help. Attention was drawn to the disproportion between the increasing requirements of examining boards and the restricted period of studentship; and students were cautioned against making the passing of their examinations the only object of their work. Advanced students were advised to study the natural appearance and healthy action of such parts and organs of the body as admit of examination upon their friends, and upon them to learn the use of the laryngoscope, ophthalmoscope, and stethoscope. You will thus, said the lecturer, quicken your powers of observation, and you will the more easily notice deviations from the standard of health; you will have learned the very alphabet of the language in which the body makes known its wants and disorders, and in which you are hereafter to read the diseases of your patients—namely, the language of symptoms. Symptoms have been aptly termed the "body's mother tongue"—a tongue in which it often calls aloud in disease, and with no uncertain meaning to those familiar with the voice. This mother tongue you must study and learn to understand, not only its plain outspoken words, but you must be able to catch the meaning, it may be, of a few faint inarticulate whispers.

Mr. Smith insisted on the necessity and advantage of undergoing the discipline of clinical clerkships and dresserships. Young Surgeons were reminded that, though a diploma legally justified all in pursuing their calling, yet that it in no degree diminished the moral responsibility of its possessor, nor did it release any from a studentship which should be lifelong. The importance of promptitude in the practice of Medicine was dwelt upon, and all were urged to become either House-Physicians, House-Surgeons, or assistants in private practice, before undertaking the more serious responsibilities of their Profession.

Our chief duty as Medical men, said the lecturer, I conceive to be to do all in our power for the welfare of our patients, and this devotion to their interests must include all means of alleviating suffering that Medicine, morality, and manners afford. In your intercourse with the sick, it will be both for their comfort and your advantage that you should cultivate a natural, quiet, and kindly manner—that you should avoid the eccentricities of behaviour that are said to have characterised some of the masters of our art. Bring also to the bedside of your patients a cheerful countenance and "pleasant words which are sweet to the soul and health to the bones," and, if possible, that "merry heart which doeth good like a medicine;" and, as said by one who was both philosopher and Physician, ever let your manners or *mores* be but the expression of the habitual frame or *mos* of your minds.

The propriety of exercising a becoming reticence concerning the ailments of those entrusted to their care was urged upon young Surgeons. The disappointments of early Professional life were spoken of, and attention was drawn to the innate tendency to heterodoxy existing in some minds, and to the thirst for lying wonders that such minds exhibited. Mr. Smith then referred to Bacon's views on the fallacy of judging of the skill of Medical men entirely by the results of their treatment of the sick. The duties of Medical men to one another were briefly sketched.

In conclusion, the lecturer spoke as follows:—I said just now that our manners should ever be but the expression of the habitual frame of our minds; and the habit and temper of mind which should animate us in our ministrations to the sick I can in no way so well describe as by reverently paraphrasing the words which so expressively tell us of the Divine Physician's tender care and true sympathy for us in our soul's sicknesses—namely, we must be touched with a feeling of their infirmities. The refining and elevating influence of such true sympathy will keep us from ever making our noble office subservient to any ignoble end; and though it may interfere with our becoming rich, yet it will raise us into a higher and purer atmosphere, above the petty vexations and disappointments of Professional life. For what if by our work we become neither rich in worldly wealth nor great in the world's esteem? Surely a "good name is rather to be chosen than

great riches, and loving favour rather than silver and gold." And though we may achieve no social distinction, we may, by the Divine help, one day find, as many have found who are now gone to their rest, that the conscientious discharge of our duty in that Profession which brought us neither wealth nor rank has been to us none other than the house of God—aye, and the very gate of heaven.

CHARING-CROSS HOSPITAL.

The Introductory Lecture was delivered on Thursday, October 1, by Dr. Pollock. After a few words of welcome to old and new friends upon the occasion of their again assembling for the winter session, and some observations in favour of the custom of giving introductory lectures, Dr. Pollock observed that the study of Medicine was one of the greatest interest, involving as it does a knowledge of chemistry, physiology, botany, and other sciences. Doubtless there were dry matters of detail to be mastered, and many difficulties to be overcome; but even these became easy and pleasant as proficiency in them was attained. The bedside itself was a source of the greatest interest to the practical Physician or Surgeon, and there was an amount of pleasure and enjoyment to be got out of the practice of Medicine equal at least to that to be derived from any other profession. It was certainly a very arduous calling, one requiring much patience and self-denial, and success in which could only be attained by real honest work. As a profession, Medicine at present held out few prizes even to the most successful, and often the only reward for much anxious care and attention was the grateful thanks of the poor patient and his friends.

The lecturer urged upon the students to make the most of their early years of student life, by attending diligently to the lectures on the various subjects, and keeping up with them by reading in the text-books. At the same time, the student should look about him and make use of his own observation to confirm the views laid down by lecturers and books. Dr. Pollock alluded to the extreme views that had at different times been taken as to the treatment of disease, such as the excessive bleeding and inordinate use of mercury in former times—then the over-stimulating by brandy, which was so much in vogue a few years ago—and expressed an opinion that the best treatment lay between such extremes.

It was necessary in studying Medicine to give a fair share of attention to each subject, not letting any one course of lectures engross the time of the student too much, lest it should tend to the neglect of some less congenial but equally important matter. Regular habits of study should be acquired, and never broken into, and work should be made the chief and foremost pursuit of the day. When a difficulty arose its solution should, if possible, be sought at once, while it was fresh in the memory, or it might be forgotten, and turn up again at some inconvenient time. Dr. Pollock insisted upon the great value of accuracy to the Medical man, as it was better to know nothing on a subject than to be misinformed. The system of "cramming" was a very bad one, for it was quite insufficient to teach a profession in which the first Physicians and Surgeons were still students.

While attending to the mind, it was necessary not to neglect the body, especially to those who would be called upon by-and-by to take charge of the health of others. A certain amount of recreation and holiday was desirable, and in some cases absolutely necessary, for the well-being of the individual. Excessive mental application enfeebles the mind quite as much as excessive physical exertion weakens the body, and rest and relaxation are equally necessary for both. To be always at work was very likely to impair the quality of the work done—no small consideration—besides which it was against the laws of nature, whose code could rarely be infringed with impunity. No doubt this advice was very old and stale; so much so that everybody seemed to have forgotten it in this age of eager competition.

Dr. Pollock then alluded to improvements in the Hospital and School and changes in the Medical staff, which he hoped would materially assist in the prosperity of the institution. In looking at the Profession at large, it was gratifying to observe an increased appreciation of Medical work, especially in the shape of hygiene and sanitary reform. The treatment of disease was beginning to receive more attention than formerly, and the establishment of the Clinical Society was a great feature in the past year. Much attention had been called of late to the action of various drugs, and the labours of Dr. Anstie in the investigation of the action and uses of alcohol, and Dr. Harley's lectures at the College of Physicians on conium, hyoscyamus, and belladonna, as well as the experiments of many other eminent men, were of the highest value. The successful administration of morphia by subcutaneous injection led to a hope that other medicines might be given with advantage in the same way. The busy Medical Practitioner might not be able to devote himself to any special scientific investigation, but he might readily add something to what is known of the action and uses of different medicines, and to such a good work Dr. Pollock, in conclusion, commended his hearers.

GUY'S HOSPITAL.

The Introductory Lecture was delivered by Dr. Moxon. The lecturer, after alluding to the strong varieties of character which are brought out by necessary habits in the several branches of social usefulness, laid this down as the distinguishing character of a profession as contrasted with a trade, that every member of a profession directly uses general principles in the practice of his profession. A Medical man, especially, must be capable of exercising judgment when decisive and conclusive motives are not present. Hence he strongly urged on them the necessity of maintaining their minds free, and capable of independent action. For the licensing bodies now demand a vast extent of knowledge in candidates for diplomas; and much knowledge, cast hurriedly into the mind, will be too likely to smother young intellects, as too much fuel smothers scarcely kindled fires. Men are a preposterous race, doing things hind-side before; we first talk, and then we learn grammar; we first reason, and then learn logic; we learn much before we think what sort of a thing it is to learn. He would have them now be beforehand, and as they are to plunge into so many sciences consider what it is to learn. 1st. It is not storing into capacities, though many of our expressions imply that it is so, and some young men seek a reputation for unfilled capacity; which is very foolish, since the mind is never greater than what it holds. 2nd. It is not receiving seeds of knowledge, for the function of the receiving mind is active; it is receptive activity. The mind receives learning as a germ receives pollen, and there arises new living thought, varying in different minds, and improving and propagating itself. Every mind is like a little Darwinian world, in which different ideas struggle for existence, and those best adapted hold their ground. Reason in the mind must take the place man has in nature, and must aid in the struggle those that are most profitable. Such being the relation of the mind to learning, how does the kind of learning affect the process? How are we to study Medicine? The lecturer here entered on the question whether there are "sciences of Medicine and Surgery." He said true sciences are of three classes, and took as a type of the first mathematics, which is pure reasoning; of the second, chemistry, which is reasoning from the facts of the chemical elements; and of the third, zoology, which is mere classification. He compared the so-called "science of Medicine" with each of these types. It is not like mathematics or chemistry, because each of these is constructive; the first of the elements of thought, the second of the elements of nature; and we have no constructive knowledge of diseases; we do not know how their elements are composed. It aims to be like zoology, but is disqualified because we cannot define a disease, and our knowledge of them is not *comparable* knowledge; for when one disease is a pain in the leg, and another a growth in the stomach, and another a spider in the skin, they compare together, as the solar spectrum and the key of C major would compare with essence of peppermint. Some people erroneously call anatomy and physiology sciences, but they are no more than common narratives of fact. The practical result of these reflections is that Medicine should not be studied in books as sciences are studied. Learn diseases as facts in nature. Know them, not as the zoologist knows his genera and species, but as the hunter knows his leopards and wild boars. No writer or speaker can describe a disease. The best attempt is only like a landscape taken from a railway, or like a print of a glorious battle, where live struggle is chilled into dead shape. They must see individual cases for themselves, and so know the history of disease from its biography. But should they, then, discard science? Assuredly the very opposite. If there is no discipline in the facts, they must bring discipline in their

minds. Like a colonel of irregulars, the Physician must be a genius of discipline over his disorderly facts. This is the true theory of Medical education. We must have minds disciplined, yet free; and these opposite requirements must be supplied from opposite sources. Freedom you can only get from yourselves. The Medical Council will discipline you, cutting your garment of learning to their regulation model of a Doctor. They carry their discipline too far. They fill every hour of your day; yet what can they in their "curriculum" offer you in place of that self-help for which they leave you no time? Your course of study will be in stages. Layers of learning will have to be deposited on you, like geological formations or coats of paint; or, like a plaster image, you will be put together—the legs and body crumbling while they make the head. Meanwhile, take care of yourselves; see that you grasp firmly the principles of the knowledge you gain, though you cannot retain the details. Do not cram for your examinations. The examination is not your real trial; you only give bail there to appear before society, from which there is no appeal. This knowledge of principles through details can only come slowly, for your acquiring intellect is a point which traces in single lines that vast chart by which you must pilot your future patients. He urged them to learn to observe well—to study anatomy practically, for that affords the best practice in observation. Medical literature should only give them the meanings of names; their eyes must show them the nature of things. When Medical literature goes beyond what we can all see, it gets contrary and uncertain; there is only one way in which we can avoid being deceived by it, and that is by so observing for ourselves that we can keep a check upon the writer, and follow this rule—"Never trust a man for what he cannot know"—which would do away with -opathies and theories. Faith may lead us, but reason must guide us. The place of reason is above and behind faith, for our oracles are uninspired. As to Medical progress, there is no such thing as progress except for conveyance from place to place. All improvement is development. We must not leave what is behind, and we have no mark to press to. It is because Physicians press after great aims that we make so little advance in our development; for when the facts we see do not promise to fulfil the aims we have, we turn away from the facts and guess our way towards the aim, and call the guesses "theories" to make them respectable. Beware of Medical theories; they are images made out of a little dust of facts, into which some one breathes a little puff of himself—a breath of life that is not divine—and they fall to pieces again when they have served their maker's purpose, and are blown about the desert dust of Medical literature. Do not guess: a guess is the squeak of reason oppressed by doubt; it no more helps reason than cries lessen pain. Be patient under doubt, do not let it make you guess in haste. Remember the danger of generous minds, which is this—that in striving to know what cannot be known, they leave unknown what they might know. We live, not to an aim, but to a duty of observation and guidance. The aim at cure spoils our social reputation. Those minds that are shaken by sickness or by anxiety suppose that we cure them, and we allow the supposition. But when they come to themselves they change their view, and give Nature the credit, and despise us as pretenders, just as their day-enlightened forefathers drowned those very witches whom they shuddered at in the dusk. The public will not forsake you. It is not hope, but fear, that caters for the Doctor. Let us patiently discharge our noble duty of observers and guides, striving to be to each individual sufferer under our care all that a man can be to his fellow-man in sickness, and no more. We shall try to make you learned, a *vir doctissimus et ornatissimus et clarissimus*. Now remember, while you are getting all the fashionable learning, that the newest patent clarified candle may give no better light than a well-managed dip, and you live to do duty, not to be admired. Get firm possession of that sort of knowledge which your daily usefulness will keep bright by activity, and add to it all the accomplishments you can acquire. In your noble Profession no personal excellence is lost, but rather all will help you in your wide range of duty, which requires you to create faith and hope, and to find fresh interest for the weary of life, and not merely to know things of which other people are ignorant.

KING'S COLLEGE.

The Introductory Lecture was delivered by Professor Guy. He said: I should disappoint you and do violence to my own feelings if I did not advert for a moment to the circumstance which gives to this gathering of ours a character and an interest of its own. It is just three months since here, in this very theatre, we took an affectionate farewell of our late Principal, Dr. Jelf, who, for nearly a quarter of a century, had administered the affairs of this College with great advantage to us, with much honour to himself—kindly, courteously, efficiently; and we doubt not that the learned leisure which he has so well earned will be gilded by many pleasant retrospects of substantial services rendered to this College.

And now I am speaking in the presence of his successor; and I am sure that I utter the sentiments of all my colleagues when I tender to him a respectful and cordial welcome (not the less cordial that he received some part of his education within these walls), and, with that welcome, the assurance that we will do all in our power to aid and support him in the arduous duties which the wise choice of the Council (may I be permitted to say so?) has imposed upon him. And though I can have no authority to speak for our Medical pupils, much less for the students of other departments, this much, at least, I can say, that I very much misunderstand them, and misapprehend the sentiments proper to their time of life, if the noble words uttered by Dr. Barry in the great hall of this College, on the occasion to which I have referred, did not strike a responsive chord in all their hearts; and if, in exchange for his promise that he would seek to govern by kindly influences rather than by the bare exercise of the authority vested in him for our good, they did not then and there resolve by all their future conduct to justify to the full the confidence placed in them.

And now I pass from the easier to the more difficult part of the task which my colleagues have done me the honour to impose upon me. I am to select out of a great number of possible topics some one topic suitable to the occasion, and I must try so to handle it that those of my audience who are not Medical men may not find me tedious; that those senior members of the Profession to whom an introductory lecture is no novelty may not think what I say trite or common-place; and, above all, that those who commence or resume their Medical education to-day may carry away with them some thoughts—some principles of action—to which they may recur with advantage during their pupilage; perhaps, even after it.

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The life of a Medical man is a life of action. He is called to a patient, and must prescribe for him before he leaves him; he is summoned to an accident or wilful personal injury, he must act at once on the spot. He cannot consult authorities, he cannot procure aid or counsel from others. He must act there and then. He must carry all his knowledge and all his acquired skill about with him. It is only after his first visit, and in what we call chronic cases, that he can refer to written authorities, or summon experienced persons to his aid. And this, his knowledge and skill, have to be applied to no limited range of objects. Diseases, deformities, accidents, injuries, count by hundreds. A very complete nomenclature of the College of Physicians, compiled with care, but not yet published, has no less than 1136 names of diseases, injuries, and accidents! Again, the services which the Medical man renders to individuals may involve public consequences. Out of his attendance on injuries and accidents, on wounds and poisonings, may spring the responsible, and often difficult, duty of aiding and enlightening the public by giving evidence in courts of law, especially in the coroner's court, where, as his evidence is given soon after the event to which it refers, there is little time for preparation, reference to authorities, or consultation with others. . . . .

Medical education has been no sudden creation, but a growth slow and gradual—gradual in all its branches, no less than in the whole tree. There has been pruning of decayed limbs here, grafting of new and vigorous buds there, but continuous growth and development everywhere; and, as a final result, an interlacing and blending together of several independent growths into one goodly clump. . . . .

It will certainly be interesting, it may be useful, to justify these statements by examples.

I will begin with the examining and licensing bodies. Well, exactly three centuries and a half ago (in 1518), the College of Physicians was founded, the Barber Surgeons having been incorporated more than half a century (1461), and the Surgeons just six years (1512) before them. How learned and how liberal the founder and first elects of the College of Physicians were; how they brought their learning and theology from Oxford, their physic from Leyden, Padua,

and Bologna, and their wealth from church livings and preferments, or grants of abbey lands; how dearly they loved their profession; how tenacious they were of their rights over Barber Surgeons and Apothecaries, insisting on directing the operations of the one and conducting the examinations of the other; how, in the forty-first year of their existence, they graciously forgave Dr. John Geynes on his humble recantation, his heresy in impugning the infallibility of Galen—(strange lesson this in the matter of infallibilities)—how they received a Royal visit, and enrolled among their fellows a Marquis of Dorchester and the Dukes of Montagu and Richmond; in a word, with what dignity, gravity, authority, they comported themselves, may be found written in many a page of authentic history.

This, then, appears to have been our first examining body. I shall shortly have to speak of their relations with the Barber Surgeons, but at present shall content myself with showing that the three existing representatives of the Medical Profession, in a comparatively rude and undeveloped state, could be found consulting together and co-operating within a century of the foundation of the College. We see them assembled around the death-bed of Prince Henry, eldest son of James I., and we learn that "Physicians, chirurgeons, and apothecaryes" were dismayed and perplexed, and driven, as a last resource, to a local application in the shape of a "cock cloven by the backe and applied to the soles of his feet." I beg you not to forget that this happened no less than two centuries and a half ago—in the year 1612, just six years before the publication of the first London Pharmacopœia. But that you may not carry away with you too unfaovurable an opinion of the consultations of the Faculty and the resources of physic, let me remind you of another occasion on which—his Majesty King William III. being the patient, and the munificent Dr. Ratcliffe the Physician consulted—the Doctor was able to suggest a line of treatment which succeeded so well that, a few months afterwards, the king was able to fight, and win, the battle of the Boyne.

Between the two ancient corporations of Barber Surgeons and Surgeons it would seem that such intimate relations had grown up as to give some importance to an event recorded as happening in 1745; I mean the dissolution of their alliance. At or about this date (about a century ago), we have indications of great activity on the part of the Surgeons, thus happily emancipated, and we are not surprised to find that, in 1799, Parliament bought and consigned to their vigilant and skilful keeping the noble museum of John Hunter, or that the Crown granted them a charter in the year following.

If I add that the Society of Apothecaries, in 1815, obtained those legal powers of which they have made, like the College of Surgeons, such good use for the promotion of sound Medical education; and if I further remind you that a charter was granted to the University of London in 1837, and that at length, in the year 1858, the whole Profession obtained a central representative and controlling authority in the Medical Council, I shall have sufficiently shown by what a gradual process of change and development our examining and licensing bodies have come to be what they now are.

If you have found this sketch of the progressive development of our examining and licensing bodies interesting or instructive, I think that a similar quick survey of the rise and progress of instruction by lectures will prove acceptable.

I have already intimated that the first teachings by lecture or demonstrations were given by Physicians, and that their first subject was anatomy. It was in the year 1540 that Dr. Caius, the founder of Caius College, Cambridge, was deputed by the College of Physicians to give anatomical lectures in the Hall of the Barber Surgeons—a place chosen for this, among other reasons, that that corporation had had conferred upon them the right to claim every year the bodies of four executed criminals. A more formal appointment appears to have been made by the College in the year 1596, when Dr. Paddy was chosen reader of the Anatomy Lectures, and from this time forward to about the middle of the eighteenth century a succession of Physician-Anatomists, with such names as Harvey, Glisson, Mead, Willis, Lower, William Hunter, and Matthew Baillie among them, carried on an unbroken chain of anatomical teaching. Meanwhile some provision was made by means of endowed lectureships at the College of Physicians and Gresham College for teaching other branches of Medical knowledge. The Lumleian "Surgery Lecture," founded 1585, and the Gulstonian lectures, best described as pathological, 1632, and the lectures on Physic at Gresham College prior to 1615, show that these subjects were not neglected.

Coming down to more modern times, we find Dr. William Hunter succeeding Mr. Sharpe as Lecturer on Surgery to a class of naval Surgeons. This occurred in 1745, a date of special interest, as it was then that the alliance between Surgeons and Barber Surgeons was dissolved, and Dr. William Hunter established his celebrated anatomical school. But this venture of William Hunter's was by no means the first of its kind, for Dr. Hunter himself studied at the school of Dr. Frank Nicholls, who seems to have achieved a high reputation as a teacher of anatomy at Oxford about the year 1730, at which date he was admitted to the Fellowship of the College of Physicians. Of Dr. Nicholls's teaching we know this much—that he professed to teach anatomy, physiology, and the general principles of pathology and midwifery in thirty-nine lectures; and we are told that Mr. Bromfield, a distinguished Surgeon and Lecturer at St. George's, comprised anatomy and Surgery in course of thirty-six lectures, while Mr. Nourse, at St. Bartholomew's, embraced "*totam rem anatomicam*" in twenty-three.

From about the middle of the last century to the present date, the history of Medical teaching is one of constant and rapid development, taking place with accelerated speed from the first years of the present century, when College and Hall began to exercise their legislative powers, and to prescribe their respective curricula.

I have not time to trace the rise and progress of Medical teaching through the establishment of a series of private schools, founded by men conscious that they possessed special qualifications for teaching, competing successfully with the Hospital schools, and, for a time, with the two Colleges, but succumbing at length to a combination of adverse influences. They had done a good work, and had had their day; and now, in lieu of them and of the Hospital schools with which they so successfully competed, we have nine Hospital schools and two Colleges, with their Hospitals attached—eleven institutions in all, with means and appliances of teaching all things necessary to qualify the pupil for the general practice of his Profession.

If time had permitted, I should like to have said something of the growth and development of practical teaching in our Hospitals. With regard to the Hospitals themselves, it may interest some present to be told that the oldest Hospital in which any clinical teaching could have taken place (a Hospital for the sick was founded at Canterbury as early as the year 1070) did not come into existence till about thirty years after the foundation of the College of Physicians. I speak of St. Bartholomew's, founded in 1547. Six years later, St. Thomas's came into existence. The eighteenth century witnessed the establishment of five more (Guy's Hospital among the number), and the nineteenth of four, of which our own Hospital is one.

Of less essential, but still most necessary, means of practical teaching—the teaching of the dissecting-room and practical laboratory more especially—I should also have been glad, had time allowed, to have spoken. But I would call the attention of our students to the new and most convenient laboratory—convenient both in situation and arrangement—which the liberality of the Council has caused to be provided for us; and I am sure that we shall not appreciate this improvement the less, when we know that a similar boon has been conferred on the department of applied science.

And now, gentlemen, having presented the present state of Medical education to you, as the result of progressive developments extending through three centuries and a half, I will take it as it is, and will try to state in plain and simple language what we, the Professors, have undertaken to do on behalf of our students, and what we think we may reasonably claim from them in return.

The examining and licensing bodies say that certain courses shall be given, and certain means of practical teaching provided. We are able, through the liberality of the Council, to do their bidding; and I can safely assert that, at no time during my long connexion with the College, has the question been raised, how little we could contrive to do. It has always been how much, with our means and our command of time, could we dare to undertake. You will understand what I mean if you will bear in mind that in this, as in every other London School of Medicine, the teachers are non-resident, and do not and cannot undertake to devote all their time to the duties of their chairs. Each lecture, each attendance at the Hospital, fills its allotted place between engagements,

often of the most urgent kind—engagements, many of which are so uncertain in duration as to lead, even with the most punctual and precise of men, to some irregularities of attendance. But, if I am asked whether I would exchange this system, with all its obvious drawbacks, for one in which, teachers and students alike being shut in within the walls of a college, the one shall be as exclusively occupied in teaching as the other in learning, I answer, without hesitation, that I would not. For I believe that, under our present system, the teacher brings with him into the lecture-room from the world without a certain vigorous, lively, practical spirit, which makes itself felt in his teaching. But be the system good or bad, the student would do great injustice to the teacher if he did not bear the fact in mind; and he would do injustice to himself if he did not provide some useful occupation during the time that he may be compelled to wait. At the Hospital, accordingly, where such disappointments must occur, the student has a reading-room provided for him, and at the College, where they are less common, a library.

But, in this College, we have never rested satisfied with meeting the requirements of the examining and licensing bodies. The instruction which we give is theirs, but we are not without a will and a method of our own. We see that the student, especially when he first comes to us, wants guidance and help in his studies; we provide a resident tutor (and let me say, in passing, that we are very proud of the men who have held that post, as well as of the men who have filled the analogous office of Demonstrators of Anatomy), and that we can, with the utmost confidence, recommend our present tutor, Mr. Yeo, as one to whom the student may have recourse in all his early difficulties and perplexities. Again, the examining and licensing bodies require from the student certificates of attendance at the several courses prescribed by them. We have our own method of ascertaining the fact of attendance, and our own rules respecting the signing of the schedules; and, with the assistance of the Dean of our department, we are able to do our duty of certifying or not certifying according to the truth. But I need not say that we are ready and willing to make allowance for the conflicting engagements which must constantly occur in carrying out a scheme of education so complex, and in certain points, as I think, erring on the side of excess of requirement. We, then, on our part, feel that we are under an obligation to sign certificates and schedules only in accordance with the truth; and we expect that the student, on his part, shall so attend his lectures, that he shall have no need to ask of us an unworthy concession, nor we have the pain of a refusal. There is yet another matter in which the College takes a line of its own, and does not rest content with carrying out the requirements of the examining and licensing bodies. We all know that there are two distinct plans or methods of education, advocated with equal warmth and sincerity by their respective supporters. On the one hand, it is said that secular instruction may be given in the same class-rooms to persons of every creed, provision for religious teaching being made by those parents, guardians, or others who have already provided the secular teaching; on the other, it is contended that the two kinds of teaching, secular and religious, should be carried on together by the same persons making themselves responsible for both. This last, I need not tell you, is the alternative embraced by this College. Its matriculated students make profession of the same faith, are members of the same church, and find here, under the same roof, that union of secular teaching with religious instruction and observance which obtain in every well-regulated household, in every school, and in all the colleges of our old universities.

It is not necessary to condemn the opposite system in order that we may exalt our own; but it is fair to say that the one which this College has chosen has an air of unity and completeness, and gives a promise of harmonious co-operation difficult to overvalue. To my own mind, it goes nearer to realise the idea of education, as distinguished from instruction, than any other system can do.

I have just hinted my belief that the scheme of education for which the examining bodies require us to make provision errs on the side of excess of requirement. Let me add that I think it admits of some obvious improvements. As the subject of Medical education is now attracting a great deal of attention, and as the office of Dean of the Medical Department which I had the honour to hold for a term of years gave me some experience, and led me to form some definite opinions on the subject, I will take this opportunity of stating what those opinions were and are.

In the first place, I was alive then, and am still more alive now, to the objections that exist to the demand made on the student that he attend more than one course of the same lectures on the same subject. I would give one opportunity, and one only, for attendance on the same course, and I would make no exception, however important, or however hard to learn, the subject may seem to be. In the next place, I think that there is a grave objection to the immediate attendance on the practice of the Hospital, now demanded of the student. In the third place, I think that, if possible, the attendance of Surgeons and Physicians at the Hospital should be so arranged that the students who ought to be following the Physicians round the wards, shall not be drawn away by the naturally superior attractions of Surgical cases. But lastly, and above all, I attach importance to a plan which, in former years, I had many opportunities of recommending—that of beginning the education of the Medical student in the summer instead of the winter. This change might be made to harmonise admirably with the plans of those who insist that some subjects comprised in the present Medical curriculum (such as botany) should be taught to the student before he begins his Medical education properly so called. If, in the three months of a preparatory summer course, botany, zoology, physics, and chemistry (such part of inorganic chemistry as might be selected for the purpose), and with them that part of anatomy known as osteology, were taught, the student might enter at once, at the beginning of the following winter session, on the practical work of the dissecting-room, and the six winter months of anatomical and chemical teaching, added to the three months of the previous summer, would supply nine months of instruction in those two important subjects. A preparatory summer session, with three subsequent complete years of study, and the abandonment of all duplicate courses, would give ample time for the deliberate study, by lectures, of all the subjects (public health, and perhaps Medical psychology, included) which it would be reasonable to require of the whole body of Medical students.

I must not pursue this subject further, for if I did I should leave my programme incomplete. I have yet to say something of education as a comprehensive subject, embracing Medical education as one of its subdivisions. I thought that some light might be thrown on the general subject by this special form of it; and it was for this reason that I entered into certain details of the rise and progress of our educational system.

Much is being said just now about technical education; and there is a strong feeling abroad in favour of training all men alike in the principles of the art which they are about to practise. The designer, it is thought, should not take his lessons from one who may himself have contracted habits at war with every suggestion of good taste; but he ought to be carefully instructed in the principles which should preside over and direct every work of design, as well as in the most approved methods of procedure in the special art or manufacture to which he intends to devote himself. And in order that the art-designer may be so educated and trained, there must be museums of raw material, of manufactured articles, of successful and unsuccessful works of ornament. Taking this as a specimen of technical teaching, we say that our Profession affords the oldest and most perfect example of such teaching. Or, if we turn to the art and business of the pharmaceutist—one entailing duties and responsibilities similar to our own—we can point to our old and approved educational system and methods of procedure generally, as worthy of the attentive study of those who are to constitute the examining body under the new Act. To those professions which have established voluntary examinations (I speak of the professions of the architect and actuary), and those which (like the civil engineers) have not yet instituted any examinations at all, we think that we hold out an example worthy of imitation. We have long since recognised, and acted upon, the principle that the public must be protected against ignorance and unskilfulness on the part of those who practise a profession, or follow an occupation, involving serious risk to life, by a good technical education and a searching examination. But we go further than this, and pronounce in favour of a large and liberal education. When we prescribe a course of botany, we do not allege that the Practitioner of Medicine will have constant or even frequent occasions of making practical application of his knowledge of plants at the bed-

side; but we look upon botany as a key which unlocks other knowledge, and as an admirable training for the faculties so important to the Physician, of observation, methodical arrangement, and lucid description; and just as we demand of the student, before he begins the study of Medicine at all, proofs that he has had the liberal education of an English gentleman, though little of what he has learnt admit of any direct practical application, so we require of him, before he enters on the practice of his Profession, a knowledge of science much exceeding that for which he can ever find a use. But then we want him to be a man of science, that he may receive the respect of persons of every rank of society. But we have a better reason even than this—we honour science for its indirect as well as its direct applications. We do not forget that it was Edward Jenner, a man remarkable for his knowledge of natural history and his love of it, who gave to us the great discovery, and to the world the inestimable boon of vaccination, and with it the grandest example the world has seen of that principle and policy of prevention for which the future has, I trust, great triumphs yet in store.

And now that I am near the end of this lecture, and look back to what I have said to you, I ask myself whether I have not been guilty of some abuse of terms in speaking of Education, when I should have used the word Instruction. If so, let me correct myself. There are two things which, as they are more or less associated in schools and colleges, are apt to be confounded the one with the other. The process by which masters and professors teach, and schoolboys and students learn, is properly called Instruction; and this, partly by means of what may be called the incidents of it, and partly by the wholesome rules and regulations of the schools and colleges in which it is carried on, becomes *Education*. In the village school the child is *instructed* in reading, writing, and arithmetic, and the elements of our Christian faith: it is being *educated* by rules which prescribe cleanliness and tidy apparel, punctual attendance, the respectful recognition of teachers and superiors in age and position, just and kindly dealings with school-fellows, and the exhortations, reproofs, and punishments of the teacher. To these the very act of learning, through continuous, silent, painstaking application, contributes the important element of the childish self-denial implied in working when the occupation natural to the child's age is play. So is it with all good schools, and so with every institution where young men are trained for any profession or serious occupation in life. The class-room is a place of direct instruction in the thing taught; a place of training for the faculty or faculties exercised in the learning of it; a place of education in the degree in which any other mode of passing the time is preferred to it. It is this wholesome function of the class-room which is overlooked by those who think that young men should attend those lectures only that the teacher can contrive to make attractive. If this were so, Science would have to put off her sober garb, and exchange her severe graces for the meretricious adornments of the theatre; and, in lieu of many small and manageable classes, we should have a few crowded audiences very hard to please, and somewhat difficult to keep in any kind of order.

There is another word, or group of words, which I have often used in this lecture, and possibly so as to lead to misconception. I mean the word "science," and its derivative "scientific." I wish it to be understood that I mean by science what it originally meant—knowledge; and by a science, a distinct and well-defined branch of real knowledge; by scientific teaching, the imparting of knowledge; by a scientific man, a man enlightened and well-informed in the subjects he professes to understand. But, as you are aware, there are some who pitch the meaning of the word "science" so high, that they will not allow Medicine to be called a science. It is not exact enough, not accurate enough, not sufficiently amenable to the discipline of figures. It lacks the gift of prophecy which astronomy has, the magic powers that belong to electricity and chemistry. But if it must consent to occupy a lower rank than these, it has very honourable associates in agriculture, meteorology, and social and economic science; in all of which events are brought about by many concurrent causes of very variable intensity; in all of which, when applied to individual instances, we often deserve, where we cannot command, success.

Be the proper place of Medicine among the sciences, however, what it may, its right to the foremost place among the arts is not to be questioned. The art of healing, practised in the light of all the sciences which enter into the Medical curriculum, is one of which its votaries need not be ashamed. To you who come here to study it, we (my colleagues and myself) wish all honour, happiness, and success.

THE LONDON HOSPITAL.

The Introductory Lecture was delivered by Mr. Critchett, who commenced by alluding to some of the changes time had wrought since he was a Medical student. Of those who then held the foremost rank, how many had passed away! But though the Blizards and the Headingtons were gone, the spirit that animated them still survived in the present Professors, and the germs of thought they sowed had fructified. If they could revisit us, they would find our Hospital adorned with expanded wings, our school changed into a college, and with an increasing body of intelligent Medical students. Though men of all grades of the Profession had honoured him with their presence, it was to the young Medical student that he wished chiefly to address himself on this occasion. He must first explain to him the nature of his studies, and secondly attempt to unfold to him the character of the Profession to which he aspired to belong. The end that the Medical student had to attain was the knowledge of disease; to this there was only one road. The accuracy with which every possible departure from the normal standard was estimated would be in exact proportion to the knowledge of the form, structure, and functions of each organ. He (the lecturer) would go yet a step further. An accurate acquaintance with the form, structure, and functions of any organ would often enable the student to presuppose the diseases to which it was obnoxious by presupposing every possible deviation from the normal condition, and that which was presupposed or hypothesised would in most instances be found to anticipate that which actually occurred as a morbid phenomenon. This principle he deemed well worthy of special attention, because it very much facilitated the comprehension and simplified the grasping and arrangement of disease, and because it had been the means of leading up to many brilliant discoveries, and opened up a new method of inquiry. The lecturer then gave some curious illustrations of this view taken from affections of the eye; he then went on to say that all really scientific treatment must be based upon accurate diagnosis; the most successful Practitioner owed his pre-eminence rather to the correctness of his aim and to his exact adaptation of the means to the end than to the possession of any knowledge of remedies unknown to others. Having then touched upon the nature of the studies which the student would be required to master, the lecturer next proceeded to dilate upon the various elements of which the Medical Profession was composed. He first alluded to the general Practitioner, referring to his valuable and untiring labours, especially amongst the poor—labours which were often so ill requited. He next described the characteristics of the Hospital Surgeon and Physician, whose special function was to make these great institutions subserve the double purpose of ministering to the suffering poor and advancing the cause of Medical science and education. The tendency to the subdivision of labour was increasing in this as well as in every other profession, and was an inevitable result of the progress of science, so that the "specialist," as he was usually termed, now formed an important element in the Professional body. The sanitary officer might be regarded as a comparatively modern branch of the Profession, whose main function it was to prevent the spread of disease, and the tendency of whose labours was ultimately to promote the Medical Profession from its present function of combating disease to the higher duty of presiding over and guarding the public health. The lecturer then concluded this portion of his address by an allusion to the Medical press, that wide-spread power that makes the thoughts of the few the property of the many and watches over the interests of the Profession, often making its influence felt in the councils of the nation. One of its most signal triumphs had been the success of its recent noble efforts to alleviate the condition of our paupers—efforts which deserved the gratitude not only of the Profession, but of the country at large. In conclusion, the lecturer quoted from an address which he had delivered on a similar occasion twenty years ago a passage in which the progress of the Profession was shadowed forth. The anticipations then expressed, he thought, had been abundantly realised; but though much had been done, much yet remained to do. He hoped that the next twenty years would show even

greater and more brilliant progress, and that the students whom he was addressing would by their zeal and industry in the noble Profession in which they were enlisted largely contribute to that progress.

ST. MARY'S HOSPITAL.

The Introductory Lecture was delivered by Mr. James Lane. The lecturer commenced by offering a cordial welcome to new and old students, as well as to those visitors and friends who had honoured the occasion by their presence.

After alluding to the present position and satisfactory prospects of the School, he remarked that it was five and twenty years, just a quarter of a century, since his first induction into the Medical Profession; and as twenty out of those five and twenty years had been employed to a considerable extent in teaching, he thought he could not do better in addressing them than state the convictions which his experience had led him to form with respect to some of the requirements of Medical education, and what appeared to him to be the principal directions in which we should aim at improvement, if we wished to increase the public usefulness of our Profession, and, as a necessary consequence of such increased usefulness, to obtain for it increased social influence and consideration. Looking back upon things as they were five and twenty years ago, many and great changes have been effected, for which students, as well as the Profession at large, had great reason for congratulation. Foremost among these changes, he referred especially to the efforts which had been made to insure a more complete preliminary education. The regulations now compelled the student to show by examination, before he could register at a Medical School, that he had received a certain amount of preliminary mental training. He had to show that he knew something of English language, English grammar, history, and so forth; also that he had a certain acquaintance with Latin, although this did not appear to be necessarily of a very extended character, to judge from the published requirements of some of the examining corporations. He was sorry to say that as yet a student need not, unless he chose, know anything whatever of Greek, nor of any modern language, if he could substitute for this latter an elementary acquaintance with chemistry, botany, or algebra. The preliminary test as it stood at present was, he thought, very far from being all that could be desired; but it was, nevertheless, a great thing to have established the principle that all young men entering the Profession should have received at least the elements of such a liberal education as could alone fit them to enter upon so arduous, complex, and increasingly difficult a study as that of Medicine.

As an excuse for dwelling upon subjects which were not, perhaps, strictly of a Professional character, he quoted the report of the Committee on Preliminary Education recently adopted by the General Medical Council, which says: "It is quite apparent that the defects which require to be remedied in the education of students of Medicine are to be found less in the subjects of Professional study than in provision for that preliminary mental culture which would enable the student to grasp with vigour the various intricate and complicated sciences on which Medicine is founded or with which it claims affinity."

Unfortunately, this encouraging preamble is followed by the inconsistent conclusion that it will not be possible in 1869 to insist upon a knowledge of Greek as a preliminary subject, although this date had been fixed upon three years ago for its introduction. It appeared also, he was sorry to see, that one of the leading examining bodies considered "two years' notice insufficient for the introduction of some very small additions in geometry and algebra proposed by the Council," the Council being either unable or unwilling to enforce its recommendations.

He confessed to a feeling of great disappointment that this conclusion should have been arrived at, for he could not conceive it either necessary or desirable, from any point of view, that a young man entering the Medical Profession should be less cultivated in those branches of knowledge which make up the ordinary education of a gentleman, or should start from a lower intellectual stand-point, than, let us say, the clergyman or the barrister, especially when it was considered how vastly wider was the range of study of which he was expected to make himself master.

He could not see any valid reason why the Medical Council should not insist upon an adequate knowledge of both Latin and Greek, as well as of one modern language, at least, in addition to our own—why they should not demand a fair proportion of mathematics (*i.e.*, besides the rules of arithmetic, algebra and geometry up to a certain point), together with the elements of natural science, at least in the branches of chemistry and natural philosophy. If the Council, actuated by the best intentions, as he believed them to be, were unable to enforce their wishes in such matters as this upon reluctant but influential corporations, it was for public opinion in the Profession to strengthen their hands, and he trusted that the efforts now being made to obtain a more direct representation of the Profession in their Medical Parliament would before long enable them to express that opinion in a more effectual manner on this and other important subjects.

The establishment of a more severe preliminary test might perhaps be objected to, on the ground that it would exclude many who had been intended by their friends for the Medical Profession. But, he asked, why should they not be excluded, and to whose interest was it that incompetent and illiterate persons should be admitted into its ranks? With respect to intending candidates themselves, it was far better that they should be kept out of a calling for which they were manifestly unfit, and that their energies should be diverted into other and more suitable channels. With respect to the Profession, it was scarcely likely that it would suffer from the want of them, if there was any truth in the complaint that it was overstocked, and was suffering from excessive and ruinous competition; that public bodies, such as boards of guardians, could obtain the services of competent Practitioners on terms barely equivalent to the value of the medicines supplied, for the simple reason that if A. was dissatisfied with the position, his neighbour B. would always be found ready to take his place; and this state of things was hardly one which it was desirable to perpetuate. With respect to the public, of all the parties to the bargain the public had by far the strongest interest that the qualifications of those having charge of its health should be raised to the highest practicable level, and in having adequate guarantees that this was the case.

He thought there must be something wrong somewhere that the Medical Profession, eminently attractive as it ought certainly to be from a scientific and intellectual point of view, eminently honourable and beneficent as it undoubtedly was in its every aim and object, should be less popular than other professions with the more highly educated of our youth; and he believed one important reason why it was less tempting to the ambition of a class which, above all others, it was most desirable to secure, might be found in the lower educational standard which had hitherto been thought sufficient.

He had dwelt at some length on these matters, because he had a strong conviction that advance in the direction indicated afforded the surest and readiest way to improve the social status of the Profession, to increase its public and private influence and usefulness, and to render its voice more powerful for good in all those sanitary and social reforms upon which the wellbeing of the community is becoming continually more dependent.

He then addressed himself more particularly to intending students, advising them how best to employ their time, and insisting especially on the importance of attention to the study of practical anatomy by dissection. He thought this was usually now the student's weak point, whereas formerly it used to be one of his strongest; and he attributed this to the more limited time allotted to it in the present curriculum—viz., two winter sessions, instead of three as formerly—and also that he was examined in it at the end of his second winter, after which he might, for any regulation to the contrary, dismiss it from his mind altogether. With this one exception, he thought incalculable advantages had been gained by the system of double examinations, and by the more practical character which the examinations had acquired. The system of clinical study adopted at St. Mary's Hospital, and which had been found to work so advantageously, was explained, and students were told that there were two things to which it behoved them specially to attend—one was the study of anatomy by dissection, the other the study of disease in the Hospital wards. They should endeavour to neglect nothing, if they could avoid it, but, above all, they should not neglect either of these.

He trusted new comers would not be alarmed at the amount of work which had been described as expected from them. But if there was plenty of work to be done, they would find

their comrades had not been remiss in devising facilities for amusement, for they would find a boat club, a cricket club, and a football club ready to their hands if their tastes lay that way, not to mention the United Hospitals Athletic Club recently established. With all these things he confessed to having a cordial sympathy, but he was not quite sure whether they were not being a little overdone, and, as a friendly critic, he would venture to offer a word of warning against this tendency. "If," he said, "you would keep that ideal of perfection before you, the *mens sana in corpore sano*, you will best approach it by a judicious combination of work and play. Such a combination is, I know, somewhat difficult for young gentlemen of eighteen or twenty. I found it so myself. It requires some resolution and self-denial. But do not let it be, as it too often is, all work at one time and all play at another. Such a practice does not promote either the sound mind or the sound body. It makes the work wearisome while you are about it, and the play is deprived of more than half its pleasure if you cannot feel that you have acquired a right to it as the reward of work well done. My advice to you with respect to work is, above all things, to cultivate regular habits. Do not work spasmodically, or try to do too much at once. Resolve to do something every day, and do not allow anything to make you break that resolution. Even if it be but little, it is surprising how much it will amount to at the end of the year. I do not advise you to attempt too much at first. Do not, if I may so express myself, make the pace too good to last. The course you have before you is a long one; it will take you over what I may venture to call a very heavy and difficult country—one of which you have as yet no experience. It is not those who start the fastest, but those who can 'stay' the longest, who will be found in front at the end.

"I have heard eloquent sermons preached on occasions like the present, the text of which has been that, if you would only work hard enough, worldly success and worldly honours would be sure to attend your efforts. I do not hold out to you any such certain hope, though I do believe that success without hard work is becoming day by day more difficult. But, unfortunately, in every calling one has not far to seek for examples in which time-serving and trickery, quackery and charlatanism are lavishly rewarded, while honest labour and genuine merit pass comparatively unnoticed. The Profession of Medicine forms no happy exception in this respect to other human institutions; and human nature has not yet reached, nor do I suppose it ever will reach, that stage of development in which virtue shall always meet with its due reward and vice its appropriate punishment. 'It is not in mortals,' Medical or otherwise, 'to command success,' but it does rest with yourselves whether or not you shall 'deserve it.' It is for you to do your duty in the state of life to which you are called—to walk straightforward in the path of rectitude and honour, swerving neither to the right nor to the left, whatever the temptation may be. Do this, and take the consequences as they come, be they what they may. Live your lives in this spirit, and then, should misfortune unhappily be the lot of any of you, you will be the better able to meet it as brave men should.

"I wish you most cordially every happiness and every success to which you aspire—that you may not only deserve it, but that you may also attain it. Nevertheless, I say to each of you, however that may be, and whether successful or not—'Fais ton devoir, advienne que pourra.' And when your race in this world is run, and the time approaches when you must 'go out into the dark,' this will be a better consolation to you than any amount of wealth or worldly honour otherwise attained."

THE MIDDLESEX HOSPITAL.

The Introductory Address was delivered by Dr. Burdon Sanderson, who commenced by setting forth in general terms the nature and objects of Medical training. It is the chief end of such training, he said, not that a man should be fitted to do credit to himself, or even to his Profession, but that he should learn how to do good to his patients—to save their lives or ease their sufferings. But, in addition to this preparation for practical work, the student must also prepare for examinations. The relative importance he will assign to these two preparations will depend on his estimate of his own future responsibilities. When a man regards his Profession as a trade, it is the fear of being rejected by the examiners which alone restrains him from absolute idleness, and the hope that he may succeed in persuading them to sanction his ignorant drugging of his fellow-men is the highest motive of his exertions. But I take it for granted that this is not the spirit in which you have entered upon the occupation of your life, and that you have already made up your minds to work at your studies, not for the purpose of slipping through at Lincoln's-inn-fields or Blackfriars, but in order that in due time you may enter on your duties with the well-founded self-confidence of the man who is thoroughly prepared for his work, and who feels, each time he leaves the bedside of a patient—"I have done, not *my* best (for that might be a very poor best indeed), but *the* best. I have done all that Medical experience teaches was expedient in the case, and have to regret no omission." I need no argument to show that this is the only way in which our daily work can be a pleasure. On occasions like the present, one is tempted to launch out into platitudes about the divine art of healing and the supreme happiness of doing good. There is truly much satisfaction in thinking that our future business will be to go about doing good; but as human nature is constituted, it is only a few who are capable of experiencing it. Medicine is indeed a Godlike occupation, but how few there are who, even while pursuing a divine art, are animated by divine motives! The pleasure to which I refer is less elevated, but more easy of attainment. It is one which every earnest, upright man may constantly enjoy. It is the inexhaustible pleasure which the man who is determined to make the best use of the powers God has given him finds in the very efforts which are necessary in order to carry that determination into effect. Make up your mind, then, that whatever other sources of enjoyment you may find in life, fruitful work is always a pleasure; but do not forget that, in order to work fruitfully hereafter, you must work laboriously now in possessing yourselves of all the knowledge and skill which your own abilities and the short time assigned you for preparation will admit of. If you do this, the work of seeing patients will be a pleasure, not a weariness. If you would go through the routine of practice with satisfaction, the first thing is to possess yourselves of the requisite knowledge and skill; the second, that you should acquire the habit of concentrating all the energies of your mind on the case of each patient you have to treat, never allowing any other subject to intrude itself on your thoughts when at the bedside until you have made up your mind what is to be done for his relief. It is the glory of our Profession that it contains a large proportion of men who habitually act on this principle, men who do not *say* that they value their patients' lives more than their own, but who *act* as if they did. We are all personally acquainted with such men; let us follow their example, and try to be animated with the same spirit. To this end, let us while we are students make every effort to qualify ourselves for our work, never forgetting that no amount of painstaking afterwards will make up for neglected opportunities now. You may depend upon it that life is much more easily destroyed by the omissions or blunders of the ignorant than saved by the most judicious efforts of the most skilful Practitioner.

In the second part of his address, the lecturer described more in detail the nature of the studies comprised in the Medical curriculum. Having stated that, although Medical education consisted not merely in the attainment of the requisite knowledge, but also in the acquirement of skill in the Medical arts, he would on the present occasion confine himself to the first of these two divisions. He proceeded to explain that Medical knowledge is of two kinds—one kind called Medical experience, the other Medical science. Medical experience, he remarked, is a subject of immense extent, so vast, indeed, that to explore it perfectly is far more than the work of a lifetime. Yet, however extensive, it must be more or less mastered by every man who aims at thorough fitness for his Profession, for in the business of Medical practice, particularly in the selection of remedies, we are guided, not by our knowledge of the causes of disease, but by our experience of cases. Thus we choose those remedies which have been found, in the general experience of the most judicious Practitioners, to be the most useful, without for the moment occupying ourselves either as to the theory of their action or the essential nature of the disease they are intended to remedy. It is this, indeed, which constitutes the difference between ourselves and the homœopathists. Not at all that we deny or disbelieve their principle, or maintain the contrary one, but that we refuse to adopt into our repertory any remedy in the utility of which we have no empirical ground for believing.

Medical science, on the other hand—or, as it is properly called, pathology—differs from experience both in its aims and methods. Its aim is to discover the nature and efficient causes of diseases, for which purpose it derives its facts from a great variety of sources, partly from the science of vital physics or physiology, partly from observations at the bedside or in the post-mortem theatre. It owes its title to be regarded as a science, not to its consisting of knowledge about disease—for if this were the case it would comprehend clinical experience—but exclusively to its method of investigation, to its proceeding on the evidently rational assumption that disease can only be understood by comparison with health. In other words, pathology is a science only in so far as it is comprehended by physiology.

As yet it has accomplished very little for practice. The history of Medicine shows that, although innumerable attempts have been made to apply scientific truths to the cure of disease, almost all of them have resulted in failure. For this there are several reasons. It is, no doubt, partly due to the fact that those who have theorised about treatment have had recourse to science rather to justify some preconceived notion than for the purpose of honestly seeking her aid. To this misapplication the horror which practical Physicians so frequently express of the intrusion of science into the province of experience may be fairly attributed. But this is not the only reason of failure. The real reason lies in the insufficient development of pathology itself. It is only a few diseases which we as yet understand in a physiological point of view—few remedies whose mode of action is as yet known. Manifestly the practical use of our scientific knowledge is restricted within corresponding limits, to overstep which is alike unreasonable and mischievous. Notwithstanding all this, I do not hesitate to avow the conviction that from the past the future is not to be judged. Experience must some time divide the sway with science. When I consider the rapid progress which vital chemistry and physics have made during the last three or four years, the importance of the discoveries which have been recorded, and the directness of their bearing on pathology, I can scarcely doubt that now at last a new era is approaching, and that although we, your teachers, may not live long enough to see it, you who are just entering on your career will both witness and participate in great changes in Medical practice.

The lecturer then proceeded to enumerate the directions in which the recent progress in physiological investigation is likely to advance our knowledge of the causes of disease, and so ultimately to bear upon practice. He adverted first to recent discoveries relating to the doctrine of animal heat, and particularly as to the mode by which it is maintained and regulated, pointing out their relation to those morbid states in which the temperature of the body is unnaturally elevated or depressed. He next referred to recent inquiries as to the chemical and physical changes which take place in muscle during the act of contraction; as to the relation between different kinds of muscular acts; as to the character of the rhythmical muscular movements, particularly those of the heart. With reference to all these questions, he showed that nearly the whole of our knowledge had been acquired or rendered exact during the last ten years, and that the immense accession of knowledge which had been gained in these fields of research was due to the more extended application of those exact methods which are in constant use in the sciences of chemistry and physics, and more particularly to the employment of self-recording instruments of observation, founded on the principle that it is better that results should be recorded mechanically than that everything should be trusted to the quicksightedness and impartiality of the observer. As a last example, he referred to the purely pathological researches which have lately been made as to the mode of origin of several most fatal diseases by what has been designated the synthetical method—the method of investigating the origin and nature of those human diseases which can be reproduced in animals by experiment. This method, applicable only to those diseases which spring from material substances or morbid poisons, has already yielded great results, and will in future yield greater, particularly by the extension of the field of inquiry through the discovery of new morbific agents.

In conclusion, Dr. Sanderson begged that none of his hearers would suppose, from his having devoted the chief part of his address to the scientific method of studying disease, that he underrated the value of experience. Assuredly, he said, more honour is due to the empirical method than to the scientific; for up to the present time practical Medicine has been advanced by men who have devoted their lives and energies, not to studies in the laboratory, but to studies at the bedside and in the post-mortem theatre. The end I have had in view has been to show that future progress is to be looked for in another direction—viz., in the independent development of pathology; not as a branch of Medicine, but as a section of physics and chemistry, and in the diligent and skilful application to its questions of the same methods as are in use in those sciences. But let it be clearly borne in mind that pathology will never supersede the absolute necessity of experience. In the future, as in the past, the greatest Physicians, Surgeons, and Obstetricians of their time will be found among those who do what Bacon says the Doctors of his day so much neglected—who emulate "the serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death."

ST. THOMAS'S HOSPITAL.

The Introductory Lecture was delivered by Dr. Barnes. He said:—The 1st of October opens the session of that great branch of educational work which is more especially studied in London. Classics and mathematics seek repose, if not solitude. The abstract sisters may best be courted in the cloisters and groves of Oxford and Cambridge; but Medicine can only be studied with profit in the great centres of population. London is, and must ever be, the great school of Medicine. Where men congregate and jostle in the pursuit of commerce, of art, and of all the manifold objects that demand physical labour and mental strife, there will abound the bodily accidents, the diseases that flesh is heir to, that appeal to science and charity for relief, and offer to science the richest materials for study. London, then, may be said to stand in the same position as the seats of the older Universities in relation to one great branch of human knowledge; and although, in the din and tumult of the mighty metropolis, it may be hard to distinguish the voice of any particular profession, it may not be unprofitable to turn our thoughts for a moment to the position which we hold in the great community, and the influence which the great Medical schools exercise upon social life and education. In the great inquiry and revolution in education now going forward, two leading points are conspicuous. The one is the growing desire to cultivate to a greater extent the study of the natural sciences—which may be called, perhaps, the sciences of observation—in preference to the study of pure literature and mathematics. The other point is concerned, not with the subjects of study, but rather with the method of study and with the manner of applying its results in the most practical manner to the public service. The great engine chosen for this purpose is competition. Now Medicine may fairly claim to have had a large share, if not even to have led the way, in initiating and promoting both these two revolutions. All that great branch of natural science which is included under the term Biology, which takes cognisance of everything that lives, has long been almost exclusively the domain of the student of Medicine. The foundations of natural history were, indeed, laid broadly and firmly by Aristotle; but it may also be said of that gigantic intellect that he grasped and expounded all the knowledge of his time. The Hippocratic maxim, "Art is long and life short," was less true in Aristotle's time than it is now, when one branch or twig of the tree of knowledge is enough to occupy the whole energies of a man. In the earlier ages, when human dissection was forbidden by religion, by custom, or by prejudice, Practitioners of Medicine were continually seeking to solve the problem of life and the processes of health and disease by dissecting the lower animals. Thus Medicine stimulated and fostered the study of the animal kingdom. And again, as Medicine called for remedies, the mineral and vegetable kingdoms were explored to this end; and down from this time, through the dark ages, as monks kept alive, but scarcely extended, the classical and mathematical lore of the ancients, so the Practitioners of Medicine, who were often, indeed, monks too, kept alive and extended the knowledge of natural science. In modern times natural science, by virtue of its great developmental force, has acquired a higher position, and has become the companion as well as the handmaid of Medicine; but still so intimate in their interdependence that they seem incapable of independent existence. It may be true that we now and then see an independent votary of pure science, but then the examples are rare indeed in which the

flame has not been kindled at the shrine of Medicine, in which the mind has not been trained by the discipline of Medical study, and stored with the knowledge accumulated by the labours of Medical students. To cite examples at large would be needless; the names of Linnæus, Harvey, and Hunter the immortal, Owen, Huxley, Falconer, Hooker rise at the thought. The talent of observation, cultivated as students of Medicine, has supplied the facts and the materials upon which genius has reared the structure of laws and generalisations. Several professions demand from their disciples a close observation of some one or more of the elements of nature. The statesman, the lawyer, the priest, must take note of man in his moral and social relations; the engineer, who seeks to turn the forces of nature to the service of man, must study the physical properties of matter; the chemist takes a similar range; the astronomer, the sailor, must learn the laws that govern the mechanism of the universe. But it is not too much to say that the Physician must look at Nature in all her elements or constituents, not necessarily deeply in all, but at least with sufficient care to enable him to grasp the chief factors which are concerned in the physical and intellectual development and decay of man. It is this imperative duty which gives the Physician his characteristic familiarity with nature, which gives the tone to his mind, which forms his habits, which lends to his work a never-failing fascination.

As a means of discipline the study of natural history, including chemistry—which especially compels to precision and order—is no doubt superior to either literature or mathematics. Anatomy or chemistry, for example, exercises all the faculties, especially that of observation; the interest and attention of their votaries are constantly kept alive by the acquisition or by the anticipation of fresh discoveries, each of which by itself, or by combination with others, enriches his mind with new knowledge and increases his power to be useful. And we have this great, almost singular, advantage in the prosecution of our elementary studies—that we can always, when in doubt or error, appeal to the uniform standard of nature; we can always repeat our observations; we can reproduce or vary the conditions of them, and test the correctness of our conclusions by comparing them with those of others. We are thus to a great extent secured against that vagueness and uncertainty which surround all those branches of study which can only be pursued through the medium of books. For example, take history. Not to cite the cynical dictum of Walpole—"Anything but history, for that, we know, must be false"—it is enough to ask—What great event or what great character is there in history which has not been, and still is, the subject of dispute? We can only study past events, or men who have gone, through the representations of others; we cannot recall those events, or bring back the men for cross-examination; and if we could, we should often be as far as ever from the chance of arriving at the truth, for, as Van de Weyer, the Belgian Ambassador, has keenly said, "In contemporary history, the only true part is that which is not written." And past history is continually undergoing modifications as documents or other sources of evidence come to light, or as they are handled or interpreted by the light or the prejudices of authors. Since Carlyle's history we think we know Cromwell better than before; but an anti-Carlyle may arise and again disturb our opinions. Are we sure that Macaulay's judgment of William of Orange is just? Did Penn, the Quaker, pocket money by the sale of negroes, as Macaulay says he did? Fresh evidence for and against may be found; but history is so distorted by the passions and interests of men that all evidence is suspected by one party or the other, and can only be received by men of no party with distrust. A document may be forged, but we cannot forge an animal or a plant. If any observer mistake or misinterpret a fact in anatomy or physiology, to-morrow a thousand observers are prepared to re-examine the fact, and to reconsider, from direct appeal to the unchanging original, the truth of the interpretation. Of course, the natural sciences are not free from contention as to fact and interpretation. Is man a promoted ape? Are the brains of the two differently formed? The question may not seem one of great practical interest, but, such as it is, the materials exist for solving it so long as apes and men continue. That both will continue for a long time, with organisations distinct and unchanged, I do not doubt. The history of man does not, I fear, justify the enthusiastic optimists who believe in his moral or intellectual perfectibility, and anatomy fails to show that he makes any progress towards a higher type of physical development. And no traveller has yet discovered a race of apes that can justify the notion that they are in a state of transition into even the lowest known type of man. Classics and mathematics are to be valued apart from their intrinsic worth, as food for contemplation, as a source of pure enjoyment for the cultivated mind for two chief merits—First, as means of discipline, of acquiring the habit and faculty of applying the mind with concentrated force upon any given subject of inquiry; and secondly, as furnishing knowledge that is requisite for the elucidation and extension of other subjects of study. As means of discipline up to a certain point, I believe both are eminently useful; but, if carried too far, both are apt to give too abstract a bent to the mind, and to injure it in that point which, to Medical men, is of paramount importance—namely, the faculty of quick and accurate observation of the phenomena of nature. Indeed, it is a matter of fact that men who are deeply and exclusively versed in mathematics or classics are prone to form the most erroneous and perverse judgment upon questions of natural science, and of Medicine especially.

In application to the study of Medicine a moderate proficiency in classics and mathematics is indispensable. It is enough to call to mind that scientific nomenclature is drawn from Greek and Latin, and Medicine, as it advances, becomes more and more a science of precision, whose facts and laws are brought within the range of physics. And many of the phenomena of life, in health and disease, are now habitually investigated by the aid of instruments, the right use of which demands at least a correct elementary acquaintance with mathematics and physics. Of late years the study of one or more of the modern languages has been much insisted upon. In its application to the acquisition of knowledge there can be no doubt that French or German is of more value than Greek or Latin; indeed, French and German are now so essential a feature in polite education that Medical men can hardly hold their proper place in society without them. But I further believe that French, if rightly studied and not merely picked up from a nursery governess, is a means of discipline for the mind scarcely, if at all, inferior to Latin. The French are perhaps the most logical people in the world, and their language with its grammar, and their literature in almost every department, offer models of order, precision, reasoning, and curious felicity of expression which it would be hard to match in any other language, living or dead.

Moreover, the scientific activity of our French, German, Dutch, and Italian brethren is so great, their contributions to knowledge so rich, that we cannot hope to keep pace with the times unless we bend to our purposes and make tools of the modern languages. And we should lose much of the enjoyment of that peculiar charm and special privilege of our Profession—that of finding ourselves at home in friendly intercourse with men of cultivated minds in every corner of the globe. There is no freemasonry like that which binds men of science together. We should not suffer the curse of Babel to scatter us, to damp the flame of private friendship, and to impede the progress of knowledge.

Then, again, as to Competition, that potent engine from which so much—I venture to submit too much—is expected. Competition has long been the accepted test, and therefore the stimulus of knowledge, in the older Universities and in the Medical Schools. A double-first or a wrangler is great and honoured for his day or year; if he unfortunately is weak enough to believe that a Fellowship and celibacy are prizes worthy of the highest ambition, the chances are that he sinks into a state of æsthetic indolence; he becomes a pensioner upon the revenues bequeathed by liberality to encourage industry; he enjoys, in monotonous sadness and pride, the reward of work, he having only got possession of the tools, and acquired the capacity for doing useful work. This serious mistake is often made not alone by double-firsts and wranglers, but by the world. We are apt to confound the tool—the organon, as Bacon might call it—with the work which that tool rightly handled can produce. We are disposed to credit a man with great powers and great acquisitions simply because he has obtained a high place in a competitive examination. This is often to be unjust not alone to those who are beaten in the contest, but also to those who have won. Examinations are framed to test the industry of the candidates in the acquisition of taught knowledge; they do not, at least as a rule, give scope to the display of natural vigour of mind, of original power of reflection and research. The men who commonly excel in competition are those who servilely bend every power they possess to acquire what will pay at examinations; they are often men who have a special faculty for accumulating

the stock doctrines of the schools. Too commonly such men attain their highest stage of development at the examination tables. It would seem as if they had at this point exhausted the powers with which Nature had endowed them; they do nothing more as long as they live, and they are apt to think they have done enough to justify their claim to those rewards that rightly belong to superior merit.

The right use of competition is as a corrective, a safeguard against nepotism. Indeed, it is almost the only one. There is so treacherous a tendency to discern superior merit in those whom we personally know, or in whose advancement we feel an interest, that some security is imperatively called for to protect the public interests. As a preliminary safeguard, as a pass-word to challenge those who present themselves at the outer gates, competition is perhaps the best that offers. It has this especial recommendation, that it gives to the unfriended and indigent student the means of breaking through those barriers which wealth and connexion are too apt to rear for the protection and advancement of their clients. It tends also to encourage an honourable self-reliance and an independent spirit. To give exclusive or undue preference to those who stand foremost in competitive examinations is, however, to disregard a great fact in the history of the human mind; it is to fall into that most fatal error of setting up one Procrustean standard for all intellects. Now, who can fail to observe that there are wide differences in the rate of development of different minds? Some men attain their full powers, or at least they seem never to improve upon what they had reached, at a very early age. There is, as Bacon expressed it, "an over-early ripeness in years which fadeth betimes." To use Quintilian's simile, they grow yellow with empty ears before the harvest-time has come. Other minds, growing more slowly, gaining strength with time, and with the habit of self-reliance and independent research, miss their mark in the premature contests of youth, but shine the more brilliantly and the more permanently when a new test of excellence is applied—namely, the capacity of doing honest work that shall profit mankind. Competition favours precocity; or rather it favours those attributes which more especially belong to adolescence, and which, therefore, mark a stage of imperfect mental development. Memory is one of these attributes, and this natural gift is not only carefully exercised, but various technical tricks are resorted to in order to reproduce patly at the examination tables what is likely to be most wanted. Prominent amongst the means of aiding or supplementing memory is the habit of taking full notes of lectures. I am ready to admit that the men who are most diligent in taking notes almost always take the first places at the examinations. I am also willing to admit that the habit is very effective in fixing the attention of the student upon the subject of the lecture. A man who is taking notes is not likely to fall asleep. He thus pays a delicate compliment to the lecturer, which is sure to be appreciated. But I very much doubt whether it is the best mode of training the faculties, of strengthening the mind, or of attaining sound knowledge. I am quite sure of one thing. Surveying the careers of some of my old companions, I see that some who took but few notes have become distinguished men, of robust intellect; and, on the other hand, I see others whose notebooks would form a library, who have settled down into the most humdrum routine, very types of mediocrity. I therefore conclude that a man of many notes will not necessarily make a man of note. What is the great end of education? It is not simply to heap up the greatest amount of knowledge in the mind. The aim should rather be to discipline the intellect, to give precision and quickness to the faculties of perception and observation; to strengthen the power of reasoning and comparing so as to form just and rapid conclusions upon the cases and problems that arise in daily practice. "J'aime mieux," said Montaigne, "forger mon âme que la meubler." Now this end is not attained, I think, by trusting to notebooks. The art of writing and the invention of printing have even been thought by some to have done doubtful service in strengthening the human intellect, however vast may be their influence in extending and diffusing knowledge. Plato said that, without this delusive aid of alphabetical writing, "men would have been compelled to exercise the understanding and the memory, and by deep meditation to make truth thoroughly their own. Now, on the contrary, much knowledge is traced on paper, but little is engraved in the soul." Quintilian too said "Memoriæ plerumque inhæret fidelius, quod nullâ scribendi securitate laxatur." And I may enforce this argument by quoting the opinion of one honoured alike amongst women and amongst men, and deserving of special honour in this Hospital. Florence Nightingale says, "If you find it helps you to take notes, by all means do so. I think it more often lames than strengthens the memory and observation."

What I have said of note-taking does not apply to recording facts and observations. There is no better means of training the mind to the habit of orderly observation and precision in judgment than the methodical practice of taking notes of cases of sickness. The power of taking a case correctly, seizing the important points, and avoiding that prolixity and repetition which would render subsequent study of the history tedious and repulsive, is invaluable to the student and to the practical Physician. Each well-recorded case has its individual worth as an exercise and as a record of facts; and cases acquire an interest and impart instruction which cannot be limited when their number affords the materials for comparison and for drawing general conclusions. The question as to the best mode of learning suggests the cognate question as to the best method of teaching. Three principal methods are in use, and come to some extent into competition. There is the simple method of giving no formal instruction, but of so ordering the work in the Hospital, the laboratory, and the dissecting-rooms, of providing museums and libraries, as to afford the student the means of study, and leaving him very much to his own devices in turning his opportunities to account. Now, for a young man of vigorous intellect, of resolute industry, and self-reliance, this negative or *laissez-faire* method of teaching offers very great advantages. It calls forth in the highest degree the habit of original inquiry, and since that knowledge which a man acquires by earnest labour by himself becomes more a part of himself, it gives greater solidity and depth. I am afraid, however, that the men who could be trusted to self-tuition altogether are few, and that even the most capable would lose much valuable time, and expend much energy in unprofitable directions. At the same time, I am firmly convinced that no one will ever be worth much, either as a student or a Practitioner, who expects to be taught all that he ought to learn, who is ever calling upon Hercules, who does not realise the truth that he must work for himself.

The second method is that of oral instruction by a staff of lecturers.

This method has been practised in almost all departments of learning from the earliest ages—a sufficient reason, perhaps, in the eyes of our modern reformers, for condemning it. It is argued that a man may as well read what the lecturer has to say as hear him read or say it. Now, I freely admit that if the lecturer writes out and reads his lectures, trusting nothing to spontaneous exposition or to practical demonstration or illustration, he will probably fail to keep alive the attention of his class, and will certainly miss the great object of oral instruction. But this is not what is now understood by lectures. The demonstrative subjects, as chemistry, botany, anatomy, physiology, operative Medicine, Surgery, and Obstetrics, as distinguished from the purely dogmatic parts of medical education, can hardly be taught or learned efficiently without the aid of *viva voce* and manual demonstration. Those who decry lectures are blind to one of the most prolific sources of the increase of knowledge. The lecturer who recognises the full obligation he has undertaken has to prepare the subject matter of every lecture; he has to collect and weigh the latest labours of others, and is thus constantly stimulated to add to the fulness and correctness of the sciences he has to illustrate by original investigations of his own. The earnest lecturer will always be in advance of the latest book; he can hardly stand still; and he who is animated with the fire of fresh discovery, who is glowing with the consciousness of new ideas, cannot fail to quicken his hearers with a sympathetic spark. The lecturer, moreover, has the means of explaining his subject with a copiousness and variety of illustrations, and of helping individual men over a stumbling-block which books cannot possibly possess. "Books do much," says Mrs. Shelley, "but the living intercourse is the vital heat." There is in extempore demonstration an impulse to the flow of thought—to the sudden suggestion of novel truth; gleams of light are thrown off from the kindled imagination, which, as the electric spark flashed upon a whirling disk of primitive colours, enable one to separate the illusory compound into its elements—enable the speaker to catch instantaneously the solving differences and relations of facts and ideas, which might never come to him under the less fervent magnetism of the closet. Thirdly, there is what is called the tutorial method of instruction. The common sense of mankind has, I think not unjustly, stigmatised this method

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by the attaching to it the contemptuous words "coaching and grinding." The tutor is to the slow or idle student what Hercules was to the slothful wagoner. He is expected to do all the work—to supply concentrated essences of the teaching of others, so prepared and sweetened as to be at once palatable and easily digested. What is so imbibed is notoriously of little permanent worth.

"Pater ipse colendi
Haud facilem esse viam voluit, primusque per artem
Movit agros, curis acuens mortalia corda."

And the tutor on his part scarcely attempts to teach anything original; he teaches at second-hand; and his pupils, learning by rote, are fortunate if they can make their parrot-cries chime in, with passable congruity, with the questions put at the examining table. I am afraid, however, that dependence upon this, the least desirable, mode of teaching, is increasing; and I think I discern the cause in the increasing stringency and extent of the subjects of examination. I believe that the examinations of some of our licensing bodies are now strained to the highest point of tension; and that, by excessive multiplication of subjects and severity of examination, the object sought to be attained is in danger of being defeated. The pressure put upon men at the examinations is so great that they are almost compelled to strain every nerve to acquire that which will carry them through this ordeal. The consequence is that the cultivation of practical manual dexterity and bedside skill is often neglected for the sake of cramming the memory with book-learning. Every means is exhausted to pack as much matter in as small time as the student's capacity will bear, treating his skull as the traveller treats an expansible portmanteau. I am sure we have all seen men of sterling stuff, of excellent judgment, infinitely more worthy of being trusted with the care of life and limb than these overstuffed and ready-to-burst receptacles of scholastic lore, cut a comparatively indifferent figure before the examining boards. In the long run, of course the man of ready skill will assert his superiority, but he has not been started fairly.

These are some of the reflections which my position here to-day suggests to me. They are trite enough, I very well know. They are at any rate the conclusions drawn from experience and an impartial judgment. I could have wished to say more upon the relations that Medical bears to general education. Those relations are more intimate than is apparent at first sight. I believe that it is mainly through the influence of Medical education, represented by the University of London, that the natural sciences have at last found a home in Oxford and Cambridge, and that thus the circle of polite and useful knowledge has been completed. But whilst the natural sciences can be with great advantage studied up to a certain point at Oxford and Cambridge—good teachers, museums, and books will do much—the great College, the great University, that gives the informing purpose and brings into one supreme focus the light of all science, directing it to the alleviation of the sufferings of man, is the Hospital. A great Hospital, if rightly used, is even more than a great school of natural science. It affords boundless subjects for observation, reflection, and the exercise of all Christian virtues. It presents, in England at least, where Hospitals are supported not by State taxes or by forced contributions from the sick who come for relief, but by the free gifts of charity, a spectacle to my mind one of the grandest that humanity can show. Not only do science and charity contract here an indissoluble union, gathering strength by that union, each giving to each illimitable increase of power to do good, but they also gather around them many of the best social and political virtues of the land. All classes meet here on common ground; all here recognise their subjection to the common lot of humanity; all unite to bear one another's burdens. A great Hospital is, besides, an epitome of our political life. It is an administration independent of the government of the State. It is a standing declaration that political freedom is the sister of Christian charity and of science. These virtues, so closely allied in their essence and in their action in this great Hospital, will, we hope, before another year has run, find a new home on the noblest site in Europe. The second foundation of St. Thomas's is a part—and no insignificant part—of the history of the illustrious reign of Queen Victoria. Strangers have said that London was poor in public monuments. I think we may point with pride to a concentration of public monuments which, as creations of architectural skill, can hardly be surpassed; and if we look upon them with the eye of the philanthropist, and regard them as the symbols of the virtues that make a nation great, where shall we find their rivals? All human things must decay; but the virtues that dignify human nature will, we trust, endure. Let us indulge the hope that the prophesied New Zealander may many centuries hence take his stand upon the unbroken footway of the magnificent bridge which spans the glorious river on whose ebb and flow free trade is borne, and gaze, on the one hand, upon the grand cathedral dedicated to our free religion, upon the splendid pile that marks our free political life; and, on the other hand, upon that noble Hospital, which is destined to carry on the sacred work of free charity and free science.

UNIVERSITY COLLEGE.

The Introductory Address was delivered by Professor Erichsen. Mr. Erichsen commenced his address by alluding to the pleasure which he felt at the renewal of the ties which bound them together as professor and pupil, and at the formation of fresh acquaintances among those who came together on that occasion for the first time, a pleasure, however, which was not, he said, unmixed with pain. Each new session constituted one of those sharply defined epochs in life which serve as milestones by the way, to mark the passage of the fleeting years, and each reminded him of the many men who had met thus year after year, determined to carve out for themselves a happy and a useful future, of whom so many had failed to reach the goal towards which all had honourably striven. To the pupil, however, the first session was one of unmixed interest and unclouded hopes, and often, too, of no little peril; it was his initiation into the Profession which was to become the occupation of his future life.

Whilst the study of Medicine and the practice of its art were founded, he went on to say, like the study and practice of all the liberal professions (as the Church and the law), on a desire directly to benefit mankind, it was yet not to be regarded solely from that point of view: it was to be looked on as the practical business of their lives—that by which they were to attain to social independence. And, in doing that, they would, at the same time, be spending their lives in the truest philanthropy, being the friends, the counsellors, the comforters of their fellow-men—the ministers of the purest, the most unsectarian of all religions—the true *religio Medici*, to do unto others as they would be done by.

The first question presented to them at the outset of their student life was whether Medicine was to be regarded as a science or an art—a question which had an important bearing on the way in which it was to be studied. Undoubtedly Medicine was a science according to Johnson's definition of a science—"a certainty grounded on demonstrations, or an art attained by precepts and built on principles." Human anatomy, on which were based the rules according to which the Surgeon shapes his operative procedures, was as certain as were the truths of astronomy; and the operations of lithotomy and for strangulated hernia were instances of the certainty with which the rules derived from it were to be relied upon. Similarly, physiology, which stood in the same relation to the Physician as anatomy did to the Surgeon, was a matter of equal certainty, and afforded an equally sure guidance in the diagnosis of disease. Of this the detection of the various diseases of the heart by auscultation, and the localisation of diseases of the nervous system by the various forms of paralysis, afforded familiar but striking illustration. And not only were Medicine and Surgery based upon certain sciences, but they themselves constituted a science of disease not less sure. The uniform course of some diseases, as the acute specifics, the relation between different diseased conditions, the structure of tumours, for instance, all were matters of as much certainty as the phenomena of digestion, or the structure of an internal organ or of the skin itself. Indeed, pathology had, in its turn, thrown clear light upon many normal phenomena which physiology was quite unable to explain, such as the connexion of the third left frontal convolution of the brain with the power of speech, as elucidated by Trousseau, Broca, etc. The scientific nature of Medicine was even more manifest when they looked at its relation to hygiene and the laws of health. The conditions producing many diseases, as cholera, Surgical erysipelas, pyæmia, etc., were so well known that those diseases might almost be produced at will.

In another department of Medicine, however—that of the treatment and the progress of disease—they trod upon much less certain ground, for the laws which regulate these were

subject to so many complex and various conditions that it was extremely difficult to trace it through them. It was here that individual skill and powers of observation were of such inestimable value. But the art of Medicine need not be wholly empirical. Enough was known of the fixed principles, both in the region of prognosis and treatment, to furnish a sure groundwork on which practice might be based. The knowledge which had been handed down from their predecessors concerning methods of treatment and particular remedies was neither to be accepted with blind faith nor rejected with equally unscientific incredulity, and the uncertainty which still enveloped the subject was to be taken as an indication, not of the unscientific nature of Medicine, but of the inherent difficulties of the subject, and of the impossibility at present of deducing any general laws out of the chaotic mass of facts heaped up around apparently without order, but which would doubtless ultimately be found as clearly subject to natural laws as were the facts of any other department of natural science.

The art and practice of Medicine might be regarded as resting on a tripod of science, experience or observation, and individual skill. The value of science as a foundation for practical Medicine had received a recent illustration in the antiseptic method of treating wounds devised by Professor Lister. The second leg of the tripod—observation—is not only the recognition of a phenomenon by its signs, but its investigation, aided by the judgment. The comparison of observations, especially when reduced to the statistical form, was a means of the determination of facts with absolute and mathematical certainty. Much had thus been done in ascertaining the causes of disease, etc., and it was in this way, if in any, that the real value of remedies in disease must be ascertained. Individual skill—the third leg of the tripod on which practical Medicine rests—was highly valued, and with justice, by both the public and the Profession; but at the same time too much credit should not be attached to the simple possession of it. The manipulator should not be confounded with the inventor; the man who simply applies rules, however skilfully, with the other who has devised them.

Medicine, then, was an art based on a science, and could only be safely practised when its foundations were laid deep in the science of biology, which underlay the whole of the Æsculapian edifice. The student should endeavour to be neither wholly scientific nor wholly practical, but should combine the two somewhat opposite elements of science and of art, of learning and of experience, of thought and of action, ever remembering the advice of Bacon, given three hundred years ago—"They be the best Physicians who, being learned, incline to the traditions of experience, or, being empirics, incline to the methods of learning."

The various means of acquiring knowledge were then briefly alluded to. In lectures and in books the student would find epitomised a knowledge of the science of Medicine which has been attained by the continuous and combined labours of generations of workers as well as by the latest investigators. They should observe a due proportion between their studies, regarding the preliminary ones of chemistry, botany, etc., simply as a means to an end.

In conclusion, Mr. Erichsen impressed upon his hearers the importance of clinical work, the methodical training of the senses to observe and of the mind to reflect upon what is seen. It is not necessary for this to see many cases, but it is necessary that those which are seen should be accurately observed. Note-taking was of great importance in clinical training, and by the aid of shorthand, which was easily learned, observations might be recorded as rapidly as they were made. The art of drawing, too, was of essential service in recalling details to the memory.

WESTMINSTER HOSPITAL.

The Introductory Address was delivered by Mr. Francis Mason, who said:—Gentlemen,—On the great stage of the world, whatever may be our calling, we have many important parts to play. Whether we be engaged in the pursuit of science for its own sake, whether we be occupied in professional pursuits, or whether we be employed in the more lucrative work of commerce, we all have assigned to us our little sphere of usefulness; and just as "small sands make the mountain, moments make the year, and trifles life," so the strength, the industry, nay, the welfare of the whole community all depend on the manner in which each individual plays his part in the drama of every-day life.

Such meetings as this are not without their advantages, inasmuch as they present a convenient opportunity of extending the right hand of fellowship to those who are on the threshold of their Professional studies, and also of offering increased encouragement to others who, having advanced a certain distance on the road of life, are

> "Stepping from hindrance on to hindrance,
> As a boy crosses on the stones the stream,"

and are steadily approaching that goal of success which is the honest aspiration and the purest ambition of every hard-working industrious man.

The 1st of October marks an era in the history of every Medical man's life. To-day the several Schools in this great metropolis meet in friendly rivalry, and we, as a part of a vast educational system, take up the gauntlet, and, with no spirit of petty jealousy, no ill feeling, no bitter envy, but with the fullest confidence in our own prowess, boldly and fearlessly enter the arena, prepared, come what may, to fight the battle with courage and determination, so that when the contest is o'er, and the star of peace returns, each one may lay his hand on his heart and say, with the warrior of old, "Verily I have laboured in a good cause, and I have endeavoured to do my duty manfully."

The study of Medicine commends itself. We are told that there are five great intellectual professions relating to the daily necessities of life—the soldier's, to defend it; the pastor's, to instruct it; the Physician's, to keep it in health; the lawyer's, to enforce justice in it; and the merchant's, to provide for it. Of these daily necessities, by no means the least worthy of our consideration is the duty of the Physician to keep the body in health. That is the part we have to play.

The nature of our education affords the exercise of the highest faculties of the mind.

> "The flower, the tree, the bird, the running brook,
> Are all to us material for thought."

It is impossible to study anatomy, physiology, or chemistry, three subjects on which we build our superstructure, without being deeply impressed with the infinite wisdom of divine power. In reading the volume of nature, we are animated by a passionate yearning for increased research in exact proportion as our ideas become more developed, our tastes more elevated, and our intellects more refined. Again, if we view the beautiful symmetry and the variety of Nature's forms, the grace and regularity of her designs, our minds must be led to purer notions and happier thoughts. As our reading comprises an endless variety of subjects, it is no matter of surprise that from time immemorial Medicine should have been studied for its own sake by those possessing the keenest reasoning powers; but when it is cultivated for the sake of aiding others it is like the quality of mercy:

> "It is twice blest—
> It blesseth him that gives, and him that takes."

In the pursuit of a Profession which has for its object such lofty and beneficent aims—the cure of disease, the relief of suffering, the keeping the body in health—it is no wonder that the good Physician should be taken as the highest type of humanity.

Further, if we regard the worldly emolument to be derived from the practice of our Profession, we have, even on this score, not much reason to complain. Were we all to attain great wealth, high station, or enormous influence, our natural emulation would be quickly dispelled, and our motives for acquiring superior skill speedily crushed. Such honours are but to the few, yet the prizes are open to all; and just as the race is to the swift and the battle to the strong, so he who arms himself with perseverance, self-reliance, and endurance, will be the first to reach the winning-post. We may all, however, expect a modest competency; but we acquire a far richer reward which gold cannot purchase, the heartfelt gratitude and thanks of suffering humanity, as well as the intense satisfaction we ourselves derive from pursuing a vocation whose object is at once sacred, unselfish, and sublime.

Is it nothing that science has discovered an agent which produces complete temporary insensibility, so that the Surgeon is enabled to perform the most trivial as well as the most formidable operations with absolute painlessness? Is it nothing that we have intrusted to our keeping the power of restoring sight to the blind, and of making the lame walk? Is it nothing that when a child is suffering from impending suffocation, when, indeed, the last spark of life has well nigh fled, we by our art can snatch that child, as it were, from the

very jaws of death? Is it nothing for us to know that, when a patient is bleeding profusely and dangerously, we have committed to our care the means of instantly stemming that hæmorrhage? Is it nothing that, in our daily practice, our skill, properly applied, often changes the scene from one of utter grief and desolation to one of perfect joy and gladness? Is all this nothing? Then science is nothing, art is nothing, and our Profession is nothing.

Mr. Mason then gave a brief history of the Hospital, and spoke of it as being built under the shadow of the "brave old Abbey," and "cradled alike in all its holy influences," which, could it but speak, might tell many a sad tale of sickness, poverty, and distress, as well as testify to the numberless glorious triumphs achieved by our noble art over those accidents and diseases which all human flesh is heir to. In speaking of the Medical officers, amongst whom were Cheselden and the celebrated Dr. Mead, he quoted the lines of the poet Pope:—

"Weak tho' I am in limb, and short of sight,
Far from a lynx, and not a giant quite,
I'd do what Mead and Cheselden advise
To keep these limbs and to preserve these eyes"—

and said it would be scant justice to the memory of those long since passed away were he not to say that they were men of the most cultivated intellect, of noble character, of perfect integrity. Such men, he said, are bright examples that we may admire and imitate, for their memory—the best emblem of what is good and true—blossoms in the dust, and lives amongst us for evermore. . . .

At first the student will, no doubt, be somewhat disheartened at the immense amount of work before him. But let him be of good cheer. Nothing is easy but what was at first difficult. By earnest undivided attention all the obstacles that impede his progress will fade and vanish as surely as the sun rising in the morning chases away the darkness of night.

In attending the lectures in accordance with the regulations of the examining boards, there are two special advantages. In the first place, much valuable information may be acquired, and, secondly, by regular attention are inculcated habits of self-discipline, punctuality, method, and exactness—in short, just those qualities essential to success not only in our Profession, but in every other walk of life.

The lecturer then spoke of note-taking as being most valuable in the form of short memoranda. He said there is nothing that conduces more to accuracy of observation and clearness of perception than the plan of committing our ideas to writing; for

"Sounds which address the ear are lost and die
In one short hour; while that which strikes the eye
Lives long upon the mind."

The instruction, however, that we give here, continued the lecturer, is to be regarded as a means to an end—namely, that of qualifying the pupil to practise his Profession. We do not pretend to teach him all he is required to know, but we pride ourselves on teaching him how to learn for himself. We put before him the scattered threads of knowledge, and leave him to weave them into a new and substantial fabric. In Hospital practice the student will find that all his senses will, at various times, be called into action: the sense of touch, the sense of sight—that great gateway of the mind—the sense of hearing, the sense of smell, and sometimes the sense of taste. Whilst he should never neglect to visit the wards, let him not think lightly of the out-patients' department. Let him "be wise in small things, and ponder well the greatness of the little." He must cultivate the power of sustained thought, and if he wish to overcome any difficulties, he must apply his mind intensely to the subject, remembering the old rhyme—

"Tender-handed touch the nettle,
It will sting you for your pains;
Grasp it like a man of mettle,
And it soft as silk remains."

Another important element in the acquisition of knowledge is self-examination—taking stock, as it were, of what we know. As Medical men our motto should be "semper paratus," for in our Profession, more than in any other, we have not only to be men of learning, but men of prompt action. We have to think when others are paralysed; we have to be decided when others are wavering. . . . And oh! how eloquent are our looks! A mother nursing her sick child will anxiously watch our every movement, our every expression; and one whisper, one hint, or even one gesture will often suffice to snap the last and slenderest thread of hope.

Mr. Mason then dwelt on the importance of cultivating those qualities which are considered essential to the bearing of a gentleman. Without stooping to base motives, or without cringing to abject servility, we are called upon, he said, to exercise and rightly understand what is aptly termed the "art of pleasing." One patient, for example, will require our constant attendance, which we may consider unnecessary, whilst another will be greatly displeased if unsolicited we pay him a second visit. It is this discrimination—the keen perception of individual character, the knowledge of the world, tact, judgment, common sense, call it what we will—this dealing with each case as each case requires—that we are forced to observe. Mr. Mason then urged upon his hearers the importance of being self-reliant, reminding them that in practice it is easier to make our patients our friends than to make our friends our patients. If we cannot create opportunities, we can take advantage of them when they are presented to us. If there be, as we are led to believe, a tide in the affairs of men which, if taken at the flood, is to lead us on to fortune, it is manifestly our duty to watch for that flood. We must, however, wait patiently, and, as De Maistre says, "To know how to wait is the great secret of success." Always working with a contented mind, and having at all times a due consideration for the feelings of others, we must cultivate habits of self-discipline, self-control, and self-respect. All these, combined with unflinching industry, untiring perseverance, and strict integrity, constitute the rungs that form the ladder of prosperity.

Mr. Mason said, in conclusion: I earnestly ask you on behalf of my colleagues, as well as in my own name, to play your part as we hope to play ours—zealously, cheerfully, and faithfully—so that, whilst we endeavour to fulfil the royal law of Scripture which directs us to do unto others as we would have them do unto us, we may always rejoice in the boundless resources our noble Profession affords of "looking through nature up to nature's God."

ORIGINAL COMMUNICATIONS.

DEATH FROM THE PRESSURE OF GALL-STONES ON THE VENA PORTA.

By A. S. DONKIN, M.D.,

Lecturer on Forensic Medicine to the University of Durham, and Physician to the Sunderland Infirmary and Dispensary.

Accidents of the most serious and varied description resulting from biliary concretions have from time to time been recorded. Dr. Copland(a) has collected a very complete and interesting catalogue of these; but amongst the many instances cited by him there is only one in which the vena porta was the seat of injury. The case alluded to was that of St. Ignatius Loyola, the founder of the Jesuits. Colombus(b) relates of him that, on an inspection of his body after death, it was ascertained that a gall-stone had ulcerated its way out of the gall-bladder into the trunk of the vena porta.

The following case, which fell under my own observation, is, so far as I have been able to ascertain, the only instance hitherto recorded in which death resulted from the mechanical pressure of a mass of gall-stones on the vena porta leading to fatal obstruction of the portal circulation.

In giving a somewhat detailed account of this very singular and instructive case, I shall content myself with the apology of the late Professor Trousseau,(c) that "a complete case, better than a long dogmatic treatise, leaves on the mind an impression which time cannot blot out, especially when you have been an eye-witness of the chief phenomena of the disease."

Mr. C., aged 56, a miller, of large and robust frame and temperate habits; had generally enjoyed good health, but three years ago he suffered a severe accident, requiring amputation of the thigh, followed by perfect recovery. Since this period his habits had been less active.

On Sunday, April 4, 1868, he took a hearty supper, and went to bed in his usual health. Soon after midnight he awoke in great agony from intense pain in the abdomen accompanied with vomiting. His wife gave him a dose of Epsom salts, which acted on his bowels, without allaying the vomiting. Several domestic remedies were tried, but gave no relief; the vomiting and abdominal pain continued. Enormous quantities

(a) "Dict. of Med.," vol. i. p. 394.
(b) "De re Anatom.," lib. xv. p. 491.
(c) "Lect. on Clinical Med.," vol. i. p. 680.

of fluid deeply tinged with bile were from time to time ejected from the stomach.

Mr. Penman, of Monkwearmouth, was called in attendance on Wednesday morning, the 7th. At this period the pain and vomiting still continued, with tenderness on pressure. Enemata and laxatives were prescribed, but without acting on the bowels. Nine leeches were applied over the epigastrium, but the patient grew worse.

Next morning (Thursday, the 8th), at 10 o'clock, I met Mr. Penman in consultation. The abdominal pain had now almost quite subsided, but there was great tenderness over the region of the stomach, while the vomiting was incessant. Up to this period several quarts—nay, gallons—of fluid had been vomited, always of a dark green colour. There was no increased dulness in the region of the liver. There were no febrile symptoms, and the pulse was not rapid, though very feeble. There was much jactitation, and the extremities were somewhat cold. There had been no evacuations from the bowels since shortly after the attack, all remedies given to effect this having failed. The urine was suppressed, no doubt from deprivation of blood serum.

Such a combination of symptoms rendered the diagnosis difficult. The enormous quantity of fluid vomited was equal to what occurs in severe cases of cholera; but its dark green colour, the absence of diarrhœa and of cramps of the extremities, etc., forbade the supposition that the case was one of this nature. The symptoms were not those of obstruction of the bowels from intussusception or internal hernia, the paroxysmal pain in such cases being absent altogether, while the matters vomited were quite different in character and quantity, and not at all stercoraceous.

It was evident that an enormous quantity of fluid had been vomited since the commencement of the seizure, the only source from which it could have been possibly derived being the serum of the blood circulating through the capillaries and minute vascular plexus of the mucous membrane of the stomach. Such a copious and continuous effusion of fluid could only result from congestion, and if this were of a passive or mechanical nature, as seemed most probable, then some serious obstacle must exist to the portal circulation, or at least to that portion of it comprising the gastric veins, but the exact pathological condition causing this obstruction it was impossible to ascertain.

The very temperate habits of our patient, and the constant abundance of bile in the fluid vomited, together with his previous good health and the suddenness of the attack, were all circumstances militating against the conclusion that cirrhosis of the liver and contraction of Glisson's capsule could be the cause; the presence of a tumour in the substance or at the base of the liver, compressing the vena porta, was a much more probable supposition, though none could be detected on palpation, this method of examination being difficult on account of the obesity of the abdominal walls.

The suddenness of the attack was the most unintelligible feature of the case. Whatever hypothesis might be adopted in forming a diagnosis, the growth of the tumour being gradual, its pressure on the vena porta would gradually increase, and the result produced slowly developed in the production of ascites, hæmatemesis, melæna, etc., except in a sudden change of position of a tumour (external to to the liver) which might rapidly develope the symptoms just described.

The diagnosis at which we arrived was that some serious mechanical impediment to the portal circulation existed, most probably a tumour near the inferior surface of the liver. The prognosis, it is unnecessary to say, was most unfavourable.

Morphia and bismuth were prescribed in considerable doses to arrest or mitigate the vomiting, but without effect. Thirst being urgent, large doses of brandy diluted with soda-water were administered at frequent intervals, together with beef-tea and milk.

The patient became gradually worse, and on the following morning his extremities were quite cold and pulseless; the copious fluid vomiting continued, and he died suddenly at midday (Good Friday).

Autopsy.—On opening the abdomen, the following appearances were observed:—The greater omentum was deeply congested, and clots of dark blood were scattered between its folds; the lesser omentum was less highly congested. The mesentery was congested, but to a much less degree than the greater omentum. The ascending meso-colon was gorged with blood, and large clots extravasated between its folds, which were considerably separated by the pressure to which they were thus subjected. This congestion extended to the transverse meso-colon, but in a much less degree. The cæcum was highly congested, while the ascending colon, opposite the seat of hæmorrhage in the meso-colon, was so intense that it presented throughout on its mucous surface a blackish colour from venous engorgement of its minute vessels and ecchymosis. The transverse colon was also congested, but to a much less degree; the remaining portion of the large intestines was healthy. The stomach contained a considerable portion of fluid, but the intestines were quite empty, except a small portion of fæcal matter in the cæcum. This could not be expelled in consequence of the intensely congested condition of the ascending colon, immediately above, producing paralysis of its muscular coat and arrest of its peristaltic action. The mucous membrane of the stomach everywhere presented the appearance of venous congestion. Several large blackish-looking patches were observed on its surface in the region of its greater and lesser curvatures. The discoloration was due partly to venous injection and partly to ecchymosis. The duodenum was highly congested, while the jejunum and ileum were only slightly so. The spleen was gorged with blood. The other organs were healthy. The liver was perfectly healthy and of natural size; but, on removing it, the gall-bladder presented a remarkable appearance. It contained three very large biliary calculi of about equal size. These it firmly embraced, and prevented their movement in any direction. The gall-bladder presented a beaded appearance; it contained no bile, and was thus converted into a hard solid tumour, whose anterior extremity, corresponding with the contracted fundus, was seated more than half an inch within the anterior margin of the liver, while its posterior extremity rested in the portal fissure over the portal vein where it enters the liver, thus producing mechanical compression of the portal vein to such a degree as to give rise to all the phenomena of congestion of its tributary trunks and the resulting hæmorrhage witnessed after death, together with the symptoms manifested during life, and, lastly, death itself. There was atrophy of the muscular coat of the gall-bladder, with thickening of its external coat, which had assumed a whitish colour—this condition, according to Frerichs,(d) being general in all cases wherein the gall-bladder ceases to be a receptacle for bile, and instead becoming firmly contracted over contained concretions. The gall-bladder, in short, had evidently long ceased to be a reservoir for the reception of bile, and, so far as its function was concerned, had ceased to exist. This fact readily accounted for the constantly green colour of the liquid vomited by the patient. The measurement of the three concretions was as follows:—One measured around its circumference 3 inches; the second, 2½ inches; and the third, 2¾ inches; the three placed *in situ* formed a jointed tumour 3 inches in length. It will be observed that the force of the congestion fell upon the superior mesenteric vein—the largest trunk of the portal system—and upon its middle colic, right colic, and ileo-colic branches; these being its largest and longest tributaries, from the rupture of their radicals the hæmorrhage arose. That there was no hæmorrhage in the mesentery may be accounted for partly by the shortness of the intestinal branches of the superior mesenteric and their intimate anastomosis with each other, and partly, perhaps, from copious serous effusion into the small intestines;(e) this effusion, not being able to pass downwards beyond the paralysed ascending colon, would find its way into the stomach, and contribute to the quantity of the fluid vomited. To form a correct estimate of the operation of a mechanical impediment such as existed to the portal circulation at the base of the liver in the present case, it is necessary to remember that the portal veins are unprovided with valves to counteract the distending force of agencies damming back the blood current flowing through them. The suddenness of the attack was a very remarkable and unintelligible feature of the case. The patient went to bed well, with a full stomach, and awoke after midnight in extreme agony. This sudden seizure, from the cause to which it was due, can only be accounted for by the sudden displacement backwards of the stony tumour into which the gall-bladder had been converted, this displacement having been most probably induced by the patient, a heavy man, falling asleep on his right side in an attitude subjecting the hepatic region to much pressure. Deprivation of blood serum, and inanition from the non-absorption of alimentary matter, combined to produce death by syncope.

(d) "Diseases of the Liver," Sydenham Society edition, p. 514.

(e) To illustrate these remarks, it is only necessary to refer to any delineation of the portal system—for instance, that in the latest edition of "Quain's Anatomy," p. 480.

CASE ILLUSTRATIVE OF HEREDITARY TENDENCY.

By Dr. THOMAS B. CHRISTIE,
Medical Superintendent, North Riding Asylum, York.

The question of hereditary tendency is one of the greatest interest to the Physician, more especially to the psychologist; consequently anything that tends strongly to confirm this already established fact should strike the educated Practitioner with gratification. Bearing this in view, I wish to bring before the Profession a singular case that occurred here a few days back.

Mr. Chaffers, the Assistant Medical Officer to this Asylum, attended in her confinement the wife of one of the farm attendants; she was safely delivered of twins, the father and mother both being one of twins, and, what is more remarkable, twins with the opposite sex, thus completely destroying the truth of the old nurse's saying—"Free martins are always barren." The twin sister of the father is living, but unmarried; the brother to the mother died when 8 years of age.

I think this case is one that well illustrates the effect of hereditary tendency; and when, as psychologists, we are obliged to strengthen our view of a person's unhealthy state of mind by appealing to the pathological effect of hereditary taint, I cannot understand why the brain organism should not be ruled by the same natural laws as those which govern the other organs of the body. Unfortunately, we are constantly treated as merely the keepers of the insane instead of Physicians to the diseased mind, and when in courts of law we attempt to strengthen our views by appealing to this doctrine, we are frequently made the laughing stock of the bar and the bench; but this case fully proves to my mind that in many cases, as regards hereditary taint, science and the laws of nature are on our side, as contra-distinguished to the fallacious doctrine of "knowing right from wrong."

I am led to make some slight remarks on this doctrine of the law by a case that is brought to my mind in which Baron Bramwell sentenced an insane prisoner to penal servitude for life, remarking, "The law makes unsoundness of mind no excuse for offences, except it were such that you did not at the time know the nature of what you were doing, and that it was wrong and unlawful. . . . I am not sure that it is not more necessary to punish a mad man than a sane one, as far as the protection of the public is concerned." So from this we are, I suppose, to understand that first the law states that no man is insane so long as he understands the difference of right from wrong, and then, when it is conclusively shown that he is insane, that he should be punished. Can it be really so that when we have gone on legislating with the dictates of humanity plainly before us, we are now to take a retrograde step, and at one time say, "Punish the insane," and at another, "Punish those who use an excess of restraint in preventing the insane from committing crime"? I am at a total loss to understand such an anomaly, but if such a judgment as Baron Bramwell's is to stand, then why go on providing at a great cost "criminal lunatic asylums"? Far better their "well-merited" punishment should follow crime, and thus deter other insanes from following in their track, and teach them by the strong arm of the law that they can govern the laws of nature, and are wiser than the God that made them.

Clifton, York.

NOTES ON THE BATHS OF ST. MORITZ, UPPER ENGADINE, SWITZERLAND;

WITH SUPPLEMENTARY REMARKS ON THE ENGADINE AS A WINTER RESORT FOR THE PHTHISICAL.

By WILLIAM BAYES, M.D.

Assuming that it may prove both useful and interesting to your readers, I have made a few short notes on some points relating to the climate and surroundings of this high Alpine watering-place, whose repute is already great and promises to be yet much greater. I first visited the Upper Engadine on June 23, having been unnecessarily deterred from venturing there earlier by the warnings I met with in Italy against the rigorous wintry weather I should probably encounter. Leaving Lake Como, I stayed a night at the Hotel Conradi,(a) at Chiavenna, and thence posted to the Kurhaus, St. Moritz, by the beautiful Maloja pass, in seven hours.

(a) This is now a most comfortable first-class hotel, having recently changed hands.

The baths of St. Moritz are stated by Colonel Dufour to be 5863 feet (English) above the sea. The Kulm Hotel at the village of St. Moritz, about a mile and half from the baths, is 6083 feet (English). From repeated barometric observations, I believe that these measurements are correct. Through the kindness of a gentleman staying at St. Moritz during June, the Hon. A. Way, I am able to give you thermometrical observations from June 21 to July 14. These observations have been carefully made by Mr. Way and myself with Casella's self-registering thermometers. The hours chosen for the daily record were 8 a.m., 2 p.m., and the lowest night temperature was taken from the spirit self-registering thermometer.

The guide books usually assert that St. Moritz has nine months winter and three months bad weather. During the first week I was there, I found it, on the contrary, warm, sunny, and invigorating. The second week was cold and bracing, but dry, and there have been only two thoroughly bad days during the twenty-four, and on one of those two days I had an hour and a half's walk without rain.

The waters are strongly chalybeate, with a very considerable quantity of free carbonic acid. The water is both drunk and used for baths. There are eighty-five baths at the Kurhaus, and more than five hundred baths can be given during the bathing hours.

The hotel arrangements are excellent, and there is accommodation for three hundred patients in the establishment of the baths. When full, three hundred patients and two hundred servants sleep at the establishment.

It is needful to write some time beforehand for apartments; the applicants for July were so numerous that nearly two hundred were refused, and the hotels and lodging and boarding houses in the village of St. Moritz are all fully occupied at this time. Accommodation for a very large number of patients is to be found in the other villages of the valley. Samaden, Pontresina, and Silva-Plana are the most favourite resorts, and good hotels are found at each. The direct route is by Chur (Coire), thence over the Julier pass; many prefer the Albula pass, which is more picturesque, and the road, though new, is good. From Chur to St. Moritz takes fourteen hours by the Julier, and fifteen to sixteen by the Albula.

The Maloja pass, from the Italian side, is far the easiest and least fatiguing, taking only eight hours by diligence, and less by extra post.

At present these waters have been more frequented by Germans, Swiss, and Italians than by the English, but there were a large number of English here this season, and a few Americans.

One peculiarity of these baths is that although their position is nearly 6000 feet above the sea, surrounded by high mountains, and in close proximity to immense glaciers, they are nevertheless in a valley, presenting at least twenty miles of almost level exercising ground in length, and from a mile to three miles in width.

The air is, as we should expect, bracing and highly stimulating, but subject to sudden changes both thermometrically and barometrically, and to frequent changes of wind.

Baths of St. Moritz, 1868.

		Lowest night.	8 a.m.	2 p.m.
June 21	Fair morning, cold rain p.m.	45·5	56·	—
,, 22	Fair morning, rain p.m., wind S.W.	46·5	55·	—
,, 23	Fair morning, showery after 3 p.m.	45·	58·3	61·
,, 24	Rainy, most part of the day heavy; wind N.E., then drew round to W.; very chill and strong	48·3	54·	54·5
,, 25	Fair; wind variable, S.W.	45·5	54·	69·
,, 26	Fair; W. early, drew round to S.W.	49·3	58·3	70·
,, 27	Fair; N. early, cloudy p.m., wind S.W.	46·	58·	69·
,, 28	Very fine and sunny	45·	56·5	67·3
,, 29	,, ,, ,,	47·	59·5	64·3
,, 30	Clouds at times all day; lightning in the evening, and light rain	46·	56·	62·7
July 1	Cloudy; wind N.E.; cold	41·	58·7	54·
,, 2	Cloudy; wind N.E.; variable	39·7	55·	54·
,, 3	,, ,, S.W. to W.	43·5	56·	53·
,, 4	Snow all the morning, light rain p.m.	42·	43·5	43.
,, 5	Snow covers the mountains, and reaches down to within 800 ft. of the valley; wind from W. to N.E., very variable	39·5	50·	50·
,, 6	Brilliant; wind N. to S.W.	36·	49·	57·
,, 7	Fair; wind N. to E.; changeable p.m.	35·	49·8	49·5
,, 8	Brilliant; wind N. to S.W.	31·5	45·5	52·5
,, 9	Fair, with a slight shower in p.m.; wind N.E. to S.W., variable; wind W. p.m.	33·2	51·2	53·3
,, 10	Fair, clouds, wind N.N.E. a.m. to S.S.W. p.m.	37·7	49·3	60·3
,, 11	Fair; wind N.E. a.m. to S.W. p.m.; cloudy and partial showers p.m.	40·3	59·	59·5
,, 12	Changeable; wind S.W.	43·	61·	68·
,, 13	Cloudy a.m., fair p.m., wind S.S.W.	42·	57·	64·
,, 14	Fair; wind N.E. a.m., S.W. p.m.	47·	57·5	58·5

In estimating the probable effects of the climate of St. Moritz on the invalid, we have not only to consider the influence of its chalybeate springs and of its low summer temperature, but above all we must direct our attention to the barometrical condition as showing the light degree of atmospheric pressure.

Our own mean pressure on the coast of England is 30 inches. The invalid travelling to St. Moritz by way of Switzerland finds that at Zurich the pressure has diminished to 28·8; at Coire (or Chur, the furthest point which he can reach by railway) it is 28, at Calanda (the first ascent towards St. Moritz) 25. Then descending to Tiefencasten, the pressure increases to 27·3. Again steadily ascending to the summit of the Julier pass, it diminishes to 23; descending thence into the valley of St. Moritz, the pressure at Silva-Plana rises to 24·10, and at the Kurhaus at St. Moritz it stands at 24.

At these high altitudes the variations of barometric pressure are not great; during the 21 days I was at St. Moritz I did not see the barometer higher than 24·6, nor lower than 23·6.

The effect of relieving the body from one-fifth of the atmospheric pressure to which it has been habituated in England is sufficiently remarkable in the lightness and elasticity it gives to the bodily and mental sensations of the patient. The vascular system acts more freely, and functional health generally is quickened. Hence persons of sluggish circulation, of oppressed function, suffering from venous congestions and the numerous ills included in their train, benefit immediately on reaching this high altitude, while those of an opposite constitution, the nervous and the irritable, with excitable arterial system, had better keep away.

I noticed that nearly all the Germans who came to the baths wore cotton-wool in their ears during the first few days of their stay. I omitted that precaution, and suffered from headache the first day or two. Probably it is wise to use the cotton-wool till the circulation has accommodated itself to the new condition of things.

Those who send patients to St. Moritz must remember that they are sending them to live, eat, drink, sleep, and walk at a higher elevation than the summit of the highest mountains in Great Britain. Snowdon is only 3571 feet high; Ben Nevis, 4380. To still further impress this fact, I would add that the valley is higher even than the summit of the Righi Kulm by nearly 200 feet.

Both Dr. Brugger (who is Physician to the baths) and Dr. Berry (who is Government Physician to the district) concur in stating that one effect of the position of St. Moritz is to cure hæmorrhagic conditions. Hæmoptysis is arrested at once by a residence there. This is probably wholly owing to the removal of atmospheric pressure and the consequent freedom permitted to the circulation.

Among the English at St. Moritz was a gentleman whose case interested me greatly—a middle-aged man, who had had sunstroke in India, and who had but just escaped from having an apoplectic attack in England. He was suffering when he came to the baths with congestion of the head to a very serious extent. His brother told me that he scarcely spoke to him the whole distance from England to St. Moritz. His face was flushed and congested to an extreme degree; his eyes bloodshot; he had great pain at the back of his neck and occiput, and was extremely giddy, not daring to walk up any height, not caring to speak to any one, and feeling morose and miserable. I only saw him as an outsider, and was not able to make other than such observations as I could make non-professionally, but his improvement was daily and almost hourly manifest. In a few days he was comparatively cheerful, and soon became perfectly well to all appearance. His face lost half its redness, his eye cleared, he sought society which he had before avoided, and I saw him in less than a fortnight climbing one of the spurs of the mountains more than 2000 feet above the valley, alone, and free from all giddiness. He left St. Moritz perfectly cured after about a month's course of its waters and baths; but I should attribute at least as much of his cure to the removal of atmospheric pressure as to the effect of the chalybeate and carbonic acid of the waters.

The effect of the winter climate of St. Moritz on the consumptive is beginning to attract much notice, and during last winter a few consumptives bravely stayed at Samaden, about four miles down the valley, with the greatest advantage to themselves. I had the opportunity of seeing and examining two of these gentlemen, and of conversing with others.

The conclusion at which I have arrived is, that in the early stage of phthisis, where there is great congestion and partial consolidation, with hæmorrhage, or a tendency to hæmorrhage, a winter at St. Moritz will prove of great value. Further, in the ulcerative stage, where the disease is confined to one lung, or where the portion of tissue destroyed is not very extensive, I think a winter's stay at St. Moritz would be worthy of grave consideration. In these cases perhaps the best tes would be as to whether the patient's breathing, cough, etc., are better during clear frosty weather or not. We all of us have had cases of this kind where, during very severe frost, great improvement has been manifest, and lasted until the thaw set in. In such cases a residence at St. Moritz for the winter would be worth a trial.

One of the gentlemen whom I saw gave me this history of his case:—When about 20 years of age he had several attacks of pulmonary hæmorrhage; he was then living in England, and was following sedentary pursuits. Several English Physicians were consulted—Dr. Williams, Dr. Gull, Dr. Walshe, in London; Dr. Blakiston, of Hastings; and Dr. Barry, of Tunbridge Wells. They all considered him to be consumptive, one lung only being the seat of the disease. There was no hereditary tendency to consumption in his family. In June, 1866, he came to St. Moritz, and derived so much benefit during the summer that he was persuaded, at the instance of Dr, Berry, to remain also during the winter. He has remained there ever since, and is apparently quite well. I examined his chest, and could find no trace remaining of any disease whatever. He is thin and dark, but has abundant physical power, and feels quite well.

Two Italians spent the winter of 1867 in the valley. In one of these cases there was profuse purulent expectoration, which, together with the cough, almost disappeared during his residence at St. Moritz. The other also was pronounced by his Physicians to be in a state of advanced phthisis, but is now apparently well. These gentlemen informed me that by the middle of November the weather becomes settled and cold. A large fall of snow usually ushers in the settled winter, and then there is no thaw till the end of March or middle of April. The air during all this time is perfectly dry, the sky brilliantly blue, with a clear sun for days or even weeks together. There is very little wind, and the air is still and wonderfully clear and pure. The lowest degree of cold in the winter of 1867 was —14° Fahr.

M. Avignone, one of the gentlemen above referred to, kindly favoured me with the following table of his own personal observations(b):—

Weather (Fahrenheit's Thermometer).

Months.	Average of the thermometrical temperature.	Average of the day of maximum temperature.	Average of the day of minimum temperature.	Days of rain.	Days of snow.	Perfectly serene days.	Remarks.
July, 1867	+55·90°	+61·25°	+47·75°	..	..	..	Thermometrical observations taken four times a day—8, 12, 4 8 o'clock. The months of June, July, August, and September observed in St. Moritz, the others in Samaden. The number of cloudy days may be obtained by subtracting the number of rainy, snowy, and serene days from the whole number of days in the month.
August, ,,	+55·70°	+63·50°	+45·50°	..	..	..	
September, ,,	+50·55°	+61·25°	+38·75°	..	..	..	
October, ,,	+39·85°	+51·00°	+28·25	4	8	11	
November, ,,	+26·75°	+41·00°	+12·20°	3	7	18	
December, ,,	+13·20°	+33·00°	− 4·00°	..	8	9	
January, 1868	+14·25°	+25·00°	− 6·90	..	6	17	
February, ,,	+24·00°	+32·00°	+15·00°	..	1	20	
March, ,,	+28·00°	+32·00°	+19·00°	..	8	15	
April, ,,	..	..	..	..	..	..	
May, ,,	..	..	..	..	..	..	
June, ,,	+53·20°	+60·25°	+26·25°	1	1	8	

The valley of St. Moritz affords several advantages to those for whom a residence in a dry frozen air is deemed desirable.

Firstly. It is easily accessible by railway to Chur, and thence by posting or diligence in from twelve to fourteen hours over the Julier or the Albula pass. There is fair accommodation half way at Tiefencasten for those who desire to break this long journey. The route from Italy is still more easy—from Chiavenna over the Maloja.

Secondly. This accessibility allows the invalid to avoid the dangerous time—viz., that of unsettled weather of alternate frosts and thaw. He can wait in France or Italy until the middle of November, and then go at once into the region of decided frost. The road is open during the whole year.

Thirdly. The accommodation is now excellent. Mr. Strettel, who resides at St. Moritz for his own health, will gladly give any information on this head. He wishes to receive a few

(b) The continued sunshine is partly due to the geographical position of the valley, which, in a direct line, is about thirty miles only from Lake Como, and therefore has the Italian sun and sky.

delicate boys into his own house, and to educate them. Dr. Berry also will receive patients, and I believe the Kulm Hotel will be kept open if a sufficient number of visitors remain; if not, the Bernina Hotel at Samaden is open all the year round, and is most excellent in all its arrangements. Both Dr. Brugger and Dr. Berry assure me that consumption is unknown in the upper part of the valley, and that those natives of the Engadine who contract the disease in Italy, France, or England return home again and rapidly recover.

A very fat and jolly innkeeper, a Boniface in appearance, was pointed out to me as one of these salvages. He looked as little like a consumptive, when I saw him, as any man I ever met with, as he was standing in front of his hotel, a cigar in his mouth, and another tucked behind his ear (as a clerk wears a pen).

One other point deserves notice—the extreme rarity of goître in the valley of the Upper Engadine. I only saw one person thus afflicted during my three weeks' stay. It is very prevalent in the Italian valleys we passed through on our route.

It will afford me great pleasure to answer any further inquiry from any of your readers, and to give any information in my power.

Bath.

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Medical Times and Gazette.

SATURDAY, OCTOBER 3, 1868.

THE OPENING OF THE LONDON MEDICAL SESSION.

The introductory lectures to the coming Medical session in London may be perused with interest and profit, not only by the students for whom they are primarily intended, but by parents, by those who are employed in education, and by all who take an interest in social development. Never was greater unanimity shown by two lecturers speaking independently on the same subject. The demand of a good preliminary education for Medical students is no novelty, but never till now has it been urged with more vigour, when it is felt that it ought to be enforced, but is not. Mr. James Lane carried many a hearer with him when he quoted from the Committee of the General Medical Council, that the education of Medical students can only be improved, not by improving Medical study itself, but by insisting on that preliminary mental culture which alone can fit the mind for study purely Medical; when he regretted the inability of the Council to enforce their own recommendations; when he demanded as good a starting-point for Medical education as is demanded in law and the church, and affirmed that thus only can the miserable competition for offices of little emolument and less honour be put a stop to. Dr. Barnes spoke well of the value of the French language, not merely as an instrument of intercourse, but as a discipline in exactitude of thought and felicity of expression. He too points out—and Professor Guy as well—the immense difference between preparing to pass an examination and preparing for the work of a lifetime. The nature of Medical studies is detailed with marvellous precision by Dr. Burdon Sanderson, whose remarks on the distinction between the scientific and the empirical elements, and the due honour yielded to the latter, are worthy of one who is so acute and candid a worker at Medical science. Mr. Thomas Smith, too, treated of Medical practice as an art to be gained by experience; and if Professor Erichsen, on the one hand, spoke almost too highly of Medicine as a science, and Dr. Moxon almost too lowly, there is no difference in their teaching on this point—that, as Dr. Guy says, the art of healing is the foremost amongst the arts, and that it must be practised in the light of the sciences which enter into the Medical curriculum. As Mr. Critchett well says, diagnosis is the first point, and that must be attained by scientific methods of observation and exploration. Remedies without diagnosis are like the club in the hand of a blind man, hitting at friend or foe, as chance might be. Dr. Pollock judiciously interposed one word in favour of bodily exercise and recreation; and almost all reminded their auditors that the studies and duties they were beginning could scarcely be carried on as they should be without reference to a higher Power. The King's College Professor would naturally appeal to religious motives, for it is the genius of the College to take religion as the corner-stone, or cement, and salt, that supports and binds together all human knowledge, and saves it from corruption. But when we read the heartfelt periods of Mr. Thomas Smith, gilded with biblical eloquence, or the solemn words of Mr. Mason, and know that these are not the outpourings of minds tainted with constitutional melancholy, nor with an asceticism that unfits for the practical work of life, we realise to the full the sense of responsibility which attends the practice of Medicine, and the fact dwelt on by more than one speaker, that the sense of having done our duty is the only reward which some of us can hope to attain.

THE REV. PROFESSOR HAUGHTON ON FOOD, WORK, AND DISEASE.

We have already given commentaries on the addresses of Professors Acland and Rolleston and Dr. Gull. We now approach the consideration of Professor Haughton's "Address on the Relations of Food to Work done by the Body, and its Bearing on Medical Practice." The Professor states that whereas in childhood the food is employed in growth and in work, in the adult age, when the weight is stationary, it may be considered as employed in work only. And as the work done by the steam-engine must be measured by the loss of heat experienced by the steam in passing from the boiler through the cylinder into the condenser, and not by the loss of substance undergone by the machinery, in like manner the mechanical or intellectual work done by the food is to be measured, not by the change of *substance of the muscles or brain* employed as agents of that work, but simply by the changes in the blood—*i.e.*, the food that supplies these organs. He then proceeds to argue that it is a great mistake to suppose that the work done by any organ—whether muscles or brain—may be measured by the waste of the working instrument. "If it were possible," he observes, "to assume that all muscles wasted equally for equal quantities of work, and also to measure separately the products of that waste, we might then assume the waste of the organ as the measure of the work. Neither of these assumptions, however, can be admitted, for it can be shown that different muscles act under different conditions, so that equal wastes would represent unequal works; and also it is impossible to separate in practice the products of waste of muscles from those of the general changes of the blood."

These remarks are sufficient to explain to the reader what

may be termed the starting-point of his views. He now turns to the subject of *animal heat*, and traces its history from Hippocrates to Lavoisier. It may interest those of our readers who take an interest in the history of scientific discovery if we briefly indicate the steps by which Lavoisier arrived at his great result. A guinea-pig was placed in a bell glass inverted over mercury, and an arrangement was made so that a current of fresh air was supplied to the animal, and was afterwards carried off through tubes containing caustic potash, which arrested the carbonic acid produced by the animal. In ten hours the guinea-pig burned on an average 3·333 grms. of carbon, which are capable of melting 326·75 grms. of ice at 0° C. The same guinea-pig was then placed for ten hours in an ice calorimeter, during which time the heat of its body melted 402·27 grms. of ice at 0° C. Making a correction for the coefficient of combustion of carbon, we find by a simple calculation that the heat of combustion of expired carbon thus determined is equal to 90·68 per cent. of the animal heat developed, which is regarded as 100. Subsequent experiments showed that the difference between these numbers was due to the combustion of the hydrogen consumed in respiration.

In concluding the subject of animal heat, Professor Haughton estimates its amount in a manner that will bring it into comparison with ordinary mechanical work, and by a simple arithmetical calculation arrives at a result which will probably startle some of our readers—viz., that *the mechanical work equivalent to the daily animal heat of Lavoisier's guinea-pig* = 233,310 foot-pounds; (a) and, assuming the animal to weigh 4 lbs., the preceding amount of work representing animal heat would suffice to raise the weight of the animal through a vertical height of 11·05 miles. Professor Ranke found that, under various conditions of food and fasting, his daily excretion of carbonic acid varied from 660 to 860 grms. His weight being 67 kilogs., the heights through which the combustion of the carbon would raise him are 5·74 and 7·48 miles respectively. Pettenkofer and Voit succeeded in producing a range of carbonic acid excreted by a large dog from 289·4 to 840·4 grms.; and by a similar calculation as before, these excretions of carbonic acid correspond to the mechanical work of lifting the weight of the dog through heights of 5·03 and 14·62 miles respectively; and, taking the mean of the above results, the average work due to the animal heat will lift the animal through a vertical height of 8·784 miles.

Then the question comes, "How much of this force is employed in producing animal heat, how much in mechanical work, external and internal, and how much in vital or mental operations?"

From numerous observations on daily labourers engaged in the hardest kinds of work (paviors, navvies, etc.), Dr. Haughton finds, as a mean result, that a man's daily labour is equal to 353·75 foot-tons, or 109,549 kilogrammeters. This is the exact equivalent of the work done by a man weighing 150 lb. in climbing through one vertical mile, and is less than one-eighth of the work expended in producing and maintaining animal heat. Even if we add to the external muscular work that of circulation and respiration, which may be estimated at 133 foot-tons, the whole muscular work of a labourer will amount to less than one-sixth of the work expended in maintaining his animal heat.

From experiments made independently by Professor Haughton, Pettenkofer and Voit, and Ranke, it seems that about 2 gr. per lb. (or 300 gr. for a man of 150 lb.) of urea are excreted independently of muscular exertion, and must be regarded as due to vital work. Hence, if we suppose that muscular exertion can be measured by an increased excretion of urea, the quantity of this excretion will not increase as fast as the muscular exertion, but should increase regularly at a slower rate. To settle this important point, Dr. Haughton, for four consecutive days, walked on an average nearly twenty-one miles, his ordinary daily exercise being five miles a day. To his great surprise, although not to our own, this four-fold exercise did not produce the *slightest effect* on his daily excretion of urea, which averaged 501·28 grains. For very similar results had been obtained previously to the date of his experiment. For example, Dr. Edward Smith ascertained that with violent labour, as that of the tread-wheel, there was only an increase of 19 gr. of urea daily over the amount secreted during light labour, and Voit, as long ago as 1860, found that in fasting dogs, with or without work, the quantity of urea was so very nearly the same that he attributed the slight increase in the case of the labouring dogs solely to increased ingestion of water, together with increased action of the heart and lungs.

From a somewhat complicated series of calculations, into which we need not enter, Dr. Haughton finds that the "work due to production of 501·28 grains of urea (his average daily quantity) = 704 foot-tons." The amount of theoretical work produced by nitrogenous food is double the work actually done in his walking excursion, which he calculates at 354 foot-tons. If to this external work we add 122 foot-tons as representing the heart's daily action, and 21 foot-tons as representing the internal work performed by the respiratory muscles, the total work is represented by 487 foot-tons, which is 69 per cent. of the theoretical work—viz., 704 foot-tons. If the assumption be correct that 2 grains of urea per pound of bodily weight is required to maintain the vital work, only about half of the 501 grains can be considered as expended on external muscular work. Moreover, we are assuming, what is by no means the case, that the muscles act without loss by friction. Hence it is obvious that, supposing the data are correctly given, the available force represented by 501 grains of urea is not sufficient to account both for the vital work and for the external work expended by Dr. Haughton during his experiments. When he made these observations he was not aware that he had been anticipated by a few months by Drs. Fick and Wislicenus, of Zurich, whose experiments have been described in this journal, and who were undoubtedly the first to prove that "the force due to the urea excreted in a given time is not sufficient to provide the actual work that may be done by the muscles in the same time." The subject is one of such great importance that we are glad that Dr. Haughton has thus given us an independent proof of the correctness (to a certain extent) of the results obtained by the Zurich physiologists. We are surprised to find no allusion to the researches on this subject by Dr. Parkes, who probably arrives at results nearer to the truth than any other inquirer. Liebig, if we are correctly informed, remains unshaken in his view that nitrogenous food provides the forces necessary for the production of muscular work, while his recent opponents deny that this food contributes any portion of the force employed in muscular work. The truth, as Dr. Haughton observes, lies between these extreme views, and we must admit that a certain development of force, expressed in animal heat, muscular work, and mental exertion, may be the effect of farinaceous, saccharine, fatty, and albuminous foods.

Amongst other new views connected with this subject we may observe that the blood is now almost universally regarded as the seat of all the chemical changes that develope force in the body.

The habits of the cats and the ruminants are forcibly contrasted by Dr. Haughton. While the former require fresh meat and blood for their nourishment, the latter are exclusively vegetable feeders. Muscular work is obviously developed

(a) As it is possible that some of our older readers may not be familiar with the comparatively modern term *foot-pound*, we may mention that it is now generally employed to signify the *unit of work*, which in this country is that which is necessary to overcome the pressure of one pound through the space of one foot. The dynamical equivalent of heat (a knowledge of which is assumed in these calculations), or, in other words, the number of foot-pounds required in order to produce an elevation of temperature amounting to 1° F. in one pound of water at 50° F., is taken as 772. In place of foot-pounds, the French use *kilogramme-mètres* as their unit of work. These are converted into foot-pounds by multiplying them by 7·210.

by both these forms of diet, but it is muscular work presenting marked differences in its character. "The hunted deer will outrun the leopard in a fair and open chase, because the work supplied to its muscles by the vegetable food is capable of being given out continuously for a long period; but in the sudden rush the leopard will overtake the deer, because its flesh food stores up in the blood a reserve of force capable of being given out instantaneously in the form of exceedingly rapid muscular action." The inferences to be drawn from the history of the deer and the leopard are obvious. For steady, long-continued, slow labour, we should trust to farinaceous and fatty foods, while for the exercise of sudden bursts of muscular exertion for short periods we should take nitrogenous food. We are inclined to doubt "the instinctive preference" given to the proper food, and very much question whether the Lancashire labourers would prefer living on "flour and fat, in the form of apple-dumpling," if they had a chance of dining off roast beef and sucking-pig. No one has exhibited stronger evidence of "steady, long-continued labour" than the learned author of this essay. Does he personally feel the preference of which he speaks, or has he observed it amongst the other hardworking Fellows of Trinity? In support of his view that the food should be selected according to the nature of the work, he cites the cases of certain Hospital nurses who, during a cholera epidemic, when their work became more constant, asked for bacon fat and milk in place of meat and beer; this change was partially carried out (on two days of the week) with good results.

THE WEEK.

SCARLET FEVER.

The ever-watchful guardian of the public health, the Registrar-General, calls attention to the prevalence of scarlet fever, from which 101 deaths were registered last week in London. He suspects that the cause is to be found in the bad sanitary state of the houses in the poorer parts of London, and instances one house, of which the district registrar says that "there is no water laid on to the closet, and the effluvium is very offensive." This terrible fever is, indeed, a very severe test of the sanitary condition of houses, for even in the best and cleanest it is but too liable to spread and affect every member of a family. It were well that some methodical notions were instilled into the public mind as to the getting rid of the scarlet fever infection. First, there is the house, and, in consequence of the porous nature of plastered and papered walls and ceilings and floors, it is often necessary to scrape all porous surfaces, to fumigate with burning sulphur, and completely to renew all the surfaces, before infection can be got rid of. Secondly, there are the immovable articles of clothing, such as carpets, curtains, and bedding, which pre-eminently require purification by heat or by washing and long exposure to the air. Thirdly, there is linen and wearing apparel requiring the same treatment. Fourthly, there is the patient's person, which retains infection long and obstinately, and which ought to be secluded till the skin is well peeled, and all sores about the nose and throat healed. Lastly, there is the underground department, the sinks, closets, and receptacles of impurity, which ought to be thoroughly emptied, and disinfected with carbolic acid. As for any approach to scientific accuracy in staying the infection of this fever whilst the patient is still sick, or in getting rid of it from the house, as the houses of the poor now are, it seems hopeless. The ventilation of the sick room should be so managed that there should be a brisk current up the chimney, and no air pass into the passages. No foul linen nor slops should be removed without previous disinfection, and in a closed vessel. The closets and other places where slops are emptied should be sedulously disinfected, for these are the true vehicles of infection. As for the state of things described by the Registrar-General, it is the normal one in all the poor districts of London and elsewhere; and so long as houses remain as they are, the hope of checking scarlatina is visionary. The mercy is that after some weeks it dies out of itself.

THE WATER OF THE SOUTHWARK COMPANY.

We hope that the statement by Professor Frankland, in the Registrar-General's weekly return, of the extreme impurity of the Southwark water will be inquired into by the Metropolitan Board of Works or the Privy Council or other authority. The total solid impurities in this water in September are said to have been as 39 parts in 100,000, against an average of 24 in the other Thames water companies; moreover, it is said that much of the impurity was due to common salt. Had some Thames water from between bridges found its way into the reservoir?

PETROLEUM *v.* MALARIA.

We may call attention to a copy of correspondence at page 405, which has been sent to us by an Indian correspondent, respecting the power of petroleum vapour to neutralise malaria. It is well known that some effluvia—for instance, those of crowded bodies of men—have this power, and it will be a great boon to travellers through fever-haunted districts if they can supplement the good effects of quinine by medicating the night air with petroleum vapour.

BURIAL EXPENSES.

The notion that a man may do what he likes with his own has seldom been carried to a more absurd pitch than in the case of a man against whom the relieving officer of Hammersmith applied for a summons for neglecting to bury his wife. The body had become offensive, and the parish authorities had been obliged to remove and bury it. It was alleged that there was no lack of means, save that the man wasted them in drink. The magistrate said he had no power to enforce repayment of the funeral expenses, and it is very doubtful whether this can be done in the County Court. The case is only another illustration of the manner in which the Poor-law enables the idle drunken working man to put his hand into the pockets of the industrious ratepayer.

THE MAURITIUS EPIDEMIC.

We learn from a correspondent that between July 16 and August 15 there has been a decrease in the rate of mortality from fever in Port Louis amounting to nearly 50 per cent., the daily average of deaths from that cause early in the period having been nearly eight, and latterly only four. With this exception, the public health remains in much the same state as when our correspondent last wrote. That an epidemic tendency still exists is shown by the occurrence of fresh cases of fever, as well as repetitions of former attacks, during that which is, under ordinary circumstances, the most healthy season, not only in Port Louis, but in the country districts. Two men of the 86th Regiment died of the fever in its rapidly fatal form, and one woman died of diarrhœa and exhaustion after fever. All the soldiers' families which have suffered most from the fever and its sequelæ have been transferred to England or the Cape. Our correspondent assures us that the tents sent from India for the accommodation of the troops during the epidemic had, so far as they had been examined, turned out to be "Sepoys' pals," small, low, and thin, instead of the large, double-poled, thick tents, which alone are suitable for European troops in a tropical climate. We trust that further examination may have a more favourable result, as it would certainly be very discreditable to the military and Medical authorities in India if it should turn out that all the tents are of the same unsuitable nature. The investigation into the nature and origin of the epidemic fever is not likely, so far as we can judge from a hasty glance at the published replies to the questions circulated by the local

authorities, to lead to any useful results. We understand that only a small proportion of the Medical men to whom the questions were sent thought it worth their while to take the trouble of answering, and their replies alone form a ponderous mass of undigested material. The majority who did not reply to the questions appear from the local papers to have been actuated by mixed motives—some by the inutility, in their opinion, of that system of investigation, and others, we are sorry to observe, by personal prejudices against the authors and proposers of the questions. While the epidemic was in full force we urged the necessity of sending out a scientific commission of inquiry from this country, the members of which would have been uninfluenced by insular prejudices. If this had been done, we might by this time, in a scientific record of the Mauritius epidemic, have been in a fair way of learning the great lesson involved in its terrible annals, but which, we much fear, is now more likely to be obscured than elucidated by the mode of investigation which has been pursued. Local papers state that Dr. Reid, the principal military Medical officer in the island, to whom the investigation had been entrusted, is unable, from the engrossing nature of his other duties and from ill-health, to carry it further. Surgeon-Major Small succeeds Dr. Reid as a member of the local Board of Health, and will furnish the report on the evidence collected.

COSMETICS AND CREDULITY.

We are not going to reproduce for our readers' entertainment any of the evidence which came out on the trial of Madame Rachel, of whom we will only say, in passing, that her condemnation was most just. The philosopher is neither startled at hearing of soap at two guineas a cake, nor of the dew of Sahara or water of the Jordan at fabulous prices, nor at the faith of the prisoner's daughter, who swore that these waters came from the East. Equal miracles of faith are displayed with regard to the fat of the bear or the cream of Circassia, and equally extravagant sums are squandered on lying trumpery by women who think frugality one of the first virtues in all except cosmetics. A peculiar hair restorer, at the present moment enjoying a wide popularity, is said to be made of herbs from Western America; sceptical chemists, however, discover in it a strong solution of acetate of lead. Stranger still, this nostrum is concocted by religious persons, who regularly give the profits to charitable and missionary purposes!

FROM ABROAD.—M. GUÉRIN ON PUERPERAL PERITONITIS.

M. Jules Guérin introduced at the last meeting of the Academy of Medicine a new phase of his doctrine of the treatment of wounds in the shape of a paper on the "Arrest of Puerperal Peritonitis by the Employment of Uterine Aspiration." His views on this subject, he says, he had already expounded in 1858, based upon the at that time not known fact of the non-contraction of the uterus in this disease. The utero-placentar wound must, in fact, be regarded as either an exposed or closed wound, according as the uterus remains uncontracted and leaves all the orifices open, or by its contraction closes up the anfractuosities of the surface. In the former case, the uterine surface is subjected to the same consequences as an exposed wound, among these inflammation and suppuration; while, in the other, it enjoys all the immunities of a wound unexposed to the contact of air. Moreover, the exposed utero-placentar surface, "in consequence of the anfractuous and confined condition of the uterine surface, becomes aggravated by all the conditions and complications of a cloaca in a state of putrefaction, being, on the one hand, in connexion with the external air, which is not renewed, and, on the other, with the peritoneal cavity, which attracts its contents." This state of things M. Guérin looks upon as at the bottom of the series of well-known accidents known as puerperal peritonitis, and his proposed remedy, or rather preventive, is a purely mechanical one.

"When the uterine cavity, in consequence of the non-contraction of the uterus, forms an empty space communicating with the atmosphere, a column of air necessarily rushes in, and fills any of such space not occupied by the fluids of the uterus, and exerts on all parts of the internal surface of the organ and the matters it contains a pressure equal to the barometric pressure. The cavity of the uterus is also in communication with that of the peritoneum; and I long since demonstrated that the peritoneal cavity, like all other serous cavities, undergoes variations in its amplitude, whence result variations of pressure of the media which they circumscribe. As regards the abdominal cavity, these variations are under the influence of the respiratory movements, and at each inspiration relative vacuums are produced between the viscera of the abdomen and the walls that hold them, which exert temporarily an aspiratory effect upon the orifices of the Fallopian tubes, that is further favoured by the permanent pressure of the column of external air acting on the internal, open, gaping surface of the uterus. Under these circumstances, we can but recognise a utero-abdominal current, and we can only arrest this by establishing a current in an opposite direction. The effect of this last current must be to produce the aspiration of the liquids and gases of the peritoneal cavity, and the consecutive contraction of the walls of the uterus. But in order that this retrograde action may become established, it is evident that the entrance of the external air must be prevented by occlusion of the vagina. This and all other difficulties are overcome by means of the apparatus I have devised, as illustrated by the case I now have to relate."

An account of this apparatus without the accompanying woodcut (which is given in all the Paris weekly journals) would be unintelligible. It may in brief be stated as an adaptation of the air-pump for the withdrawal of previously injected liquid substances, such as diluted phenic acid, etc., carefully securing, at the same time, against the ingress of the external air per vaginam.

M. Depaul protested against the suction-pump theory of puerperal fever of M. Guérin altogether, and declared that the assumed passage of the liquids by the tubes was anatomically and physiologically impossible, and well enough as this apparatus may work out of the body, it can be of no practical use. The passage of liquids from the peritoneal to the uterine cavity, and reciprocally, cannot be demonstrated any more than can the identity of the liquids of the two cavities. In 600 autopsies performed by M. Depaul, he has never met with any condition justifying M. Guérin's purely theoretical views. Among other examples showing how unfounded these are, take the following:—

"A child dies in utero during labour, every manœuvre having been tried in vain for its extraction. Air, of course, is introduced in abundance; the child is putrefied, and everything is infected. The head plugs up the os, the uterus has tripled its size, and the abdomen is distended. Surely here is more than a pump to induce penetration of fluids or gases into the peritoneum, but the uterus would burst before such passage took place. How could one expect the organ to exert such action when nothing prevents these matters issuing from the vagina? And when its own walls are soft and flacid as a rag, could it exert the effects of a forcing pump and propel liquids through a microscopic canal? M. Guérin must be terribly in want of a defence for his theory, but this one will deceive no one but the ignorant in obstetrics."

M. Blot observed that M. Guérin was wrong in supposing that the uterus after delivery continues to undergo contraction. It is a process of atrophy that is set up, and when the physiological changes are interfered with this is arrested, and then the organ may become large, soft, etc., as described by M. Guérin; but this is a condition of atony or inertia, in which it is in a very unfit state to propel liquids into the peritoneum by contractile action. When, at an autopsy, we meet with pus in the uterus, the tubes, and the peritoneum, this is produced by these respective surfaces, and to say that it flows from one cavity to another is a mere assertion. M. Blot agrees with M. Depaul that the case related by M. Guérin was one

of mere metritis, probably due to some shreds of placenta being left behind, as so commonly happens in women delivered by midwives' pupils. The diagnosis, at all events, was very insufficiently made out, and the recovery, perhaps aided by the injections, took place quite independently of the "aspiration" treatment.

THE NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

(*From our Special Correspondent.*)

BIRMINGHAM, September 30.

THE twelfth annual meeting of the Social Science Association began to-day at 1 p.m., and was opened by a council meeting at the Exchange-buildings. The arrangements which had been made to celebrate the congress were very complete, and promised to make it a very successful and brilliant gathering. A goodly number of tickets have been issued, and, if all the holders of them attend, there will be a very large meeting.

The chief business of the council meeting was to bid a welcome to all the friends of the Association, and to congratulate each other upon having met again to discuss the various topics which their Association embraces, and also to consider to whom they should award the prize offered by Mr. W. H. Lloyd for the essay containing the best and most feasible plan for the temporary employment of operatives and workmen in casual distress.

At 3 p.m. there was a special service at St. Philip's Church, when the Bishop of Worcester preached the sermon. There was a fair attendance, including his worship the Mayor (Mr. T. Avery), Lord Lyttleton, the Rev. Dr. Wilkinson, the Rev. Dr. Burges, the Rev. R. W. Dale, and many others. The rector read the lessons. The bishop selected his text from Luke—"If the salt have lost his savour, wherewith shall it be seasoned?" He spoke of the joy he felt at the committee of the Association making it part of their arrangements that they should meet together in God's house, for the service of prayer and praise is the best introduction which could be given to their labours, and he felt persuaded that the object at which the Association aimed, and that the efforts of the promoters of social science deserve the best wishes of all who are anxious for the common good. He went on to remark that—

"You may construct the most perfect machinery for the government of social life; you may enact the best laws; you may contrive the best processes of education; you may discover and make known ways of protecting and preserving health, which are of unquestionable excellence; you may lay down rules of faultless character for the regulation of trade and commerce; but if you content yourself with the construction of such machinery, and expect it to work well without the animating spirit, which is to be found in the Book of life; if you leave out of all consideration the means and appliances by which that spirit of life may be put into your machinery, you are but heaping up salt, which will have little or no effect in keeping society from evil, because it has not the savour which makes its use of value. I say it with all humility, because I speak in the presence of men of well-cultivated minds; but I say it with the deepest conviction of the truth of what I say, and with the boldness of one who speaks in his heavenly Master's name, that the true savour of the salt of Social Science is to be found in the characteristic doctrines of the Gospel, in the love of Christians for Christ, and in their love to one another for Christ's sake. The 'prudential instincts' of man may build up a school or sect, drawing together empty hearts and attaching them to one another by a feeble bond of union. But the allegiance of Christians to their Lord and Master forms them into a holy brotherhood, because they are joined together in Him. Their full hearts burn with zeal to show how they may prove themselves to be His disciples. He bound men to one another in the Gospel, but the strength of the tie consists in the fact that every one is first bound fast to our Lord himself. Our devotion to Christ is the one thing which causes us to love the brotherhood. We love Christ in every man. We love every one for whom Christ died. The office and work of the ministers of the Gospel, upon which, however, this is not the occasion to enlarge, requires them to teach those among whom they labour how to bring about and to perfect this their union with their Lord. We betray a solemn trust if we do not spend our lives in doing it. It is our part specially to spread abroad this Saviour of life; but while we so employ ourselves, and draw our cares and studies that way, we acknowledge a large debt of gratitude to those who undertake the noble work of developing the laws, and constructing the machinery, by which the well-being of our kind may be permanently bettered. We ask you only, while you are so engaged, to lift up your hearts and minds from time to time above the machinery that you are contriving, and try to catch for yourselves, and to impart to others, the spirit of life, which shall give it working power. One more remark in conclusion will finish the task which the occasion seems to lay upon me. Beware, let me say, of exaggerated expectations of the results which are to follow from the successful prosecution of our labours. However plain the laws of wellbeing that we discover, however perfect the machinery which we may contrive for averting evil, it would be hopeless to expect that irregularity and evil can be made to cease entirely. Such is not the condition on which we hold our being; such is not the discipline by which our heavenly Father governs us. There are good uses of adversity, which pious hearts are quick to recognise as they bow down themselves in submission to their heavenly Father's will. There is salve in the experience of suffering for which the chastened spirit can rise up and thank God who permitted it, because it has wrought in us the preparation for a far more exceeding and eternal weight of glory. Riches make to themselves wings and flee away, however perfect our contrivances for keeping them. The pestilence walketh in darkness, and sickness destroyeth in the noon-day, however wise and careful our precautions. The poor will never cease out of the land. The unruly wills and affections of sinful men will disturb our most prudent calculations. Sorrow and sighing will not flee away until that of us which is mortal shall have put on immortality. The recollection of these stern truths should not be allowed to discourage us from the noble work in which we desire to be occupied. Our heavenly Father permits us to labour in a wide field for the prevention of ills which afflict the life of man, and He crowns our labour with success in innumerable instances. Let us account it a joyful task of duty to labour in this field; but let us take care also that our work be begun, continued, and ended in a spirit of deep submission to the over-ruling Providence and grace by which the world of men is governed."

At eight in the evening a general meeting of associates and members assembled in the Town-hall, to hear the opening address delivered by the Right Hon. the Earl of Carnarvon. The hall was nearly full, and presented, from the number of ladies who were present, quite a gay and animated appearance. On the platform were his worship the Mayor, Lord Lyttleton, Earl Howe, and other men of note. The address, which occupied an hour and a half in delivery, was a most able one, and marked throughout by great clearness of expression and depth of research. His Lordship alluded in it to the principal topics which the Association will have to discuss during the week. He dwelt at some length on the subject of sanitary reform, and spoke of Birmingham as a town which had not neglected the measures which are conducive to health. Speaking generally on the subject, his Lordship noticed the scanty legislation of the last session of Parliament with regard to sanitary science, briefly calling attention to the Pharmacy Act, the Vaccination Act, the Act for the Improvement of the Dwellings of Artisans and Labourers, and lastly the Poor Relief Act. In all these and similar sanitary questions, Parliament (said his Lordship) may do much, private individuals may, by precept and example and influence, sometimes do more; but it may be safely laid down that no real or permanent reforms can be achieved where the two main conditions of health—air and water—those two great agents for good or evil, our masters or our slaves, most subtle in conveying poison, or most powerful in sustaining organised life, are wanting. In spite of the Metropolitan Water Act, we are painfully and gradually opening our eyes to the discreditable deficiencies of the water supply of London. Immeasurably inferior to its great type and rival of the ancient world, whose aqueducts, built tier above tier, and striding over the Campagna, still in their very ruins carry their living waters into the heart of Rome; inferior to Marseilles and Lyons abroad; inferior to her own provincial towns, such as Aberdeen and Glasgow, Sheffield and Cardiff, London is provided with a water supply less than health and domestic purposes require, less than the protection of property from fire may justly claim; open, in fact, to objections on the score of quantity, quality, cost, and

unnecessary waste. It is true, indeed, that each individual is nominally credited with a consumption of rather more than thirty gallons per day; but in this case such an average is deceptive, and practically the poorest class are, in many places, reduced to three or four gallons daily, a pitiful and intermittent allowance, obtained under circumstances of personal hardship. It is not too much to say that a good water supply is a necessary condition to high civilisation, which, if she too often exacts the sacrifice of many lives in the requirements of modern society, whether necessary or unnecessary, in the practice of unwholesome trades, in the crowded society of great towns, in the physical and mental overwork to which all classes are subject, and which engenders disease and shortens existence, has at least this compensating merit, that while she consumes she also rates human life more highly, and proclaims in all her works that there is nothing so humble or so mean that science will not take account of it and true statesmanship ponder it, in order to add one week or day or hour to the average life of the millions who are labouring with, and amidst, and around us.

To-morrow morning the chairman of the Council will deliver an address, after which the departments will meet to discuss questions on the respective subjects. In the evening the members and associates will be received by the Mayor in the Town-hall. The work of the Association will then commence in earnest.

PETROLEUM *v.* MALARIA.

(*From Colonel A. Hopkinson, Agent to the Governor-General N. E. Frontier, and Commissioner of Assam, to the Secretary to the Governor of Bengal. No.* 194, *dated Shillong, the* 3*rd July*, 1868.)

Sir,—I have the honour to submit copy of an inspectorial report from Dr. Berry White, of the 44th Regiment Bengal Native Infantry, and also in civil charge at Dibrooghur, which contains a very curious and interesting notice of the unusual good health and immunity from malarious influences enjoyed by the imported labourers at the petroleum works at Makoom, near Jeypore, in Upper Assam.

2. It would be perhaps rash at present to accept any conclusion on the facts noticed by Dr. White. The number of persons whom they concern, and the period involved, are insufficient to connect cause and effect, and to say positively that the results are not simply casual coincidences; besides, I have been informed that the petroleum-working coolies are Dhangurs, who are said by some persons to be as impervious to malaria as Dr. White says the Cacharries are, but it seems to me that a case has been made out for observation and investigation, as well as a search elsewhere for corroborative evidence, and that it would be worth while to draw scientific attention to Dr. White's report.

3. Petroleum workings are now conducted pretty well all over the world, and probably at some localities as malarious as Makoom. Not to mention other places, I may refer to the oil and asphaltum works in Pennsylvania, Trinidad, Seyssel, and the Burmese petroleum wells at Renhangyoung, and it would be important to learn whether at any of them prophylactic effects of the nature indicated by Dr. White have been observed.

4. I do not know whether up to the present time any discovery has been made in regard to the nature of malaria which would rival in importance the obtainment of proof that it could not exist in an atmosphere charged to some particular extent with the vapour of petroleum oil.

5. The Burmese are in the habit of applying their "earth oil" to the cutaneous eruptions to which they are liable, particularly Indian ringworm, but with little beneficial effect beyond allaying the itching.

(*Extract from letter from J. B. White, Esq., Assistant-Surgeon, in Medical charge of Troops, and Civil Surgeon, Dibrooghur, to Major R. Stewart, Deputy-Commissioner, Dibrooghur. No.* 25, *dated Dibrooghur, June* 15, 1868.)

It may not be uninteresting to notice here the unusual good health and immunity from malarious influences enjoyed by the imported labourers at the petroleum works. I made an especial point of inquiry into this in consequence of the extreme unhealthiness for which Makoom has been hitherto notorious. When there was a detachment of my regiment stationed there, the mortality was never under 20 per cent. per annum among the sepoys. Chiefly in consequence of this, on recommendation to Government, the post was taken over by the police about four years ago. Since they have occupied it, it was found to be no less deadly to the Bengalees and Hindostanees of that force, and for the last two years, on my advice, Captain Hume has only sent to the place men who were either Douaniers or Cacharries, both races who are known to thrive rather than otherwise in malarious localities. As these Bengalee labourers could not possibly be so well cared for as the sepoys, I expected to find that the mortality among them would have been something appalling. I was equally surprised and gratified to find that it was all but *nil*, only one death having occurred in two years out of a population of over sixty persons; and that one was an old debilitated woman, who was allowed to accompany her friends. There was an increase by births of seven, and as many more expected within a short time. The infants born in the place all looked strong and healthy. This immunity from malarious diseases can, I consider, only be accounted for on the presumption that the gases, etc., given out by the petroleum exercise a protective influence against the effects of jungle miasma, which is supported by the fact that this mineral oil contains carbolic acid, or its elements, now recognised as one of the most powerful and effective disinfectants known. I further noticed that the coolies were quite free from ulcers or sores on the extremities, which is one of the greatest afflictions of the imported labourer in Assam, and is very difficult to treat. In the tea plantations a leechbite or any scratch or cut in most cases causes an obstinate ulcerous sore. Although these labourers get cut and bitten frequently, their wounds invariably heal rapidly, and, as their work necessitates their being up to their knees in oil for several hours daily, it is only reasonable to deduce that it is the oil which causes the cure.

I have noticed this to you, not for its scientific interest, but because it may be looked on as one of very considerable politico-economical importance to the future of the district; for if this speculation should turn out successful, which it promises to do, it is satisfactory to know that it will not be attended with the fearful loss of life among immigrant labourers which up to this has been incidental to every other branch of European enterprise in this province.

ON THE CHEMISTRY OF THE OSSEOUS TISSUE IN MEN AND ANIMALS.

Although none of the animal tissues have been more thoroughly examined by chemists than the bones, there are still several points on which there is considerable discrepancy of opinion. In order, if possible, to clear away these differences, Dr. Zalesky(a) has instituted a series of analyses of the bones of men and various animals in the Tübingen Laboratory, under the superintendence of Professor Hoppe-Seyler. The following are the most important of his conclusions:—

1. The ratio of the inorganic to the organic constituents of bones is so nearly constant that any discrepancy may be accounted for by the more or less perfect separation of tendinous fibres, vessels, etc.

2. The relative quantity of each of the individual constituents of the bone-ash—as CaO, MgO, PO_5, CO_2, ClCa, FlCa—may be regarded as constant in man and the animals which he examined.

3. Excepting in the carapace of *Testudo græca*, a chlorine compound, which is insoluble in cold water, is found in all bones.

4. The quantities of chlorine and fluorine are in all bones nearly the same, the fluorine slightly preponderating. The quantity of fluorine found by Dr. Zalesky was considerably less than that found by preceding chemists, the mean quantity of FlCa in the bone-ash of the ox being 0·616, in that of man 0·47, and that of the tortoise 0·419 per cent.

5. An augmentation of either the lime or the phosphoric acid contained in the food exerts no constant influence on the ratio of the organic to the inorganic substance of the bones, or on the ratio of the lime to the phosphoric acid.

Professor Ehrenberg.—The renowned Berlin Professor will have the jubilee of his 50th year Doctor's degree celebrated on November 5 of the present year.

(a) In the first part of Dr. Hoppe-Seyler's "Med.-chem. Untersuchungen." Berlin: Hirschwald. London: Williams and Norgate.

REVIEWS.

Surgical Observations, with Cases and Operations. By J. Mason Warren, M.D., Surgeon to the Massachusetts General Hospital. Boston: Ticknor and Fields. 1867. Pp. 622.

This work merits particular notice for several reasons. From its perusal the reader will be enabled to acquire full information concerning the recent progress of Surgery in America, and to compare the results of pathological investigations and operative treatment obtained during late years in that country and in England. To the practical Surgeon it is likely to prove of value, as it contains a great number of admirably reported cases on very many points of operative Surgery, from amputation at the hip-joint down to the removal of an enlarged tonsil or puncturing a hydrocele.

The cases reported by Dr. Warren, which amount to more than 350 in number have been taken from the practice of the Massachusetts General Hospital, and occurred mostly under the care of the author, who combines with a ripe experience, derived from long-continued Hospital practice in his own country, a thorough knowledge of the state of Surgery in England and France. It is not proposed, Dr. Warren states, to comprehend every Surgical subject, but after excluding certain special branches we have had difficulty in finding that any topic has been omitted likely to be found in the contents of more bulky and ambitious text-books.

As a convenient method of arranging and classifying the various subjects treated of in this work, each chapter is devoted to a special region of the body. The first three chapters deal with the injuries and Surgical diseases of the head, face, and neck; the fourth is on paracentesis thoracis; and the fifth, sixth, and seventh, on affections of the abdomen, anus, and male and female genito-urinary organs. Chapter VIII. contains much important matter relating to operations on the extremities, the remainder of the book dealing with gunshot wounds, tumours, and miscellaneous cases.

Dr. Warren is an advocate for excision of tonsils, and states that he has performed this minor operation more than five hundred times with satisfactory results. In cases of enlarged tonsils with otorrhœa, deafness, difficulty of respiration, and other disturbances caused by obstruction to the free ingress of air, partial removal of the affected glands has given great relief. The following are his conclusions on the results of such treatment:—

"From a review of a large number of cases, I find that many of the children were of a scrofulous constitution; that the enlargement of the tonsils caused great local trouble, attended with considerable constitutional disturbance; that the patient was much more liable to inflammatory attacks of the throat than in cases where this condition does not exist; and that they were less liable, after the operation, to these attacks.

"In about half of all the cases, and in about two-thirds of those of children, deformity of the chest existed. Whether this depended on the general constitutional habit of the patient, or was induced by the obstruction in the throat to the free passage of air, the accounts received as to the exact time when either affection was first observed were not sufficiently accurate to justify a decision. It is certain, however, that this deformity does not increase, but rather diminishes, after the removal of the obstruction in the throat. The operation is a simple one, attended with no danger, and almost always affords immediate relief to the symptoms."

The instrument generally used by Dr. Warren is a guillotine without any steel movable needle for piercing the tonsil, as this is thought to be a useless addition.

In the chapter on affections of the anus, a description is given of a peculiar form of fistula which has been frequently observed by Dr. Warren. This consists in one or more sinuses in the region of the anus, which on superficial examination appear to be rectal fistulæ, but, instead of leading into the gut, are nothing more than long inversions of integument containing at the bottom of the cul-de-sac small curls of hair. This hair lies perfectly loose in the sinus, and acts as a foreign body, giving rise to inflammatory action, suppuration, and the formation of fistulæ extending in various directions. The subjects of this affection almost always suppose that they are suffering from ordinary fistula in ano. The treatment is very simple, and consists in laying freely open the suppurating tracts, and removing the loose tuft of hair.

In cases of that very painful affection, fissure of the anus, Dr. Warren recommends excision of the ulcer, and, when there has been much spasmodic contraction of the sphincter, subcutaneous division of the muscle.

The concluding chapter is headed "Anæsthetics," and contains an interesting account of the introduction of ether into practice, the advantages of this agent, and Dr. Warren's reason for preferring it to chloroform. In the Massachusetts Hospital sulphuric ether has been used for more than twenty years without a single unfavourable occurrence, whilst in institutions where choloroform has been used many fatal accidents have occurred. The proportion of deaths from chloroform is estimated at about one a month for the last twenty years. The inflammability, disagreeable taste and smell, and the subsequent unpleasant depression, are all admitted by Dr. Warren as serious disadvantages attending the use of sulphuric ether, but he thinks that this agent, in consequence of its greater safety, will in civil practice take the place of the more pleasant and portable anæsthetic, chloroform.

Some of the cases reported in this volume are of great interest, especially in the chapters on occlusion of the vagina and tumours of the parotid gland. At page 446 is given a remarkable clinical report of ligature of both carotid arteries for an extensive erectile tumour of the mouth, face, and neck. The commentaries on these cases, though brief, are quite to the point, and thoroughly practical. Scattered throughout the book are some excellent plates and woodcuts. Dr. Warren has made a valuable addition to modern Surgical literature, and his volume, we have no doubt, will in this country be favourably received and ranged with the well-known clinical works of Syme and Butcher.

Molestias Venereas y Syphiliticas: Exegese das Doutrinas que a esse respeito interessam, seguida da uma Summula Pathologica y Therapeutica, etc. Pelo Dr. J. A. Marques. Lisboa. 1868. Pp. 1052.

Venereal and Syphilitic Diseases; with a Survey of all the most important Doctrines concerning them; to which is added a Pathological and Therapeutical Summary, etc. By Dr. J. A. Marques. Lisbon. 1868.

This work is one of the most complete, if not the most complete summary and exposition of recent syphilographical science which can be met with—it is truly a marvel of industry and of fair selection. It takes in all the recent contributions of French, German, and English syphilographers, with a bias which perhaps inclines, but not unduly, to English teaching. The names of Simpson, Hutchinson, Wilks, and many other English writers, appear on the page. Few foreigners, indeed, have done equal justice to our Medical literature. The author, in general phrase, will be called a dualist, but he does not shrink from accepting the appellation of unicist, as now it has come to be employed in a more intelligent sense—that is, by unicity intending specificity. This leading idea is, indeed, maintained throughout the work. In page 62 the author quotes the words of M. Bousquet in the debate on vaccinal syphilis in the Academy of Medicine at Paris, wherein it is said—"In the family to which a virus belongs there is no promiscuousness or cross-breeding; neither mule, nor mulatto, nor any hybrid." Dr. Marques resumes the subject thus:—"Here it is," he says, "that we see pathological laws, if we may call them so, all working up and tending to the support of modern syphilogical doctrine even before the distinction between venereal complaints and syphilis was clearly marked out, and before the character of that so-called epidemy of the fifteenth century was well understood. And then, again, we have in the consideration of the fact on which the whole thing rests, which one day will have to be called unicity by us dualists—we have, I say, in the impossibility of any hybrid nature in the so-called mixed chancre, and in the importance attributable to the evolution of the symptoms in a true series, an explanation of that persistence which Zeissl offers to the impropriety of the term 'mixed chancre,' which certainly is, and should also be called, a double inoculation."

The historical part of this work is very interesting. Like the work of Astruc, it attributes the arrival of syphilis in Europe to the communication with America, and exposes the distinctions that used to be made between syphilis and the other diseases now termed venereal before the close of the sixteenth century—that is, blennorrhagia and simple chancre. The study of what are called exceptional cases in chapters vii. and viii. prepares for the interpretation of the practical part. The results of inoculation form the ground of much subsequent deduction and chief basis of argument. In the course

of the work we meet with some ideas which bear the stamp of perfect originality, as where the author attributes the growth of the mucous papule and its development from the ordinary papule to the alkaline secretion of the parts on which it is commonly found. The moist papule is accounted for in much the same way. These views are independent of, and prior to, those of Virchow on the effect of alkaline secretion. The visceral complications of syphilis do not fail to receive a large amount of attention. In treatment of syphilis and its relapses Dr. Marques is inclined to a very prolonged use of mercury in small doses. There is an especial formulary at the end of the volume. This work, indeed, is calculated to attract much attention both at home and abread.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

Liverpool, September 28.

The fever at Bootle is not increasing. Since writing last week, I have had the opportunity of examining patients in all stages of the disease, which in many respects presents peculiar features. It certainly cannot be referred at once to either of the two great classes of English continued fever, some of the cases approximating, however, in their general characters to typhoid, others to a mild kind of typhus. Where any rash is present it is that of typhoid, and associated with this as a symptom is diarrhœa. In two cases which I have just seen, the rose-coloured cuticular spots were quite typical, and in one of these the looseness of the bowels was very great, evacuations taking place involuntarily. Still there was no tenderness of the abdomen nor tympanitis, nor could gurgling be detected in the right iliac fossa. Delirium was also absent, and the sleep was calm and refreshing. I mention these circumstances because they are by no means exceptional, and they serve to show that the epidemic is not of a very severe type. Where the symptoms are more nearly allied to those of typhus, as in many cases they undoubtedly are, no rash is present; and frequently throughout the whole course of the disease the tongue continues moist and clean, and the ability to take food almost unabated. Not unfrequently there are indications of remissions of a regular character, that seem to point to a malarious origin, and to ally the disease with those fevers which make their appearance in inter- and sub-tropical countries at the conclusion of the hot season when the rains begin to fall, and every condition favourable to the development and spread of malaria is present. The particular time at which this epidemic broke out is interesting in this connexion. During the intense heat of August it was scarcely heard of. There were indeed two or three cases of fever so long ago as the middle of that month, but it was directly on the accession of the wet weather which succeeded the almost tropical heat three weeks ago that it broke out with so much virulence. The extent to which it is spreading points to some cause other than a strictly local one. Not only are Seaforth and Waterloo, two populous townships, situated on the same north-easterly bank of the Mersey as Bootle, affected equally with it, but the fact cannot be disguised that cases are appearing in Liverpool itself. As yet the streets principally affected are outside the boundary, but the epidemic can hardly be expected to stop there. Nor is there as yet any indication of its declining either in Seaforth or Waterloo.

A more dreaded visitor than this disease, it is to be feared, is coming to us. Typhus is rapidly increasing. The Medical returns submitted to the Board of Guardians on Thursday last, the 24th inst., showed that there were on the preceding morning 168 cases of fever in the department of the infirmary attached to the workhouse devoted to this class of diseases. This is eight above the number for the accommodation of which the Hospital was built. A large proportion of the admissions had been from the parish of West Derby, which is at present more unhealthy than Liverpool. A letter has been addressed to the Chairman of the Workhouse Committee by the able Physician to the Infirmary and Fever Hospital, Dr. Robert Gee, in which he calls attention to the number of admissions, and urges the adoption of energetic measures, such as the immediate isolation of marked cases, the thorough disinfection or destruction of body- and bed-clothing, and purification of the houses infected, with a view to "stamp out" the disease. Among the facts of interest which this letter contains are the following:—During the week ending August 29 there were admitted 20 patients; September 5, 48; September 12, 55; September 19, 67. The total number in the Hospital at the end of each week was as follows:—Week ending August 29, 92 patients; September 5, 95; September 12, 113; September 19, 147; September 23, 160. These figures are important, because the number of admissions to the Workhouse Fever Hospital affords a pretty fair indication of the state of fever in the town. In view of its probable further increase, the question of the erection of mortuary chapels is being again discussed by the Town Council. This was brought forward some time ago, but deferred then on the ground that the town could not afford the expense. A Roman Catholic mortuary was commenced some few years since, and remains half finished for want of the funds necessary for its completion, the corporation being unable to interfere with it because it is denominational. Yet there is little doubt that great injury to the public health accrues from the general habit among the very poor of shutting up the living with the dead in a single room, oftentimes for three or four days together; and that this source of infection would to a great extent be done away by the erection of properly managed mortuaries, and the education, and, if need be, compulsion, of the poor to deposit their dead within them.

To recur once more to the Bootle epidemic, I may again state that a very large proportion of the cases have occurred in good houses, among families where the minutest regard is paid to every measure that could promote cleanliness and health. This circumstance would seem to point to some other origin than the one to which typhus is generally attributed—viz., overcrowding. Parts of Bootle are overcrowded, but these are by no means the only, or indeed the worst affected parts. Large, airy, isolated houses may be visited by the dozen, in which two, three, and sometimes more are down with this epidemic at once. There are tolerably well-marked stages. First, a premonitory one, which lasts about a week, and is characterised by the usual malaise attending the onset of all the continued fevers, having, however, as specially marked symptoms early sleeplessness, giddiness, and severe pain at the back of the neck. At the end of the first week, or earlier, the patients take to bed, the pulse reaches 120, the emaciation (notwithstanding that much nourishment is taken) proceeding rapidly, and the weakness becoming very great. This goes on through another week, at the end of which, if it has not been a continual symptom, perspiration of a critical character breaks out, and a sleep, scarcely interrupted for two or three days, lands the patient in comparative health. As to treatment, early stimulation is required, and the early and persistent administration of quinine has, at least in one gentleman's hands, been attended by marked success.

I cannot close this letter without expressing my obligations to Dr. Walker, of Bootle, for the ready facilities he placed in my way for examining patients under his care suffering from the disease in its various stages, and for other assistance he afforded me in my inquiries concerning it.

GENERAL CORRESPONDENCE.

MR. MONCRIEFF AND THE MEDICAL PROFESSION OF SCOTLAND.

[To the Editor of the Medical Times and Gazette.]

Sir,—I think all will admit that the neutral position you have taken up as to the two great political parties is the right position for a scientific journal to take, but I trust you will pardon me expressing a doubt whether you have even done the *Medical Times and Gazette* justice as the advocate of Professional interests in the remarks you have made in to-day's number on the recent speech of the Ex-Lord-Advocate. Mr. Moncrieff was not, as the author of the obnoxious clauses in the Registration Act for Scotland, acting in ignorance of the wishes and feelings of the Profession. On the contrary, he contemptuously persisted in retaining them in the face of urgent and repeated remonstrances from our Scotch brethren; and he did this, too, at the time when our Irish brethren (more power to them!) indignantly and successfully repelled like clauses for Ireland when Sir Robert Peel brought in his Irish Registration Bill. A few reminiscences will prove these facts. On March 12, 1863, a letter from the Ex-Lord-Advocate (then a member of the Government) was read to a numerously attended meeting of the Profession in Glasgow,

written in reply to the remonstrances of the Profession against those clauses. To every Practitioner the "eminently absurd nature" of Mr. Moncrieff's proposed modifications was at once apparent. And Mr. Walker, the Secretary, feelingly remarked —"Situated far from the centre of power, their small voice was seldom or never heard when the honour and dignity of the Profession was at stake" (*Medical Times and Gazette*, March 21, 1863). On May 12 the Medico-Chirurgical Society of Glasgow petitioned Parliament that the Medical Profession of Scotland might be relieved from "the degraded and invidious position" in which they were placed by the Act; but Mr. Moncrieff only turned a deaf ear. Your editorial comment on the measure thus persisted in gave no uncertain sound. You say—"The experience of the working of registration in England shows that a penal clause is entirely unnecessary. Its enactment for Scotland was a piece of mischievous legislation—fastening an insult on a body of highly educated men, who have ever been foremost to serve the commonwealth, and utterly useless as a means of securing statistical accuracy." (*Medical Times and Gazette*, May 23, 1863.) In April, 1864, with a perseverance which does them the highest credit, the Profession of Glasgow next moved the students of Glasgow University to petition their Rector, Lord Palmerston, then Prime Minister. They truly say in their petition that the course followed by the Government at the instance of the then Lord-Advocate Moncrieff was "wholly opposed to the genius of the British Constitution, and wholly irreconcileable with English ideas of justice and the rights of professional labour," and they quote from the speech of the Secretary for Ireland, when introducing the Irish Registration Bill, to the effect that he had been informed the "Scotch compulsory system" would be met in Ireland with "scorn and contempt." All this failed to turn Mr. Moncrieff from his purpose, so that nothing was left for our insulted brethren in Scotland but to bear in mind (as they do) your pithy comment on this petition (*Medical Times and Gazette*, April 16, 1864, p. 440)—"The Scottish Registration Act was an insult to the Medical Practitioners of Scotland, which could never have been perpetrated had the Profession been properly represented in Parliament." This short history gives but an imperfect idea of what Mr. Moncrieff thinks of Medical feelings and interests. It is, however, enough to show that Medical science, whether in Scotland or elsewhere, could not easily have a more incompetent representative; and, moreover, it serves to determine the question whether the narrow and passing exigencies of party or the broad and permanent interests of Medical science and art will have the strongest influence on the votes of Medical electors.

I am, &c. M.D.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following gentlemen obtained the Licence in Medicine and Midwifery during the months of May, June, July, and August:—

Backhouse, Jos., Carrick-on-Shannon.
Behan, Denis Wm., Blackrock.
Bodkin, P. J. T., Tuam.
Boyd, George, Castletown.
Bradley, J. K., Stoneyford.
Bradshaw, B. F., Bansha.
Byrne, James P., Drumdangan.
Chatterton, Jas., Ballynamote.
Clerke, Henry, Dublin.
Collins, Edward W., Dublin.
Connolly, Patrick, Hill of Down.
Crawford, James, Longford.
Crean, Charles E., Ballinvilla.
Crean, John Joseph, Clonmel.
Crean, Richard, Ballina.
Daly, Malachy, Eyrecourt.
Fawcett, Edward, Blacklion.
Frazer, Henry, Gilford.
Furniss, Joseph J., Dublin.
Gabe, Joseph, Wrexham.
Hadden, Edward, Maryborough.
Hall, Henry George, Boyle.
Kiernan, John, Dublin.
Laird, John, Drumshambo
Lloyd, Edward Thos., Dublin.
Mayne, Robert St. John, Dublin.
M'Grath, Terence John, Dublin
O'Reilly, John, Kingscourt.
Spence, Robert, Co. Wicklow.
Stannard, Henry, Ball's Bridge.
Torrance, Geo. H., Dublin.
Walker, James F., Bonmahon.
Wallace, Robert B., Trim.
Waring, F. J. A., Blackrock.
Wilson, Thomas, Longford.

The following obtained the Licence to practise Medicine:—

Anderson, Chas. Jas., Kilkeel.
Barker, Wm Oliver, Dublin.
Bruce, James, Kidsgrove.
Carson, John, Dowra.
Duke, Val. de Saumarez, Dublin.
Graham, William, Royal Navy.
Keating, Mich. Joseph, Dublin.
Kelly, Bernard, M.D., New York.
Kenny, James B, Killeshandra.
Lyon, Francis H., Roscrea.
Owens, John, Dublin.
Shea, Henry, St. John's, Newfoundland.
Walshe, Thos Patrick, Dublin
Worthington, G. F. J., West Worthing.

The following obtained the Licence in Midwifery:—

Barton, John, Rathfarnham
Botterell, James A., Montreal.
Churchill, F., jun., Dublin.
Fitzgerald, James F., Tipperary.
Mulligan, John W., Aughnacloy.
O'Donohoe, Michael, Frenchpark.
Saunderson, Wm. H., Edenderry
Walsh, Patrick L., Kilfinane.
Woodward, Chas. R., Dublin.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 24, 1868:—

Affleck, James, Stretford, Lancashire.
Duke, Benjamin, Guy's Hospital.
Nunn, George Richard, Lyndhurst.
Peacock, Stanley, Frederick-street, King's-cross.
Pottle, Edgar George, Bath-street, City-road.
Rix, Charles James, Oxford-street, Manchester.
Thompson, James Ashburton, Delamere-street, W.

The following gentleman also, on the same day, passed his First Examination:—

Patchett, William Ashton, Manchester Infirmary.

At the Preliminary Examination in Arts, held on Sept. 25 and 26, 129 candidates presented themselves, of whom 36 were rejected, and the following 93 passed, and received Certificates of Proficiency in General Education, viz.:—

Andrews, J. S.
Aspinall, H. M.
Baker, C. E.
Barnes, F.
Barrett, J.
Barrow, C. A. G.
Barrow, Frederick.
Bassano, W. H.
Birch, E. A.
Bowkett, W. D.
Burgess, E. J.
Burnes, H. F.
Burt, J. K.
Charlesworth, H.
Coke, W. H.
Collet, G. B.
Collier, N. C.
Colmer, C. A.
Colthurst, J. B.
Connell, J. B.
Crisp, F. A.
Davey, C. J.
Davis, Henry.
Day, E. O.
Duncan, J. T.
Evans, Henry.
Fairbank, W.
Fisher, S. H.
Flewitt, W.
Fyson, E.
Goodchild, J. A. (special certificate).
Groves, H. J. F.
Hall, F. A.
Hamerton, G. A.
Hands, A.
Hanks, Arthur.
Harris, Vincent (special certificate).
Haslam, W. D.
Hemming, W. D.
Hernage, A. H. O.
Hetley, H.
Irving, J. C.
Jay, W. E.
Johnson, C. G.
Jones, Charles A.
Jones, T. (New Quay).
Kebbell, A.
Lang, H. C.
Lidderdale, J.
Lord, J. C. W.
Luke, E. T.
Maggs, H. M.
Maybury, A. V.
Moore, Arthur.
Moore, S. W.
Murrell, C. F. F.
Nicoll, V. T.
Nisbett, F. H.
Nix, E. J.
Openshaw, F. C.
Peacey, W.
Pitt, R. J.
Pocklington, J. P.
Pratt, A. C.
Priestley, C. E.
Prothers, D. W. G.
Ransford, T. D.
Robinson, Mark.
Robinson, Stanley.
Rogers, H.
Savory, A. H.
Sawdon, F. J.
Scott, Edward.
Sers, C. H.
Sinclair, G. A. B.
Smedley, E. B.
Smelt, F. H.
Smith, G. Cockburn.
Smith, H. A.
Sparrow, W. W. B.
Spencer, E. R.
Spencer, L. W.
Steavenson, W. E.
Stuart, H. W.
Thomsett, R. G.
Turner, George.
Velge, J. E.
Wartenberg, V. A.
Watson, R. C.
Weech, C. W.
Wheeler, F. W.
Whitelam, R.
Wilding, W. A.

APPOINTMENTS.

*** **The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

HILL, J. H., L.R.C.P.E.—Resident Medical Officer for the males at St. Pancras Workhouse, King's-road, N.W.

SHUTTLEWORTH, G. E., B.A. Lond., M.R.C.S. Eng., Medical Associate of King's College, London—Assistant Medical Officer to the Asylum for Idiots, Earlswood.

NAVAL AND MILITARY APPOINTMENTS.

MEDICAL DEPARTMENT.—Assistant-Surgeon John Henry Gouldsbury Meares, from the Royal Engineers, to be Staff Surgeon, *vice* Staff Surgeon-Major Thomas Guy, M.D., promoted—Assistant-Surgeon Richard Uniacke Cashman, M.D., from the Royal Artillery, to be Staff Surgeon, *vice* Edward Touch, M.D., placed upon half-pay.

ROYAL ARTILLERY.—Staff Assistant-Surgeon Alexander Jennings, M.D., to be Assistant-Surgeon, *vice* Richard Uniacke Cashman, M.D., promoted on the Staff—Staff Assistant-Surgeon John Stuart to be Assistant-Surgeon, *vice* John Henry Gouldsbury Meares, promoted on the Staff.

39TH FOOT.—Assistant-Surgeon James Davis, from the 57th Foot, to be Assistant-Surgeon, *vice* Wilton Everet, who exchanges—Staff Assistant-Surgeon George Frederick Sankey to be Assistant-Surgeon.

57TH FOOT.—Assistant-Surgeon Wilton Everet, from the 39th Foot, to be Assistant-Surgeon, *vice* James Davis, who exchanges.

BIRTHS.

FORSTER.—On September 24, at Keyham-terrace, Devonport, the wife of Thomas B. Forster, M.D., of a daughter.

GILL.—On September 26, at Dover, the wife of John Beadwell Gill, M.D., of a daughter.

HILL.—On September 28, at Lymington, Hants, the wife of Wm. Robinson Hill, M.D. Edin., of a daughter.

SMITH.—On August 25, at Madras, the wife of Colvin Smith, Esq., M.D., of a son.

MARRIAGES.

EVERET—BARRY.—On September 22, at Violet-hill, Newry, Wilton Everet, Assistant-Surgeon H.M.'s 39th Regiment, to Mary Constance, younger daughter of the late John Barry, Esq., of Dublin.

ROBERTS—REED.—On September 26, at St. Mary's Church, Dover, Arthur Roberts, Esq., M.R.C.S., etc., of Kensington-square, to Margaret Francis Reed, of Raymond-villa, Addison-road, Kensington. No cards.

STRICKLAND—WALKER.—On September 24, at the parish church, Halifax, Edmund Strickland, M.R.C.S., etc, Halifax, to Jane, eldest daughter of Henry Walker, Esq., of Savill Hall, Halifax.

SUTHER—JENNINGS.—On September 23, at St. Michael's, Liverpool, Cuthbert Collingwood Suther, Captain and Adjutant Royal Marine Artillery, third surviving son of P. Suther, M.D., Deputy Inspector-General of Hospitals and Fleets, to Louisa Adelaide, eldest daughter of J. W. Jennings, Esq., of Liverpool.

DEATHS.

BLETCHLY, ELIZABETH MONSLOW (LILLY), widow of the late Edmund Bletchly, Surgeon, and eldest daughter of Charles Alex. Harries, Bath, Surgeon, at the residence of her father, on September 27, aged 30.

COOKESLEY, JOHN MOORE, Esq., M.D., late of Boulogne-sur-Mer, at No. 14, The Grove, Boltons, South Kensington, on September 23, aged 58.

MORIARTY, HERBERTA MARIA, the beloved wife of Dr. Moriarty, of Dieppe, at No. 6, Rue du Faubourg de la Barre, on September 25, aged 40.

ROOTES, GEORGE, son of W. Symonds Rootes, M.D., of Ross, Herefordshire, on September 27, of diphtheria, at Guy's Hospital, London, where he was one of the House-Surgeons, aged 24.

THORNTON, HENRY JOHN LIND, M.R.C.S.L., a retired Surgeon-Major in the Hon. East India Company's Service, at Langley-villas, Clifton-hill, Brighton, on September 22, in the 62nd year of his age.

POOR-LAW MEDICAL SERVICE.

APPOINTMENTS.

Brixworth Union.—Charles Hedley, M.R.C.S.E., L.S.A., to the Third District.

Hartlepool Union.—George Longbotham, M.R.C.S.E., L.S.A., to the Greatham District.

Hartley Wintney Union.—James Haslam, M.R.C.S.E., L.S.A., to the Heckfield District. Thomas J. Biddle, M.R.C.S.E., L.S.A., to the Eversley District.

HOMŒOPATHY IN RUSSIA.—This form of practice is said to have been prohibited in the Russian Empire, under pain of a heavy fine and two years' transportation to Siberia.

A PENTONVILLE prisoner has died from ulceration of the aorta, produced by a bad half-crown which he had swallowed to hide it, and which lodged in the œsophagus. It did not hinder the food from passing. The man ascribed his sufferings to the right cause, but seems not to have been believed. *Moral:* If even a criminal alleges a fact, examine into it.

A BOY, ten years of age, has died of inflammation of the brain, alleged to have followed a blow on the head from the master of St. Cyprian's school, near the Regent's-park. The blow was not severe, and probably had nothing to do with the result.

AT Greenwich the keeper of a low lodging-house seized the dead infant of one of her lodgers, and would not allow it to be removed for burial, because of arrears of rent. The magistrate, on being applied to, pronounced the detention illegal.

SCIENTIFIC POPULAR LECTURES.—EXAMINATION AND PRIZE SCHEME.—In anticipation of the third season for the delivery of a course of familiar scientific lectures prepared by Thomas Twining, Esq., in connexion with his Economic Museum at Twickenham, that gentleman has propounded a plan for examination, and offered prizes to be competed for by the attendants at his lectures. The course will embrace the subjects of Physics, Chemical Physics, Chemistry, Natural History, Human Anatomy, and Human Physiology. Arrangements are at present made for the delivery of the course at the Lambeth Baths, and, although Mr. Twining will be happy to receive proposals for the gratuitous delivery of the lectures in other localities, the examination and prize scheme is for the present limited to the Lambeth Baths, where the most numerous and attentive audiences have been present in past seasons.

SICK CLUBS AND THEIR SURGEONS.—The following important resolutions have been passed at Birmingham by the "Order of United Brothers":—"That this Association is of opinion that those Surgeons who have entered into an arbitrary compact with each other to advance their rate of pay from members of sick societies have treated the members of such societies with discourtesy in not first notifying them of their intention, and asking them to a conference on the subject. That the Surgeons, in entering into the compact mentioned in previous resolutions, are acting with great injustice, not only to sick societies, but also to the younger members of their own Profession, in refusing to associate with, or meet in consultation, any Medical man who accepts an appointment on existing terms; thus attempting to deprive sick societies of the services of independent Medical men, and the younger members of the Profession of that stepping-stone to Professional practice and position to which they, the older members, are so much indebted. That the demands made by the Surgeons in the before-mentioned compact are extravagant, unreasonable, and impracticable; and we, the lodges here represented, are determined and do hereby pledge ourselves to strenuously oppose the said demands, and to use all lawful means to accomplish our object. That in the event of the Surgeon to any lodges here represented making a demand for an advance of salary upon any of the lodges here represented (or who may hereafter join our Association) the secretary of the lodge receiving such demand shall at once communicate with the secretary of this Association, who shall call a meeting of the delegates at the earliest possible moment to consider upon and take such steps as may be deemed expedient, with a view to the establishment of a dispensary for, or the adoption of other means to supply Medical aid to, the whole of the lodges represented. The Association very respectfully submits the above resolutions to the consideration of other lodges of the Order, and to sick societies generally, and earnestly invites their co-operation."

UNFOUNDED CHARGE AGAINST A PAROCHIAL SURGEON.—On Monday, Sept. 28, the guardians of the Uckfield Union, Sussex, concluded a most patient and lengthened inquiry into an allegation against one of their Medical officers, Mr. M. Mackintosh, of negligence and improper treatment of a pauper patient. It is pleasing to learn that the result of the investigation was the entire exoneration of Mr. Mackintosh, who was proved not only to have attentively and properly treated the case, but to have shown extra consideration for the patient, in continuing to inquire after her and allowing wine and nourishment, even when the attendance of another Practitioner had been imported into the case by some kindhearted, though officious and misguided, neighbours, who probably thought, as is often the case, that they could not better show their own goodness than by seeking for the shortcomings of others. The Board, after the evidence of the patient herself and others who were brought in support of the charge had been heard, without calling for any defence, characterised the proceedings as altogether unnecessary. The individual who had instituted these proceedings was further requested, both by the chairman and vice-chairman, to be cautious as to occupying the time and attention of a body of gentlemen by bringing charges against their officers so entirely unsupported by evidence as this. The manifest feeling of the Board was that of entire confidence in their Medical officer.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Several matters of importance, owing to the pressure on our columns, stand over till next week.

The Introductory Lecture at St. George's Hospital was delivered by Professor Acland, M.D., F.R.S. An abstract next week.

Mr. Haviland's paper to be read at the Social Science meeting at Birmingham is to be "On the Geographical Distribution of Heart Disease in England and Wales, and its relation to Sea Air and Tidal Influence." This paper is down for Tuesday next.

Dr. Thomas Warden.—See Dr. Hyde Salter "On the Stethoscope," *British Medical Journal*, January 31, 1863.

"*Our Learned Brother*" will find he is addressing a jury who are not to be bamboozled.

Montrose.—We have received a communication from Dr. Henry Steele, of Montrose, relating to an unpleasantness with Dr. Johnstone, of the same city, who is said by Dr. Steele to have visited a patient of his without his knowledge. If the facts be correctly reported to us, the senior Practitioner, in visiting the girl more than once, without communication with the junior, did what was scarcely consistent with the respect due to the junior, who might justly be excused for feeling annoyed. The letter of the latter gentleman is not in the best of taste, but then he received the first provocation. We should think Dr. Steele and Dr. Johnstone would have little difficulty in arranging this matter amicably. Surely a senior Physician who is requested by a benevolent lady to visit a poor woman under the charge of the parish Doctor, may so arrange his visit that it shall be done with the knowledge and consent of the latter, and produce a state of mutual good feeling, arising from the interchange of good offices. A senior should be tender of the reputation and self-respect of his junior. On the other hand, the junior should not be too ready to fire up, nor to resent that as a Professional injury which may have been meant as an extra-Professional act of kindness.

TREATMENT OF APHONIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I shall feel indebted to any of your readers who will inform me of a method for treating a case of aphonia. The case I have at present has

been in no way benefited by the numerous remedies and applications I have tried. The commencement of the case was unusual, there being no premonitory symptoms, not even a cold, and the affection developed itself in the course of a night. The man is perfectly well in all other respects, and there is no history to point to a diagnosis. He has been in this nearly dumb state for three weeks. I am, &c. Z. A.

Chorea in Pregnancy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you allow me to say, with reference to a statement in a most interesting article in last week's *Medical Times and Gazette*, page 375, that since my experience of Chorea in Pregnancy is exceedingly small, I have no opinion to give as to whether the movements in cases of chorea so occurring are, or are not, usually unilateral?

I do not think Dr. Jaccoud can safely conclude that the increased choreic movements of the left limbs of his patient, following "excitation" of the skin of the right limbs, were owing in any way to increased excitability of the *spinal cord*. No one would suppose that hemiplegia—the face being affected—could be due to disease below the medulla oblongata. I would not deny that the spinal cord may be diseased in many cases of chorea, but I know of no evidence to render it even probable that pathological change of any sort, organic or "functional," affecting any part of the spinal cord, can bring about any variety of motor defect—palsy, spasm, or irregular (choreal) movements—*limited to one side of the body and affecting the face*. It is quite true that when Dr. Jaccoud made the observation recorded, the choreal movements of the *face* had ceased. But again, no one would think, when, in a case of hemiplegia, the facial palsy had disappeared, that the lesion accounting for the palsy of the arm and leg would be in the spinal cord. If Dr. Jaccoud had suddenly frightened his patient, and thus induced a *general* bodily condition, an increase of the local movements would doubtless have followed, just as it followed the local excitation of the skin of the sound limbs. Perhaps I may be permitted to refer to an article I have written on chorea, which will, I believe, appear in the October number of the *Edinburgh Medical Journal*. In it are considered the above question and many of the points raised by Kirkes and others as to the pathology of this disease.

I am, &c. J. Hughlings-Jackson.

COMMUNICATIONS have been received from—

Studens Viator; Dr. Acland; Dr. Lockhart Robertson; Dr. Donkin; Professor Erichsen; Dr. Pollock; Mr. Edward Nicholson; Dr. Laycock; Mr. Alexander Yule; Dr. Thomas Warden; Mr. Francis Mason; Mr. James Lane; Dr. Isidor Gluck; Dr. Moxon; Mr. Critchett; Dr. Shinkwin; Mr. Sergeant; Mr. F. A. Goodenough; Dr. J. H. Wathen; Dr. Henry Steele; Dr. Barnes; Dr. C. A. Gordon; Dr. Bayes; Dr. Day; Mr. Francis Mason; Mr. Thomas Smith; Dr. Burdon Sanderson; Dr. J. Hughlings-Jackson; Dr. Henry Osborne; Mr. T. J. Cooper; Mr. Haviland; Mr. R. G. Davey; An Army Medical Officer; Mr. H. Steele; Dr. T. B. Christie; Dr. A. S. Donkin; Mr. Critchett.

BOOKS RECEIVED—

Shinkwin on Hydrophobia—Cutaneous Journal, No. 7—Report of the Newcastle-upon-Tyne Convalescent Society—Trevelyan on the British Army in 1868—Pharmaceutical Journal, No. 112—Journal of Mental Science, No. 67—Edinburgh Medical Journal, No. 160.

NEWSPAPERS RECEIVED—

Brighton Times—North Devon Journal—Dominion Medical Journal, No. 7—Public Health, No. 10—Medical Press and Circular—Liberal Review.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 26, 1868.

BIRTHS.

Births of Boys, 1062; Girls, 1069; Total, 2131.
Average of 10 corresponding weeks, 1858-67, 1895·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	664	663	1327
Average of the ten years 1858-67	594·0	574·2	1168·2
Average corrected to increased population..	..	..	1285
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	3	30	3	1	3	4	..
North ..	618,210	..	11	17	2	2	21	15	..
Central	378,058	..	4	19	1	1	7	6	..
East ..	571,158	..	5	15	..	6	14	12	2
South ..	773,175	..	2	20	1	10	17	27	1
Total ..	2,803,989	..	25	101	7	20	62	64	3

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·499 in.
Mean temperature	58·4
Highest point of thermometer	74·4
Lowest point of thermometer	46·7
Mean dew-point temperature	51·9
General direction of wind	Variable.
Whole amount of rain in the week	0·51

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 26, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Sept. 26.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Sept. 26.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2131	1441	1327	74·4	46·7	58·4	0·51	52
Bristol (City) .	167487	35·7	96	75	*62	..	..	..	..	..
Birmingham (Boro')	352296	45·0	258	171	138	66·5	40·2	54·7	1·06	107
Liverpool (Borough)	500676	98·0	385	290	300	70·6	45·0	55·5	0·76	77
Manchester (City) .	366835	81·8	285	208	*244	..	..	..	..	..
Salford (Borough) .	117162	22·7	101	59	94	69·5	42·0	55·0	0·92	93
Sheffield (Borough).	232362	10·2	192	122	102	64·5	49·5	54·2	1·83	185
Bradford (Borough)	108019	16 4	89	55	81	..	..	..	..	..
Leeds (Borough) .	236746	11·0	197	120	162	67·0	44·0	56·3	1·40	141
Hull (Borough) .	108269	30·4	75	50	51	67·0	41·0	54·4	0·95	96
Newcstl-on-Tyne, do.	127701	23·9	94	68	60	60·0	47·0	51·9	2·21	223
Edinburgh (City) .	177039	40·0	106	85	96	62·7	46·0	53·7	2·70	272
Glasgow (City) .	449868	88·9	314	262	244	..	..	..	..	..
Dublin (City and some suburbs) .	319985	32·8	‡177	157	‡162	..	..	..	..	..
Total of 14 large Towns . . .	6391080	34·7	4500	3163	3123	74·4	40·2	54·9	1·37	138
					Week ending Sept. 19.	Week ending Sept. 19.				
Vienna (City) .	(1863) 560000	..	..	..	..	..	..	† ..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·499 in. The barometrical reading decreased from 29·58 in. on Monday, September 21, to 29·16 in. on Friday, September 25. The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 57·1°.

‡ The return for Dublin not being received in time for insertion, averages of the returns for the three previous weeks have been used to make up the total for the fourteen large towns.

APPOINTMENTS FOR THE WEEK.

October 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

5. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

7. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Obstetrical Society of London (Meeting of Council, 7½ p.m.), 8 p.m. Dr. Tilt, "On Irritable Uterus." Dr. Meadows, "On Flexions of the Uterus." And other Papers by Dr. Martyn, Dr. Cory, and Mr. Houghton

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

9. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Mr. Maunder, "Ligature of Femoral Artery." Dr. Peacock, "Cases of Acute Rheumatism, complicated with Disease of the Heart." Mr. Hulke, "Ichthyosis Glossæ." Dr. Douglas Powell, "Case of so-called 'Fibroid Phthisis.'"

ORIGINAL LECTURES.

LECTURES ON
DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Diseases of the Spinal Cord—General Characters.

In coming to the spinal cord, we should, according to the principles already laid down, meet with hemiplegia, if one motor tract—that is, half of the organ—were involved. Such an accident, however, rarely occurs; for in actual practice it is much more common to find the cord more or less affected on both sides, or throughout its entire thickness, and thus a paraplegia is a far more likely effect of spine disease than a hemiplegia. But just as there are anatomical and functional divisions in the cord, so we find there are peculiar symptoms associated with its special lesions.

Now let us see if there are any general rules which can guide us as to the seat and nature of the different diseases which we commonly meet with. I have already informed you that clinical observation accords rather with the experiments of Brown-Séquard than with the earlier views respecting the arrangement of the fibres in the spinal cord—that is, that the motor fibres run upwards in the antero-lateral columns and cross at the pyramids, while the sensory fibres of the spinal nerves pass to the grey matter, and then cross to the other side. Thus, when the cord is divided longitudinally, sensation is altogether lost, but a lateral division destroys sensation on the opposite side. Cases of injury to the exterior of the cord, sparing the centre, exhibit a paralysis with sensation remaining; whilst, on the contrary, all feeling has been lost when the grey matter has been severed. Also in those rare instances where the grey centre has been so shaken by a blow that blood has been effused, sensation has been lost, whilst motor power has remained. Even the crossing of the sensitive fibres, as demonstrated by the physiologist, has been verified by some instances of remarkable accidents; for example, there has been a case reported in one of the foreign journals, where a man received a sabre wound on the upper part of the right side of the neck, and which so disabled him that his legs gave way under him, and he immediately fell. It was found, on examination the next day, that his right arm had lost its power of movement, but it still retained sensation. The right leg was a little weakened, but only as regarded motion. It was afterwards discovered that the left side of the body was insensible to touch; pins were inserted into him without his feeling it; and what was most remarkable, when he was pinched some obscure kind of sensation was felt on the corresponding part of the opposite side of the body.

In Abercrombie's well-known work, written many years ago, there is to be found the case of the Count de Lordat, who received an injury to the neck from being thrown off a coach. Six months afterwards he had weakness in the left arm and some difficulty in articulation, and subsequently the limb became withered and useless. After this the right arm became numb, and finally the whole body. After death the medulla oblongata and upper part of the cord were found enlarged, and the membranes thickened.

Now, if the motor tracts run towards the outside, and the sensory within, we should expect to find a lesion of motion much more common than one of sensation, seeing that the exterior of the cord is much more liable to injury as well as disease, the latter so often originating in the bones or the membranes. Thus it is that when paraplegia has followed disease of the spinal column, it is motion which is first and especially involved, and the same also may be noted in chronic meningitis. In the case just now alluded to, where blood has been effused in the grey matter of the cord, there sensation alone is lost. In a case of acute inflammation producing a softening of the whole of the cord, both sensation and motion would be lost. But, besides these conducting powers, the cord has inherent properties of its own; the grey matter can be excited to action by external stimuli, and thus in the case where the cord is simply severed, as in an injury, although voluntary motion and sensation are lost, the portion below still retains its excito-motor power, and thus, if the limb be touched, a movement results. If the grey matter is destroyed throughout, then of course this power is gone. I think, therefore, we may say in general terms that when disease attacks the outside of the cord there is a failure in motor power; that if the grey matter is touched, sensation is lost, but excito-motor power remains in the part below; if the grey matter be destroyed throughout, then this also is lost.

We may note some still further facts; for just as we observed, in speaking of the brain, that an inflammation or irritation of the surface set up an excited action in the organ within, so we may observe in the cord that an amount of disease on the surface not sufficient to diminish its function or produce paralysis may cause irritation of the organ, and even more, for if the disease be sufficient to destroy the motor tracts, it may be of a kind which is perpetually irritating the grey matter within. Consequently, if the action of the cord be much exalted, we may generally suppose that it is being irritated from without; for an observation of cases has constantly shown that in inflammation of the membranes involving the outer layer of the cord the excito-motor function is painfully active. In acute inflammation you may notice convulsive movements of a tetanic nature; and in chronic meningitis, where a portion of the true cord may be involved with an accompanying paralysis, constant jumping and twitching are amongst the commonest symptoms. Not long ago I had an opportunity of seeing a patient of Mr. Birkett, who, in consequence of an injury to the back, suffered an acute arachnitis of the spinal cord. He had no paralysis, for no portion of the medulla was affected; but he had severe pains all over him, especially in the limbs, his head was drawn back, and he was, in fact, like one suffering from tetanic opisthotonos. In the epidemic cerebro-spinal meningitis, of which you have heard so much of late, these were just the exact symptoms which were noticed. In some other cases of spinal meningitis I have observed not so much convulsion as extreme and constant restlessness. In those where there was much pain in the limbs it is probable that there was an implication of the nerves, for there can be no doubt that in many cases of spine disease where much pain exists the roots of the spinal nerves are involved in the inflammatory process. It may be also that in the cases of chronic meningitis already alluded to, where an exalted spinal function exists, the immediate cause of the excitability is the implication of the nerve roots, which react on the cord.

The true interpretation, however, of pain in spinal disease is one of the most important matters to understand. In the first place it is undoubtedly true that the spinal cord may be diseased throughout its entire thickness without the patient experiencing any pain, and without indeed there being the slightest sign of shrinking when the back is struck. On the other hand, the most intense spinal pains are those which are caused by disease involving the nerves only, as in aneurisms, which corrode the spine and leave the cord itself untouched. Again, it has been found that in those cases of meningitis of the cord where pains in the limbs have been a constant symptom the roots of the nerves have been involved in the process. With these facts before us we have some general rules to guide us in the interpretation of pain, although I could not positively teach you that pain necessarily implied an implication of the roots of the nerve external to the cord. It is highly probable that to a certain extent an implication of the nerve-fibres within the cord may produce the same result, but pain is not a necessary consequence, I am sure. We may note also that the irritation of the nerve roots not only produces pain and excites the centres to corresponding movements, but also causes tonic spasm or rigidity. Thus, when the membranes are affected in common with the roots of the nerves, this rigidity may often be observed. I have seen a man who, having fractured and dislocated his spine in the upper dorsal region, had intense pain and rigidity of the arms, but as soon as the bones were replaced the pain and spasm passed off. In chronic inflammation of the membranes of the cord the surface of the medulla is generally involved, and thus there may be more or less paraplegia; should the disease at one spot have involved the entire thickness of the cord, then sensation is lost, but the excito-motor function in the part below may be more than usually exalted. In our museum is the spinal cord of a man showing great thickness and ossification of the membranes, closely adherent and bound up with the structure of the cord. This man lay quite paralysed, but his spinal centres were in the highest state of tension, so that it was painful to pass by his bed; the merest touch made his whole body quiver, the act of micturition threw him into convulsions, and, I believe, on one occasion a jar against his bed caused him to spring on to the floor. He was in the condition of a tetanised frog.

Let us see how these observations apply to cases before us, as, for instance, the case of the boy who was lately lying in Stephen Ward with disease of the dorsal vertebræ. His back projected outwards in consequence of an angular curvature, and thus, no doubt, a quantity of inflammatory or purulent material existed within the canal pressing on the medulla; and what might you think would be the result? You would suspect that he would be lying in bed with his legs stretched out, and quite paralysed as regards motion. The pressure not having reached the centre of the cord, you might think that sensation remained; also, as a pressure of this kind on the upper part of the spinal cord would involve the motor tract but leave the sensory entire, and as the medulla would be healthy below, that the true excito-motory function would remain. Thus you would expect that, although he would be perfectly helpless to move in the slightest degree, a tickling of the feet would cause a drawing up of the legs and their flexion on the body. You might also have expected from the membranes being involved, and consequently the existence of an irritation of the cord through the roots of the nerves, that there would have been some convulsive movements of the legs or rigidity. Now all these symptoms were actually present, and considering what, in all probability, was the nature of the case, you will see how they accord with all well-observed physiological and pathological facts.

Thus far, I think, is pretty clear; in some cases of spine disease we may find motion lost only, in others sensation only, or the two together. Then again, although the conducting power of the cord is lost, and with it a paralysis of sensation and motion, its true function may remain, for the former may be destroyed by the most limited layer of disease, supposing it involve the whole thickness of the organ, but let the cord itself below be destroyed, and then the excito-motor has also vanished. But is this all? Has the spinal cord, or the nerves proceeding from it, any other functions? It is thought by many that they have, and thus it is necessary to suppose that a nerve is a vastly more compound organ than was once supposed—that it contains filaments destined for special functions. It has been thought that the fibres which conduct impressions to the spine and those which reflect movements back again are different from the fibres which convey sensations to the brain and from those which carry down the dictates to the muscles. Of this division, however, there is no proof. Then, again, as I shall have presently to show you, there are some who think the muscles have their own sensory nerves, and that we are endowed with a true muscular sense. Again comes the important question, and one of the most vexed questions in nervous physiology and pathology, whether any influence is conveyed along the cord which involves the nutrition of the tissues, or whether the power which the nerves possess in this respect is derived from the sympathetic system.

But this is not all, for it is said that what we call common sensation may be divided into different varieties. I have not Brown-Séquard's lectures at hand, but I think I am right in saying that this physiologist states that there is one sense for touch, and another for the appreciation of temperature, another for such a sensation as would result from pinching or pain, and another for tickling. I could say from my own observation that I have seen a patient who was insensible as regards touch, yet appreciate a difference of temperature. Also it may be constantly observed that hysterical women, who make no complaint of inability to feel any object, yet will often allow needles to be thrust into them with impunity, and sometimes even have lost all power of judging of temperature. I believe Dr. Darwin many years ago separated sensations of heat and cold from those of touch and pain. In mentioning the name of the first distinguished physiologist, I might inform you that it is his opinion that every function of the nerves which appears distinct must have its appropriate filament, and thus he considers that every ordinary nerve contains fibres of eleven different kinds.

There are, first, the fibres which conduct sensory impressions, and then the conductors of motor influence. These are of two kinds—those which pass to and from the sensorium, and those which are connected with the spinal cord for the reflex or excito-motor actions. Then again there are filaments which regulate the calibre of the vessels and their corresponding afferent nerves. If, now, we suppose there is a nerve which conveys to the sensorium the state of the muscle, and if the ordinary sensory nerve is composed of four different filaments, according to the several varieties of sensation already mentioned, we shall have described ten different kinds of fibres. I am not quite sure about the eleventh, but I think it is said that if any branches of a nerve supply a gland it is supposed that a specially appropriate filament is required for the secreting office.

These distinct filaments have never yet been demonstrated in every nerve, and there are some who think that there is no need for the supposition of their existence; that, for example, the excito-motor function of the spine is worked through the ordinary motor and sensory nerves; also that the spinal nerves may be influenced through their junction with the sympathetic without supposing that the latter sends distinct fibres to accompany them; and again, that the different varieties of sensation may be only different forms of impression conveyed through the same nerve.

The question of the compound function of nerves is of especial interest in reference to the question of their influence over nutrition. That such an influence does exist there can be no doubt, and the usual explanation is that the nerves have a controlling influence over the blood-vessels, but what exactly is the nature of these nerves and what their origin has not yet been quite ascertained. There are some physiologists and pathologists who see in chemical action all that is sufficient for the production of the changes in the tissues, whilst there are others who are content to speak of cell-growth altogether uninfluenced by nervous forces, and they enforce their statements by illustrations from the growth of plants and some lower animals, to say nothing of the growth of the human embryo itself. Admitting, they say, that nerve force may regulate or control nutrition, the latter must necessarily be independent of it in its actual operation. Those, on the other hand, who see a direct influence which almost amounts to a vital one propagated by a nerve, would illustrate the fact by cases where a nerve has been severed, and an atrophy of the parts below has resulted; or a nerve proceeding to a muscle has been injured, and the muscle has wasted. Also as showing the influence of the nerves on nutrition, there are the cases mentioned by Mr. Hilton, where an angry ulcer has healed on the division of the nerve leading to it, or where an ulcer on the face remained open until a neighbouring decayed tooth was removed. The herpetic eruption following a neuralgia would also seem to imply that the condition of the nerve and that of the tissues in the skin were inseparably connected. Dr. Addison had a notion that the chronic ulcer sometimes met with in young girls was due to nervous irritation and intimately associated with the palpitation of the heart, pain in the side, and other neuralgic symptoms so commonly met with in these patients,

In regarding the question of nutrition, we ought, if possible, to look at it in its integrity, and not, because the bent of our mind is towards one branch of science rather than another, make it either a subject of chemistry or one of physics; for we must be quite sure that the cells, the blood, and the nerves are all working in harmony, to say nothing of the lymphatics, which appear of late years to be left quite out of the question in discussing the various processes of nutrition. One great difficulty in judging of the effects of nerve-influence on nutrition has been due to the varying results of paralysis on the tissues; but this might be used as the strongest argument in favour of the compound character of a nerve, and that just as in one case the vaso-motor filaments are involved in disease, in another they might escape. If, for example, an ordinary compound nerve is divided, the totality of its functions is lost; but should that nerve contain filaments possessing different properties, and which, on reaching the spine, take their own respective destinations, it is clear that disease in different portions of the cerebro-spinal centres may involve only certain portions of the nerves, and thus the various forms of paralysis may be as numerous as there are distinct filaments and functions of the nerves. If, for example, there is loss of motion without sensation, it is evident that the nerve is only partially paralysed, and if in one case nutrition is affected and not in another, we should suspect that a certain function of the nerve remained in the one case and was absent in the other. Now, it would be highly desirable to ascertain for certain where the vaso-motor filaments have their source, or, if there be not such in ordinary nerves, at what point of the nervous system the motor filaments receive their influence from the sympathetic. Certainly in central cerebral disease, there may be loss of sensation and motion, but nutrition is unimpaired; also in many cases of spinal disease, we observe the same, whereas there are other cases of disease of the cord where wasting of the muscles is most marked. Thus in the disease known as progressive muscular atrophy, the prime cause of the malady has been usually placed in the tissues themselves, because ordinary

paralysis was not known to cause wasting of the muscle; but in answer to this, it may be said that some special part of the cord may be affected, and this will probably turn out to be the case. Waller's experiments, however, tend to show that the nutritive nerves do not altogether proceed from the spine, for if the roots of the spinal nerves be divided, the motor branch wastes away, whilst the posterior retains its integrity beyond the ganglion.

In illustrating this subject I would not attach too much importance to many examples which are constantly mentioned in proof of the importance of nervous influence on nutrition, for many of these would bear a different interpretation. Thus, there is the well-known case of the bedsore which so commonly accompanies paraplegia, and which might be used to exemplify the principle; but, on the other hand, it might be said that the inability to move for several days, and thus to relieve the pressure from a particular spot, would be sufficient for the effect, as shown by the restlessness which all people in health experience. The strongest argument in favour of such proposition is that if the patient be placed on his side the most extensive ulcer will often rapidly heal. The same remarks apply to the cystitis which occurs also in the disease. This might be referred to the removal of nerve influence; but, on the other hand, it may be said that the retention of urine causes decomposition, and if the bladder be continually washed the inflammation is prevented. As regards the oft-quoted case of ulcer of the cornea on division or disease of the fifth nerve, it is certain (as I have seen) that the ulcer will heal when the eyelid is closed, and thus all irritant substances prevented from affecting the anæsthetic surface.

The physiological connexion between the spinal nerves and the sympathetic has not yet been fully shown, for in many of the results obtained by passing galvanic currents through the body, it has not yet been ascertained what amount of result has been due to stimulation of the motor nerves or the sympathetic. Thus, in the interesting observations by Remak on what he calls *diplegic* contraction, the *rationale* of it is not very evident. He took a case of progressive muscular atrophy and applied one electrode beneath the right ear and the negative electrode outside the sixth dorsal vertebra, and then on closing the current a contraction took place in the left hand. Faradisation appears to produce the same results, and which are thought to be induced by stimulation of the superior cervical ganglion.

I have thus endeavoured to associate as far as I can certain phenomena with definite lesions of the cord; but there still remain several affections whose pathology is not yet ascertained, and, on the other hand, many post-mortem appearances which are not yet associated with definite symptoms. But the agreement will come in time.

ORIGINAL COMMUNICATIONS.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 358.)

The Spirit Ration—Difficulties attending Improvement—Water Supply—Church Parades—Other Causes of Illness—Insufficient Medicines—Care of the Men inculcated—Measures against Contagious Diseases—State of 62nd Regiment—Sickly Regiments—Change of Climate—Hill Stations.

In 1836 Dr. Burke was succeeded by Dr. McLeod, who, while readily acknowledging the great improvements that had of late years been effected, was greatly struck with the faulty system of issuing to the soldiers a ration of spirits, and with the prevalence of the vice of drunkenness among them. Adverting to these matters, and to other usages which, in his view, were detrimental to health, he mentions in his first report having submitted to the then Commander-in-Chief a representation in which his opinions and suggestions were embraced. "In this memoir," he observed, "I not only strongly urged the bad effects on the soldiers of the spirit ration, but brought under consideration all that I deemed expedient for their health in everything that related to their diet, clothing, bedding, barracks, Hospitals, ventilation, cleanliness, exercise, and recreation, both bodily and mental, and the general internal economy of regiments." He continued his report in these words:—"I feel it my duty to add that, in conducting the duties and discipline of the corps, sufficient regard has not been paid to the preservation of the soldier's health. There is an over-fondness for parade and drills during the hot weather; but while the men continue to expose themselves at all hours in the way they now do, it is impossible to say to what extent the present mode of conducting duties may be prejudicial to health."

He strongly protested against the system under which, to obtain a revenue from the sale of spirits, the Indian Government seemed literally to encourage vice in the soldier. This subject will be elsewhere more particularly dwelt upon. It may here be observed, however, that Dr. McLeod thus expressed himself in regard to it. "A strange indifference," it was thus he wrote, "is shown by the Indian Government to the well-being of the European, and the extreme difficulty of obtaining from them any alteration in existing regulations renders active measures on their part (that is, of Government) very doubtful;" and he adds, "if these measures are likely to interfere with revenue, or if they are to incur expense to any extent, it is hopeless."

But while Dr. McLeod thus expressed himself, it is evident that he had in view what had by his predecessor been written on the various subjects which had the most important bearing upon the health of the soldier, as well as what had been stated with reference to improvements effected. It was this that doubtless led him to express himself as he did. "It may be said," so he wrote, "that the condition of the soldier is bettered, and in many instances it is so in several respects;" but he adds, "it is after years of application and representation, and with more labour in the face of moral opposition than any man not conversant with Indian regulations and Indian boards can find it easy to believe."

In the days when the above remarks were penned, there existed two boards in India, on the proceedings of which much of the comfort of our troops then in the country depended. These were the Military board and the Medical board, neither of which now exists. To one or other, or both of them, however, the further remarks of Dr. McLeod doubtless referred. "The reports of my predecessor," so he wrote, "on the different military barracks and Hospitals, and the little done to improve them; the slow manner and extreme difficulty with which that little has been effected is a proof of the little interest taken by the Indian Government in the health of their European troops."

I may observe that the subject of water supply at military stations had at this time attracted the attention of the inspecting Medical officers. With reference to that of Ghazepore, it was stated in the Report for 1835,(a) that "the water is plentiful and good; that for cooking and drinking is generally taken from the Ganges, while the wells supply that used for other purposes." It is evident that then, as since, the water of that river, notwithstanding the filth and abominations thrown into it along its course, was actually better adapted for use than the generality of wells sunk in the alluvial soil, with saline impregnations, upon which several of our military stations stood, as they still continue to do.

But not only was the quality considered by the Medical authorities; the sufficiency of the supply was so also, as, indeed, was natural by officers so well qualified for their high and important duties as Drs. Burke and McLeod. In 1836(b) the insufficiency of the supply at Hazarabagh was dwelt upon by Dr. McLeod. He wrote that "the troops still suffer here, as usual, in consequence of the scanty supply of water in the wells. Those intended for the use of the troops were quite dry during the greater part of the dry season, and from the one at the Hospital not a drop of drinkable water has up to this period been obtained."

It is evident from these remarks that the defect here alluded to was not new, but that, on the contrary, its existence had on previous occasions been adverted to. Let me once more allude to the date of the remarks I have extracted—namely, 1836. Let me also observe that during the hot season of 1867 the same defect at Hazarabagh was monthly being commented upon. Let it further be borne in mind that it has been so during every hot season that troops have been quartered there, and we shall have a good example of the delay that in this instance has taken place in remedying one of the most important sanitary defects to which soldiers can be exposed. Luckily for the reputation of army Medical officers, we have

(a) Page 433. (b) Report for that year.

written evidence that the responsibility of this rests not with them. They performed their duty in representing the evil.

What may have been the individual recommendations on the subject of water supply from this time to 1844, with reference to cantonments generally, there is now some difficulty in tracing. There is ample evidence, however, that Dr. Clarke was, equally with his predecessors, alive to the great importance of the question, for in the latter year he expressly alludes to the subject in his report. "Wells," he observed, "ought to be sunk in the sites of many cantonments to supply pure and sufficient quantity of water."

These few instances are here recorded chiefly to indicate that the important subject to which the remarks refer obtained attention in India at a much earlier time than credit is usually given for; but they also indicate that, as in the case of Hazarabagh, defects may still continue to resist not only the recommendations of Medical officers, but even of "Commissions;" and the lesson is a very suggestive one.

When, in 1835, the 62nd Foot was sent to Moulmein from Masulipatam on account of the severe degree in which the men had suffered from fever at the latter station, the attention of the Medical authorities became at once directed to the necessity of various improvements in the clothing of the troops. In addition to this measure, the reports inform us that "everything was done which the Medical officer considered conduced to the comfort and health of the corps." One circumstance, however, which had an important bearing upon the health of the men was, by the regimental Medical officer, specially dwelt upon—namely, that of the corps marching to church in the heat of the day on Sundays, and being confined during the rest of the week to barracks—a practice which, as at the time expressed, is very pernicious to the European constitution, but especially to a body of recruits lately arrived and not acclimatised.

Five years afterwards—namely, in 1840—we find Dr. McLeod again urging upon the authorities in India the necessity of carefully superintending the various circumstances that tend to induce disease among the troops. "That the comforts and well-being of the European troops"—such are his words—"have received more attention of late years than formerly is unquestionable. Still, from many and unavoidable circumstances, a constant surveillance is required." General officers and regiments are relieved by others who have to gain, and often purchase dearly, local acquaintance, and, unfortunately, there seems an extreme reluctance to profit by the experience of others.

Dr. McLeod went on to remark that "in a climate like this (India) many additional causes are in operation which are calculated to ensnare even the well-disposed. The irksome, long, hot days, when men are necessarily confined to their barracks for the greater part of the day, the want of occupation, discomfort, the increased thirst, languor, exhaustion, and irritability usually felt, sometimes aggravated by what would, under other circumstances, be merely considered a common parade or drill, doubly felt in those regiments where the red cloth is insisted on being worn, they return into a hot, noisy barrack. The water to drink truly hot, and perhaps not so clear as it might be, induce or drive them to seek some more exciting beverage."(c) These remarks contain an epitome of the causes of disease, against several of which it is impossible to guard our troops, and which, it is feared, will continue to produce high rates of sickness and mortality among our soldiers serving in India as compared to those more favourably situated as regards climate. But Dr. McLeod thus continues his remarks:—"We hear regiments spoken of as always having had and possessing a high character; as being healthy; as being notorious for 'hard goers,' or always having a crowded Hospital, etc." "Would it not be desirable," he asks, "that the different systems pursued in such regiments should be looked into and closely examined; and would not such inquiry be likely to prove highly useful?" "No regiment can be uniformly good, bad, healthy, or otherwise without a cause; and if it is uniformly faulty, there must be a screw loose somewhere." In these remarks he struck a chord which it would perhaps be well for our soldiers were it more frequently touched than it is. Every person at all acquainted with the economy of regiments knows full well how all-powerful in producing a large or a small sick-list is the interior system which prevails in particular corps. A regiment may be to all appearance smart and effective on parade, while in reality the men are both physically and morally depressed, and the establishment is full of gall and bitterness within. It is needless to further enlarge on this point to those of my readers who have personal experience of the internal economy of regiments.

But whatever defects there may have been in other matters that bear upon the condition of the soldier, we should have supposed that no parsimony would have been allowed to stand in the way of obtaining for him a sufficient supply of medicine. It was otherwise, however; and, strange and unaccountable as it must seem, the inadequacy of the supply, and difficulty in obtaining it, were many years ago, as more recently, the subject of representation by our army Medical officers in that country. In his report for 1832 (p. 202) the Inspector-General had occasion to remark that "the Medical officers throughout the command have complained of experiencing much inconvenience from the scanty supply of quinine. Doses of bark and the liquor arsenicalis have been substituted, but with by no means similar satisfactory results." What is here stated has been repeated on many occasions since the above remarks were written; nor was quinine the only medicine that was issued scantily. The remark is equally applicable to all the more expensive articles.

"It has not unfrequently been thought by 'new comers' from Europe," so wrote Dr. Sandham in 1841, "that the soldiers are taken too much care of and petted; and some have acted on it till they have dearly bought experience by their crowded Hospitals, or have been restrained by higher authority possessing greater local experience." Are not these remarks as applicable at the present day as when they were originally written, and are there not now, as there then were, military officers, and among them men of high rank, who contemn all endeavours to improve the condition of the soldier as so many attempts to pet, to pamper, and to spoil him? To such I commend the further remarks of the able Medical officer from whom I have just quoted. "The welfare of soldiers in such a climate," he goes on to observe, "cannot receive too much attention, nor be too much cared for; by so doing only can they be kept effective, and it is good economy to the State by preserving health. Every little comfort that can be afforded them should be allowed. They are both necessary and useful here, where, for the greater part of the year (most properly), they are not allowed to be out of barracks except and from certain hours of the day."(d) So deeply convinced was he of the necessity of what would now be called general hygienic management that in the following year he recurred to the subject. "That the comforts of soldiers," he wrote in 1842, "have not been lost sight of is most true, and equally so that many improvements have been made within the last few years; still it is desirable to dwell on this subject, and never to forget that the comforts of the European troops in India cannot be too closely watched over, for with all that can be afforded to them, the infliction from climate and unavoidable confinement is great; its extent can only be known to the few who have or will, quietly and unknown to the men, enter some of the barracks during an evening in the hot weather."(e)

Another circumstance having an important bearing on the continued efficiency of a regiment, to which the attention of our Medical officers in India had been drawn, was precisely that to which many years before the notice of Sir James Macgrigor had been directed in England—namely, the practice which prevailed in some corps of discharging soldiers from Hospital before their health had become sufficiently re-established to render them capable of undergoing all the fatigues incidental to their ordinary duties. Of this an example is afforded us in the case of the 44th Foot in 1840, when that regiment, being stationed at Kurnaul, and the men suffering severely from fever, Mr. Harcourt, its Surgeon, laid great stress upon the importance of not discharging men after having been under treatment on account of the prevailing malady until their health had been, as he said, permanently restored. Dr. Sandham, then acting as an Inspector-General, in commenting upon the remarks of Mr. Harcourt, observed that of the truth of the measure he had "for many years been impressed," and which, as he stated, is too often lost sight of. In fact, the rule in most regiments was to discharge no man from Hospital until fit to resume his duties.(f)

Regarding the measures taken to protect the soldier, as far as was practicable, against contagious and infectious diseases, it may be well to offer a few remarks, leaving the subject of cholera epidemics to be treated of in a separate section. On the subject, therefore, of infectious diseases generally, it is

(c) The extract is verbatim from Dr. McLeod's reports.

(d) Report for 1840-1. (e) Report for 1842.
(f) Report, 1835, page 434.

expressly stated in the reports referred to (g) that the weekly inspections were specially directed to the detection of them; that men suffering from such diseases as were contagious were, on being discovered to be so, immediately sent to Hospital, and those labouring under such as were infectious carefully separated from the rest of the patients.

As to the nature of the steps taken on occasions of the occurrence of ophthalmia, one example will suffice. In 1828 (h) that disease prevailed extensively among the soldiers and children of the Buffs at Bhaugulpore. On that occasion we are informed that the hot days, the solar exposure, the cold nights, and the wet feet of the men, to which it would seem they were exposed while going to and from the regimental school, situated some 200 or 300 yards from the barracks, doubtless acted as strong predisposing causes. The measures which were then adopted to check the prevalence of the malady were much the same as would now be taken. They are stated to have been the promotion of cleanliness, the separation of the affected from the healthy, the avoiding the use of the same towel, or the same water to wash in. The affected were, moreover, sent away from the station. With a view to protect the men against small-pox, it is stated that Dr. Burke, on August 21, 1831, (i) issued to all army Medical officers serving under him a circular, from which the following is an extract, showing the measures which he recommended for adoption. "By the examination of every man, woman, and child, and ascertaining that they bear unequivocal marks of either small-pox or cow-pox, and by practising primary vaccination where requisite, not only the safety will be ascertained of those confided to the Surgeon's charge, but thus will he secure his peace of mind." It will be observed that Dr. Burke, in his instructions, did not deem it beneath him to appeal to the conscientiousness of Medical officers under his superintendence; and, in reference to the instructions he laid down, it may be fairly questioned if any better have since been promulgated, while it might probably inflict no very serious injury upon the interests of the army were officers now more often than they are given in official documents the credit which Dr. Burke had the magnanimity to accord to them.

"It has been frequently represented," Dr. Clarke wrote in 1844, "by the principal Medical officers in India that the health and comfort of the troops would be improved were sundry measures recommended by Medical officers in charge of her Majesty's regiments carried into effect. Among such may be classed those regarding barracks and Hospitals." These barracks and Hospitals had been erected without due reference to the Medical officers; and there are some that have been erected in India considerably more lately than those to which Dr. Clarke here alluded, which were urgently protested against by army Medical officers years before a Royal commission recorded defects that had already been pointed out. Is it too much to say that, had the representations by responsible Medical officers in India received the consideration to which they were entitled, the reduction in the rates of sickness and death among our soldiers, which are justly due to improvements recently introduced, would have dated their origin from a period any time subsequent to 1826?

The measure of removing a sickly regiment from a station where it has suffered to a more salubrious climate has for a number of years been an established principle in India. How long it may have been so prior to 1834 the existing reports do not inform us; but that it was adopted in that year we have the means of knowing. The 62nd Foot was moved from Masulipatam to Moulmein; and, with reference to the state to which the soldiers of that regiment had been reduced before the move took place, we learn that "the corps was in such a state of sickness that a guard for the protection of the barracks or Hospital could hardly be given, and the majority of those on guard were obliged occasionally to rest on their firelocks." What with a crowded Hospital and the greater part of the barracks converted into convalescent wards, the scene was awful. By the Madras Government much had been attempted for the recovery of the corps. Ships had been employed the previous year to take the men to sea, where, as we are informed, they suffered from scurvy, which added to their other ailments. We are further informed that wines and Medical comforts were freely given, that no expense was spared for their comfort and recovery, but that they were so without avail. Instead of these, the report from which I quote goes on to say "they should have removed the regiment from Masulipatam to some healthy station." (k) In November, 1835, this corps returned to Madras; but it does not appear that residence at Moulmein had sufficed to restore the condition of the regiment, for, with reference to this, it is stated that "the majority of those who have escaped the great ravages of the last station will never be able for the arduous duties of a military life in India." (l) We have had many illustrations more recently of the fact that even the removal to a more healthy station of men suffering from the effects of malaria to the extent which those of the 62nd evidently were, does not in all instances benefit them to the extent anticipated. What is desired in the present remarks, however, is to give an instance where change of air was had recourse to long before the question had been taken up by so-called "sanitarians" and sanitary reformers. I would in this place also give an instance of the removal into camp of a regiment during an outbreak of fever in epidemic form. It occurred in the case of the Buffs at Kurnaul in 1841. During September of that year, this regiment had a daily average of 300 sick in Hospital, 241 being cases of fever, and 12 of dysentery. During August and September 27 died, 18 of these being by fever, and 7 by affection of the bowels. In consequence of this sickly state, the regiment was, on October 7, removed into camp about two miles and a half to the west of cantonments, and, as we learn, soon after the move, the admissions from fever diminished. The regiment remained in camp during the remainder of the month. (m)

The great benefit obtained from removal to a cool climate of patients affected with fever is specially alluded to by Dr. Clarke with reference to the station of Umballah, and the facility afforded by the vicinity of the hills for carrying such an arrangement into effect is dwelt upon. Writing on this subject in 1843, he says:—"Last hot season several officers of the Company's service who had been exposed to great heat in the tents were seized with remittent fever of a very alarming character. One young man died. The rest were sent off *dâk* to the hills at night, and reached a cool and delightful climate by 9 o'clock the next morning. All urgent symptoms immediately disappeared, and all speedily recovered." Dr. Clarke goes on to observe that "the power of transporting the sick so quickly to a climate equal to most parts of Europe is an incalculable advantage enjoyed by the residents of Umballah." If, therefore, Medical officers had the power of promptly sending to the Kussowlie depôt men labouring under certain forms of disease, it cannot be doubted that many valuable lives would be saved to the State.

The good effect of removal on the occasion of outbreaks of ophthalmia has also been mentioned. For example, when, in 1843, this disease occurred epidemically in the 10th Foot stationed in Fort William, Calcutta, a detachment of men affected with it was removed to Chinsurah with benefit, in so far as the disease was concerned, (n) and, with regard to similar measures taken on the occurrence of cholera, I deem this part of the subject of such importance as to demand consideration in a separate section.

(*To be continued.*)

(g) Report, 1835, page 434.
(h) Report, page 156.
(i) Report, 1834, page 176.
(k) *Ibid.*, page 90.

A CASE OF STRANGULATED FEMORAL HERNIA IN THE MALE. OPERATION—RECOVERY—RADICAL CURE.

By J. HANCOCKE WATHEN, L.R.C.P. Edin., M.R.C.S. Eng.

I WAS requested about 11 p.m. on July 11, 1868, to visit Moses D., a labourer, aged 31 years. I found him suffering from strangulated femoral hernia of the left side. The hernia was of three years' standing. He had always been able to reduce the greater portion. Had worn a truss, but it did not effectually keep the rupture up. While on his way home from a fair, held some miles off, about 5 p.m., first felt pain in lower part of bowels, and had great difficulty in passing water. The tumour was about the size of a hen's egg, tense, and painful to touch. Poupart's ligament to be traced above. Has had no vomiting, except the rejection of a dose of castor oil. Pulse 70. Respirations 16. Temperature 99°. The taxis was tried in a warm bath, but failed to reduce the hernia. As the symptoms of strangulation were very slight, ordered one-grain doses each of calomel and opium, and hot fomentations to the abdomen and tumour. On the following morning pulse 104, respirations 32, temperature 101°. Tongue covered

(l) Report, 1835, page 349.
(m) Report for 1841.
(n) Report, 1843.

with white fur. Thirsty. Complains of more pain in tumour. No vomiting or retching. As the patient would not consent to an operation, I attempted reduction by the taxis under the influence of chloroform. 10 p.m.: Patient in great pain at times, rolling about the bed, begs most earnestly for an operation. Retching and vomiting occasionally. With the assistance of my father, Mr. Wathen, who administered chloroform, I proceeded to operate. Numerous bands of adhesions were found surrounding neck of sac, which I broke down with my finger. This enabled me to get my forefinger under the tight constricting border of Gimbernat's ligament, and divide it to the extent of two or three lines. The greater portion of contents of sac were now returned, but a small piece of intestine and omentum, which could be felt through the sac, were tightly nipped at the neck of sac. This was divided, a single ligature passed round omentum, and excised. The intestine, which was of a deep claret colour, was returned, sutures introduced, a thick pad and spica applied. Ordered grain doses of opium and effervescing drinks every two hours.

13th.—Pulse 82. Temperature 99·4°. No pain.

15th.—Pulse 68. Temperature 98·6°. Tongue cleaning. Bowels moved naturally. From this the patient progressed until convalescence on fourteenth day after operation.

The patient has been at work for the last six weeks. No return of the hernia. Does not wear a truss.

The points of interest in the case, I think, are—1st. The comparative rarity of femoral hernia in the male. 2nd. The small amount of urgency of symptoms up to twenty-four hours after strangulation, contrasted with the degree of damage done to the intestine as found thirty hours after strangulation, indicating very strongly the propriety of not delaying an operation until severe symptoms have set in. 3rd. The pleasing result of a radical cure.

Fishguard.

CASE OF COMPOUND AND COMMINUTED FRACTURE OF PATELLA,

LAYING OPEN THE CAVITY OF THE RIGHT KNEE-JOINT, IN WHICH THE LIMB HAS BEEN SAVED, WITH ALMOST PERFECT USE OF THE JOINT.

By JOHN MADDEN, M.B.T.C.D., F.R.C.S.,
Surgeon-Major, 2nd Battalion 8th Regiment.

I WISH to lay before the Profession the following very interesting and instructive case of Conservative Surgery, particularly as the recognised authorities lay it down that, in similar injuries to large joints, amputation should be had recourse to, in which, notwithstanding compound and comminuted fracture of the patella from direct violence, where the whole cavity of the knee-joint was laid open from condyle to condyle of the femur, the limb has been preserved, and the patient has now the perfect power of the leg. The following is an abstract of the case taken from the Hospital records of this regiment:—

P. D. R., aged 30 years, an Irishman, by trade a tailor, total service nine years, all in the Mediterranean, brought to Hospital at half-past one o'clock p.m. on July 26, 1867, by the civil police, who found him lying in the ditch opposite the Auberge di Bavaria. When admitted he was in a state of intoxication, and it was found that he had sustained a compound and comminuted fracture of right patella, laying open the knee-joint, and also a severe lacerated and contused wound of the integuments covering the lower part of os frontis, and left ala of the nose was split by direct violence, as, when running away from the picket, he leaped over the bastion opposite the Auberge di Bavaria to effect his escape, sustaining a fall of about forty feet. I saw him in half an hour after his admission to Hospital, and found him in a state of great excitement from drink. When placed in bed, it was found that the right patella was fractured perpendicularly into several small pieces; the knee-joint was laid open from condyle to condyle of the femur. It was impossible to bring the lips of the wound together, as he kept violently and forcibly flexing the joint, and each time he did so the crucial ligaments were brought into view. He was seen by all the Medical officers in the General Hospital, Valetta, who strongly advised immediate amputation, considering the saving of the limb hopeless, and that there would be less shock to his system by performing primary amputation. Although he had received such a fearful injury, I determined to give him the chance of saving the limb. With this view he was restrained by the united power of relays of three men until the excitement from drink passed off; the limb was forcibly extended and placed loose in a fracture-box, the lips of the wound were drawn together by four points of suture, and a compress of lint dipped in the blood from the orifice of the wound was placed over it.

On the following day violent reaction was established, and considerable oozing of blood mixed with synovial fluid took place from each angle of the wound; the joint was also enormously tumefied. The limb was retained in the fracture box, and ice in a bladder suspended from the central ring of a cradle, so as to take off its weight, was kept constantly applied to the joint. The next day he had several rigors, and a discharge of blood, synovia, and pus took place from the angles of the wound, accompanied with dusky redness of the surrounding integuments. On July 30 the oozing of blood and pus ceased, the tumefaction abated, as also the discoloration, and the lips of the wound had united except at its angles; the points of suture were removed, and ice in a bladder, as before, and poultices were alternately applied to the joint. He continued uninterruptedly to improve, and almost free from any constitutional disturbance; the external angle at the end of six weeks united; the internal one remained open until a month ago, discharging an oily fluid very much resembling synovia, from which several small pieces of dead bone, portions of the fractured patella, have exfoliated. All the openings are now perfectly healed. The patient's general health is very good. He daily takes walking exercise in the open air without the trifling aid of a stick, and the power of flexing the joint is almost as good as in the normal state; and I have no doubt, in process of time, when the exuberant formation of callus thrown out in the union of the several broken pieces of the patella is absorbed, it will be as perfect as before the injury.

He is now in Hospital, not for further treatment, but awaiting his discharge from the service, prior to which I shall have great pleasure in allowing any gentlemen who take an interest in such cases to examine him.

South Camp, Aldershot.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

NOTES OF WARD VISITS AND OF CLINICAL REMARKS.

(Cases under the care of Mr. HUTCHINSON.)

Rodent Cancer, and its Difference from Epithelial Cancer.

Monday, October 5.—The visit commenced by the examination of a new case, a man sent up from Haslemere by Dr. S. Hammond on account of rodent ulcer of the face. The disease had destroyed the left eyelids and eye, and had extended over the nose, and downwards on the cheek. The man, who was about sixty, had, however, the appearance of good, country health, and although the disease had existed for six or eight years, none of the lymphatic glands were enlarged. Mr. Hutchinson commented on the expression, a "peculiar form of cancer," which was used by one of the students in reference to this patient. He said that it was a perfectly correct phrase, only we must try to state in what the peculiarity consisted. If a man's lips were attacked by cancerous action, the result would be "epithelial cancer;" if any part of the upper half of the face, especially the eyelids or adjacent skin, the result would be "rodent cancer." Why use the two terms? Because the two things differ exceedingly in their clinical history. The epithelial cancer of the lip would cause early implication of the lymphatic glands: these would ulcerate rapidly and extensively, and the patient would probably die within a year of the date at which the original sore became undoubtedly cancerous. In rodent cancer of the skin of the upper part of face the ulcer would extend widely and perhaps deeply; it would extend as all cancers do, regardless of tissue, eating into and destroying all structures it came in contact with, but it would not implicate the glands, and the patient would probably live on, in spite of his local disease and its pain, for ten or twenty years. Thus, the one might be considered a local cancer, and the other a cancer capable of absorption, their difference being in all probability due to the difference in the tissues originally implicated.

Scirrhus of Breast—Question of Operation.

The next case examined was that of a woman, aged 56, with a large mass of carcinoma in the right breast. The nipple was retracted, and the skin at parts adherent to the growth, showing well the resemblance to pig-skin or saddle leather, which has often been mentioned. In the axilla were numerous enlarged glands, some of them not well isolated. Mr. Hutchinson expressed a doubtful opinion as to the propriety of operation, and, the *pros* and *cons* having been partially stated to the patient, it was decided to protect the lump by cotton-wool, and to abstain from interference.

Recovery after Traumatic Suppuration of Ankle Joint.

In Richmond Ward there is a good case in which a man has recovered with a useful leg after a severe wound which opened the ankle-joint, and which was followed by diffuse erysipelas and destructive synovitis of the articulation. At one time it seemed certain that secondary amputation would be necessary, but it was deferred, and the condition of things gradually improved until now the whole is soundly healed. The ankle is of course stiff.

Recent Prevalence of Tetanus.

The last ten days have presented no fewer than three cases of traumatic tetanus. Two of these were admitted as such into the Hospital, and one originated in an in-patient. One is under the care of Mr. Maunder, and two under Mr. Hutchinson. One of the patients is dead, two are as yet living. It would be very interesting to know whether any unusual prevalence of this disease has been observed at other Hospitals or in private practice during the last few weeks, as it may perhaps be conjectured that the recent magnetic disturbances have had some influence in predisposing the nervous system to such maladies. We believe that at the London the average of deaths from this cause is from five to six yearly.

One of the cases under Mr. Hutchinson was made the subject of clinical explanation. The man appeared to suffer remarkably little, and the examination did not in the least disturb him. Mr. Hutchinson explained that in most cases of tetanus he should deem it quite unwarrantable to make any kind of class demonstration of the patient, as spasms might be induced, and much pain caused. In this instance, however, not the least spasm was induced. The patient, who is a man of 60, said that he still slept fairly, and had but little pain. His tetanic grin is most marked, and his jaws are almost closed. He has had occasional severe paroxysms of spasm, in one of which he was almost thrown out of bed. His pulse is quiet, not usually above 60, and he takes fluid food well. The prognosis in his case is perhaps rather more hopeful than usual.

Muscular, Cellular, and Periosteal Nodes.

In George Ward there is a very unusual example of cellular or muscular nodes. The patient, a young man of 26, had syphilis six years ago, but soon got quite well, and remained so to the present time. He has recently been liberated after a two years' sojourn in Warwick Gaol, where he states that although he received every kindness from the Surgeon, etc., he was much underfed. In gaol he suffered from glandular swellings, but not from any definite symptoms of syphilis. At present he has an isolated hard swelling in front of his sternum, a large loose mass in front of his left vastus internus, and a third tumour in the lower part of the left popliteal space. All of them are quite free from tenderness and inflammatory congestion. They might easily be suspected of being malignant rather than syphilitic were it not for a small ulcer on one leg of very suspicious appearance. Mr. Hutchinson gave a confident diagnosis of syphilis, and ordered iodide of potassium. He stated that the case illustrated a condition of things which is not by any means frequently met with. Muscular and cellular nodes without inflammation are amongst the rarest of syphilitic symptoms.

Extreme Pallor in connexion with the Cachexia of Inherited Syphilis.

In the same ward is an excellent example of the extreme anæmia which sometimes attends inherited syphilis. The patient, a little boy, under care for keratitis, presents notched teeth and a fairly characteristic physiognomy. His skin is peculiarly soft and silky, and he is as uniformly pale as it is possible for any one to be; his pallor amounts to almost absolute whiteness, and is not relieved by the slightest tinge of colour in the cheeks.

Other Cases of Inherited Syphilis.

There are two other good examples of inherited syphilis, and its attendant cachexia, in the wards. One of them, a woman of 20, is suffering from a most severe attack of keratitis; and the other, a young boy, has numerous nodes, one of which in the right tibia is ulcerated.

Successive Large Carbuncles in the same Patient.

There is a man in Devonshire Ward for carbuncle on the shoulder who has had a succession of them during the last few years. His back shows five or six large scars which have been left by them. He is a cachectic man of about 50, usually employed as a dock labourer. It is not easy to detect any special cause of his liability.

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Medical Times and Gazette.

SATURDAY, OCTOBER 10, 1868.

ABYSSINIAN PROMOTIONS.

No man can serve two masters; so also no master can treat two servants performing similar duties on different systems without incurring the risk of dissatisfying the one and not pleasing the other. While noticing the rewards and promotions conferred on certain members of the British Medical Department for services in Abyssinia, we gave expression to what we had reason to know was the dissatisfaction of many of the other members of that department, who felt that their brethren had been rewarded at the expense of those over whose heads they had been promoted; at the same time we expressed our surprise that no rewards had fallen to the share of the Indian Medical officers. The omission cannot fail to have excited disappointment and irritation, as in reality it has the additional effect of appearing to impute blame in some quarter.

Although our remarks were not favourable to the system of rewards adopted in the case of the British Medical officers, we were certainly of opinion that, such as they were, similar recognitions of service ought to have been extended to the Indian Medical officers. Although two wrongs can never make one right, and we are not quite certain that the members of the Indian Medical service as a body would have been much better satisfied than are those of the British service at the nature of the rewards, still they would have had less cause for dissatisfaction than they now have from having been comparatively passed over; and the case which we stated against the system would have been strengthened by the multiplication of instances.

It is curious to observe that no promotions were made in the rank in which there would have been the least reason for dissatisfaction among those passed over. We mean the Assistant-Surgeons, who would regain their relative positions on attaining the rank of Surgeon-Major, on completion of twenty years' service. No man likes to see a junior go over his head; but if anything could reconcile him to it, it would be the knowledge of being likely to regain his former position at the expiration of a certain term of service. If such a regulation were to apply to Surgeons-Major with reference to

those promoted out of their turn, it would not diminish the money value amount of the reward to the latter, or materially interfere with the prospects of further advancement in the case of those promoted for zeal and ability, as such qualities would enable them to maintain their pre-eminence, and those promoted by luck would have little to complain of at making another fair start with their less fortunate brethren.

ON THE CONNEXION THAT EXISTS BETWEEN BRAIN-WORK AND THE COMPOSITION OF THE URINE.

Dr. Byasson has just published a prize thesis on this subject which serves to a certain degree to supplement the investigations of Dr. Haughton. In order to compare the urinary secretion during the period of active brain-work with the urine in other conditions, he has analysed the twenty-four hours' urine under the five following conditions:—(1) During a "mixed animal" diet, (2) during a uniform diet without animal food, (3) during repose, (4) during cerebral activity, and (5) during muscular activity. As a matter of convenience for the sake of reference, we will here insert a table which shows at a glance the mean results obtained in his different sets of experiments, each of which was continued for several days:—

Mean of the composition of the urine on the different days.	Quantity in cubic centimetres.	Density.	Acidity expressed in anhydrous potash.	Urea.	Uric acid.	Anhydrous solid substances.	Anhydrous salts.	Undetermined organic substances.	Anhydrous phosphoric acid.	Anhydrous sulphuric acid.	Chlorine.	Lime.	Magnesia.	Potash.	Undetermined mineral substances, soda, iron, &c.
			grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.	grms.
Mixed animal diet	1432	1·017	0·486	34·47	0·372	54·989	13·02	7·16	1·97	1·05	4·62	0·25	0 12	0·37	0·37
Non-animal diet .	1074	1·012	0·178	22·41	0·163	30·581	5·37	2·63	1·65	0·60	0 84	0·13	0·11	0·27	1·78
Repose	1157	1·010	0·117	20·04	0·132	29·094	5·44	3·07	1·51	0·46	1·22	0·13	0·11	0·25	1·75
Cerebral activity .	1320	1·010	0·117	23·88	0·136	32·621	5·80	2·81	1·98	0·94	0·42	0·12	0·12	0·27	1·95
Muscular activity.	752	1·016	0·300	22·89	0·222	30·019	5·11	2·01	1·48	0·39	0 88	0·13	0·12	0·29	1·63

The first and most striking point exhibited by his results is the extraordinary change which is, as it were, instantaneously impressed upon the urine by an alteration of the diet. As soon as the diet, in place of being mixed (although chiefly animal), is made almost purely vegetable, the amount of urea at once falls by twelve grammes, or about one-third, in twenty-four hours. This observation affords an important confirmation of the similar results previously obtained by Lehmann and other chemists. The principal observations made during his course of experiments on himself had reference to the quantity of the daily urine, its density, its acidity, and the proportions of urea, uric acid, phosphoric acid, sulphuric acid, and chlorine.

The minimum quantity of urine occurred on the days of muscular work, the diminution being due to the greater exhalation from the lungs and the increased amount of sweat, and additionally, but in a less degree, to the absorption of the urine while in the bladder. In reference to this last cause our author observes:—

"Suppose that the desire to micturate is felt very powerfully and is resisted for a few moments, and that powerful muscular action is then exerted, the desire is found to have disappeared for some hours. The result is too marked to be referred to the absorption of water by endosmosis through the walls of the bladder, and the return by this means of the water into the venous circulation."

A relatively maximum quantity of daily urine was secreted on the days when cerebral action was at work.

A comparison of the figures in the columns headed *acidity* and *uric acid* readily shows (if proof were needed) that the latter is not the only free acid in the urine, hippuric and carbonic acids concurring to give an acid reaction to the urine. The generally accepted view (originally proposed by Liebig) that the acidity is mainly due to the transformation of the alkaline into acid phosphates by the action of uric acid is rejected by Dr. Byasson, for reasons which we think it needless to quote until we have repeated his experiments. We will here merely state that, for certain given reasons, he concludes that the uric acid exists in the urine partly in a free state and partly conjugated or combined with alkaline phosphates.

A reference to the table shows that, contrary to the results obtained by Lehmann, diet exerts a marked effect on the daily excretion of uric acid. The state of the brain (whether at work or in repose) has no effect on the excretion of this ingredient, which, on the other hand, is much increased on the days devoted to muscular work.

In his subsequent remarks upon *urea* he discusses the question as to whether it arises solely from the disintegration of the tissues or whether it is also formed in the blood. He adopts the latter view, and holds that urea is formed in the blood, especially when albuminoid matters are conveyed to that fluid in excess, and to the urea thus formed he gives the name of *urea of calorification*.

In tracing the variation in the daily excretion of urea, we see that the smallest quantity corresponds with the days of repose, while nearly three grammes more occur on the days of muscular activity, and nearly four grammes (or about a drachm) more on the days devoted to brain-work. In some experiments Dr. Byasson found that the difference nearly reached five grammes, and he observes that if a state of perfect repose could be attained the difference would doubtless be even greater. The experiments were so arranged that a day devoted to brain-work sometimes succeeded a day of repose, and sometimes a day of muscular work, and in each case there was a perfect concordance in the results.

The urea that is excreted by a person taking a due supply of mixed diet arises from two distinct sources, the greater part arising from the disintegration of the animal tissues, and varying in amount with the rapidity of their destruction and reparation, while the latter is the urea of calorification already described. The former is of by far the greater importance, and may be regarded as essential to life, for when its amount falls below a certain limit all the vital movements cease, and death is the necessary consequence. The latter is of relatively little importance, and, if the food is rich in starchy and fatty foods, and contains little nitrogen, is formed in very small quantity. In childhood, for example, when growth is rapidly going on, very little urea of calorification is formed. The urea of disintegration is mainly due to (1) the accomplishment of the respiratory, digestive, and circulating functions, (2) the accomplishment of voluntary muscular activity, and (3) the accomplishment of cerebral activity. Hence, including urea of calorification, we have no less than four distinct sources to which we must refer the urea put down in the above table under a single heading; and the question arises as to how we are to decide the mean quantity of urea (34·47 grammes) excreted during a mixed animal diet. This question can never be rigorously answered, but careful experiments and observations may yield approximate answers.

The most important variations of the urinary constituents, next to those occurring in urea and uric acid, are those pre-

sented by phosphoric acid, sulphuric acid, and chlorine; and from the table it appears that cerebral activity occasions a considerable relative increase of both the acids, while muscular activity augments the excretion of chlorine. The fact that the urine in repose contains a larger quantity of chloride of sodium than during muscular exercise is at first sight surprising, but it may be accounted for by recollecting that the secretion of sweat, which is especially rich in this salt, is comparatively suspended during bodily rest, and that consequently the chloride of sodium finds a fresh channel for its excretion. On the other hand, the phosphates and sulphates are in such small quantities in the sweat that the differences in amount which these salts present during the respective periods of cerebral activity and muscular work cannot be referred to this source.

The following are the principal conclusions which Dr. Byasson draws from his experiments :—

"The exercise of cerebral activity properly so-called, or of thought, is accompanied by the attendant production and simultaneous appearance of urea and of the phosphates and sulphates of the alkalies in the urine.

"The exercise of muscular exertion is accompanied by the abundant production and simultaneous appearance of urea, uric acid, and chloride of sodium in the urine.

"If the separate urines of a man who for three days has adopted a uniform diet, and has submitted himself to the same external conditions, are presented to a chemist, he can tell by a single analysis which was passed during repose or cerebral or muscular work."

THE WEEK.

DR. RICHARDSON'S NEW COURSE OF LECTURES.

Dr. Richardson's third course of experimental and practical lectures will commence on Tuesday next, October 13, at the usual hour (4.30), and will be continued on the second Tuesday of every month up to March. The first lecture will be of a practical kind—viz., on aneurismal murmurs—and will be of a character similar to the lecture on intermittent pulse and palpitation published in the early part of this year in our columns. Future lectures will probably be on the therapeutics of the organic iodides, the action of different alcohols, new researches on heat and cold, and on blood. We have to announce that we have made arrangements to present these lectures in full in our columns; and as we believe there is a wish that each lecture should be completed in one number, we shall endeavour, with the concurrence of the author, as far as is practicable to meet the views of our readers in this respect.

POISONOUS SOCKS.

The fact that socks of certain colours give rise to irritation of the skin, and so to certain anomalous eruptions, has of late been attracting considerable attention. Mr. Webber, who first laid the fact before the public, has been somewhat scurvily treated, having received more jeers than sympathy in his efforts for the public weal; but it would now seem indubitably established that such results may occur, particularly in the case of red and yellow socks. The nature of the colouring agent, however, is not so well attested; but one need hardly ask the question as to its origin; that is almost certain to be aniline. We perfectly agree with Mr. Crookes, in his letter to the *Times*, as to the generally innocuous character of picric acid (better known to the Profession as carbazotic acid); this substance has long been known. Experiments have been extensively tried with it, and although some experimenters have found it fatal to small animals in doses of from 10 to 20 grains, still in the hands of others it has not led to such results when given in larger quantity, even although the skin and conjunctivæ were thereby dyed yellow. Those acquainted with the changes in the mode of experimenting on animals can readily explain this anomaly. As Mr. Crookes says, however, it is, especially when combined with an alkali, a violent explosive, we may therefore conclude that these yellow and red dyes are more immediate derivatives from rosaniline, and we may thereby acquire a clue to the mystery. We have not had an opportunity of examining either the suspected socks or the peculiar eruption, but on hearing the report it was suggested to our minds that such products as the aniline derivatives were rarely irritating to the skin, whilst some mineral substances, especially arsenic, are remarkably so. The process almost universally adopted for the production of rosaniline from aniline and toluidine is by oxidising with arsenic acid, whereby this latter substance is reduced to its most offensive form—that of arsenious acid. Should by any chance this waste product be included in the noxious dyes, the mystery of local irritation and eruption would be readily explained—the offending substance would be the arsenic.

SOCIAL SCIENCE AT BIRMINGHAM.

If the Social Science Congress has not been the means of bringing many new truths to light, it has been fertile in opportunities of enforcing old ones. Dr. Rumsey, the President of the Health Department, followed by Dr. Farr, showed the fallacy of general averages as evidence of a diffusion of health or prosperity; and when the low death-rate of Birmingham was quoted as an instance of the needlessness of sanitary reform, it was shown, in reply, that that low death-rate was got by including healthy country districts with sickly town ones. The water supply of Birmingham was shown to be very unworthy of the town—even that of the Waterworks Company containing double the average impurities of Thames water. The town drainage was equally imperfect; and whilst, on the one hand, the disposal of human excreta in the form of liquid sewage was attended with immense nuisances by river pollution, the cleansing of the *middens*, or receptacles for filth in the solid form, was most culpably neglected, And the Birmingham people think they don't want a Health Officer!

ACORNS AND MEASLY PORK.

Among other subjects the silly season has brought up for discussion is the utilisation of acorns as food for pigs. One gentleman strongly advocates the use of the abundant crop of this year in the way indicated; and Mr. Sutton, the well-known chemist of Norwich, gives a short analysis of some he picked up, illustrative of their nutritious properties. Another gentleman, to deter from any such acts of economy, writes to the *Times* that acorns give pigs the measles. To any man of scientific attainments this is sufficiently absurd. We need not stop for one moment to criticise such an opinion, for it is now well known that measles are due to a parasite, the intermediate grade between the embryo of the tape-worm and the fully developed animal which infests mankind; in other words, acorns have nothing to do with measles in pigs any more than they have with scarlet fever in man. A question which, however, presents more features of interest is whether or not the astringent material contained in acorns may not be removed, so as to make the nutritive material they undoubtedly contain more palatable. The horse-chestnut is another fruit containing much nutritive material, but its taste is so fearfully bitter that we could conceive people starving before having recourse to it. So, again, beech mast is in the earlier stages of growth sometimes eaten by boys, but it becomes when ripe too dry and too bitter for any useful purpose beyond feeding pigs. As a rule, the bitter matter which gives the nauseous taste to these and other vegetables can be readily removed by means of water, and we can easily believe that by dealing with such fruits as acorns, as is done in the preparation of starch from wheat, a nutrient material sufficiently pure to be palatable might be procured. Cassava bread is prepared from a much more disagreeable and

a much more dangerous vegetable. If such were the case with the acorn of our native oak, much more so might it be with the larger and sweeter nuts of the ilex, which is the species used in Spain. These contain more nutrient and less bitter material, and might be usefully employed in the way we have suggested, in addition to the applications they now receive. By all means let the pigs have acorns, but let them have something else at the same time, whilst it would be worth while to try the experiment we have above suggested.

THE OBSTETRICAL SOCIETY.

On the evening of Wednesday, the 7th inst., the Obstetrical Society met in the rooms of the Royal Medical and Chirurgical Society, Berners-street, for the first time after the vacation, the President, Dr. Hall Davis, in the chair. Several very interesting specimens were exhibited, Dr. Wynn Williams showing an ovarian tumour, Dr. Heywood Smith a fœtus in which a rent had occurred at an early period of utero-gestation, and Dr. Gervis a double monster whose delivery presented some interesting obstetrical features. Two valuable papers were communicated, as it happened, on correlated subjects, Dr. Tilt dealing with the condition known as irritable uterus, and Dr. Meadows with uterine flexions. A most interesting debate followed, the question being whether these two morbid conditions were to be looked on as invariably associated—in other words, as cause and effect—or whether the irritable uterus was something altogether apart and different from the condition produced by uterine flexions, particularly that of retroflexion. In this debate Dr. Henry Bennet first spoke, holding that the irritated or inflamed state of the uterus itself was of more importance than the flexed condition; whilst Dr. Graily Hewitt maintained that, in all cases of irritable uterus he had seen, the uterus was retroflexed, and that relief of the flexed condition removed the local inconvenience. Dr. Tyler Smith held that flexions of the uterus were of great importance in as far as the morbid sensations originating in that organ were concerned, but stated that as there appeared to be two camps in the debate, so there was yet room for two sets of opinions—a discrepancy which could only be settled by further discussions similar to the present. After some observations from Dr. Rasch and Dr. Head, the latter of whom maintained that the irritable condition of the uterus mainly depended on ovarian irritation, the debate was, by an almost unanimous vote, adjourned till the next meeting, when it is to be hoped that this question will be freely discussed. The meeting was a highly successful one.

PROPOSED SANATORIA AT MALMESBURY, CAPE COLONY.

We have received a prospectus relative to the formation by the ordinary means—a limited liability company—of a series of sanatoria for individuals labouring under consumption and suchlike diseases on the shores of the Saldanha Bay, in South Africa. That the climate is good and sufficiently well adapted for the purpose proposed we are ready to admit; but when we have combined with the project of forming sanatory resorts a plan for securing labour for the poorer classes who may be induced to transport themselves thither, and a scheme for punishing shipowners for sending to sea insufficient vessels, we may be led to doubt the sanity of the originator, and still more the success of his scheme. We are perfectly ready to admit the importance of change of air and scene, as well for the poor as for the rich, and we regret that the former class do not possess the means of remedying this evil; but we may be allowed to question the propriety of mixing up philanthropy and profit—in short, of such a scheme as this now before us. It is desirable that more perfect details as to the climate of South Africa should be at our disposal, but the facts we want are scarcely those relating to the freedom of certain spots from prevalent epidemics, or even the experiences of intelligent but unskilled men. We are very far from being opposed to the institution of any number of sanatoria at Malmesbury; but if the means it is proposed to adopt concern the public as well as our Professional brethren, it is our duty to step forward and point out the insufficient groundwork of fact which is contained in the prospectus. The cultivation of tea and silk is no doubt a profitable employment, at least to those not concerned in the manual operations; but as this form of industry has never yet been fairly tried in Cape Colony, it would only be fair to wait till something was done to determine the probability of its success before inducing a number of invalids to emigrate on the chance of their industry succeeding.

FROM ABROAD.—PUERPERAL PERITONITIS—PROFESSOR SCHÖNBEIN.

On the resumption of the discussion, at the Academy of Medicine, on M. Jules Guérin's alleged case of puerperal peritonitis, M. Blot explained that he had not, as M. Guérin had expressed at the last meeting, denied the existence of contraction of the uterus, substituting for it a sudden atrophy of the organ. He did not deny that it became contracted after the expulsion of its contents, and in many cases he gave ergot for the purpose of expediting such contraction. What he does deny is that such contraction is to be regarded as the cause of the slow diminution of the size of the organ during the days or weeks which succeed delivery. This slow diminution, which restores the uterus to the volume it possessed prior to conception, is the result of a physiological atrophy which is the inverse of that process of physiological hypertrophy which gave rise to the increase of the organ during pregnancy. As to M. Guérin's theory of the passage of gases or fluids through the tubes into the peritoneum, it is a mere assertion wholly destitute of proof, and opposed to the physical condition of the parts concerned.

M. Alphonse Guérin, a namesake, but not, we believe, a relative, of M. Jules Guérin, made his maiden speech at the Academy in opposition to the views of this gentleman. In the first place, he observed that the diagnosis of the case related by M. Guérin was most unsatisfactory, while the treatment by "aspiration" probably had little or nothing to do with the result. The disposition of the tubes is such, in fact, that an exhausting apparatus placed in the vagina could not operate upon the cavity of the abdomen. A series of experiments have shown M. A. Guérin that the most vigorous aspiration exerts no action upon the liquid in which the tubes are plunged. These same experiments have, however, also demonstrated that air, and even water, if propelled with sufficient vigour, will pass into the abdomen through the tubes. And hence may be seen the danger of propelling injections into the uterus. If, as M. Jules Guérin states, it is so easy to induce through aspiration the passage of fluids effused into the cavity of the peritoneum, this might be demonstrated far more easily in cases of ascites, in which the fluid is so much more limpid than is the case in purulent effusion.

M. Depaul observed that M. Guérin's case could not be relied upon as respects its diagnosis. In fact, he is not a clinical observer, but a mere theorist, who makes facts bend to his conceptions. His apparatus of flasks, tubes, pumps, etc., which he has exhibited in action before the Academy, has but one defect—that it is not applicable to the living economy. The occlusion which would be necessary for the creation of a vacuum cannot be obtained; and, moreover, where is the aspiration to be exerted? There is no cavity in the uterus into which the air can penetrate; and air, in fact, does not penetrate into it any more than it does into the rectum, the stomach, the urethra, or the bladder. This gaping cavity which, for the purpose of his theory, M. Guérin has imagined, has no existence. We may create one by mechanically sepa-

rating the parts, but of itself it does not exist, the walls of the uterus being in contact throughout the entire extent of the organ.

The Secretary of the Academy of Sciences, M. Dumas, communicated the death of the celebrated *savant* Schönbein in the following heartfelt words:—

"The University of Basle, to which M. Schönbein had always been attached, has sustained a loss which it will find it difficult to repair in the unexpected and premature death of this Professor, alike remarkable for his amenity, his devotion to the young, and the originality of his views. Our Academy will participate in its regret. M. Schönbein occupied in science quite a place by himself. All his labours have a character of spontaneousness and unexpectedness about them which are only met with in those of other chemists very rarely and exceptionally. He never pursued the beaten track, strange questions and obscure problems having a great attraction for him; and so extraordinary was the character of the happy solutions of them he presented, that a long time elapsed before they became accepted and acknowledged as classic science. Gun-cotton and ozone are discoveries which have rendered M. Schönbein's name popular, and every one is enabled to appreciate the original character of these. Yielding to my persuasions, M. Schönbein had promised me to visit Paris and exhibit before the Academy his principal experiments. Greatly do I deplore that he was obliged to postpone his journey, and that those of our colleagues to whom he was not known have lost the opportunity of seeing a *savant* of such rare eminence and so modest and excellent a man as science has just lost."

THE NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

(*From our Special Correspondent.*)

BIRMINGHAM, October 5.

SECOND DAY.—THURSDAY, OCTOBER 1.

OUR communication in last week's paper merely gave a hasty account of the opening of the Congress on Wednesday. The real business of the session commenced to-day with an address which was delivered by Lord Lyttleton, President of the Educational Department. There was a large attendance both of ladies and gentlemen.

Lord LYTTLETON, after a few preliminary remarks, began his speech, which was frequently interrupted by loud applause. The following are extracts from it. His Lordship, in speaking of popular education, said that "if we adopted the American, or the French, or the Prussian system, we should adopt that which would powerfully tend to assimilate the English or the Scotch character to the American, or the French, or the Prussian character—a result which he was not aware we desired to obtain." With respect to classical teaching—or at least the teaching of Latin—his Lordship said that he was content to rest the argument for it on somewhat narrower grounds than are often taken. He fully admitted the force of the direct considerations in favour of classical knowledge for the immortal beauty of the literature to which it gives access. His Lordship referred to a passage in the evidence of Professor Airey, and said that it might well shame the common herd of declaimers who, from the days of Sydney Smith downwards, have indulged their easy and superficial sneers against classical learning. He advocated the substantial retention of classics and mathematics in their present position in our higher education on familiar grounds. First, as regards classics, or rather Latin, he believed an intelligent knowledge of grammar to be the best instrument to obtain mastery over languages, and through languages to get access to all knowledge and means of intellectual progress; and he maintained that from its finished completeness, as what we call a dead language, and its clear scientific precision, there is no grammar to be compared to the Latin for this purpose. He then alluded to the mathematics, and said he conceived it to be the best instrument to obtain clearness, consecutiveness, and accuracy in reasoning, and he thought, as regards both classics and mathematics, they were the hardest work generally suitable for the young mind, with a view to the strengthening and development of its powers. The speech was a long and admirable one.

In Section B Department, Dr. J. H. STALLARD read a paper on the subject—"To what Classes and in what Condition should Outdoor Relief be administered?"

His paper was followed by one from Mr. NORTH, which was very ably written, and which entered fully into the subject of Poor-law administration.

The Chairman of the Board of Guardians of the parish of Birmingham also read a paper "On the Relief of the Outdoor Poor in the Parish." He said that the object aimed at primarily was the relief of actual destitution only, and the function of a relieving officer was to ascertain in each case that destitution existed, and then to relieve it in accordance with the law. It might be said that he had no business with the causes which had led to the present condition, nor could he take steps to provide for the future—that his duties were limited to the exigencies of the present moment. In furnishing relief it had been found expedient to keep the position of those assisted from the poor-rates below that of the lowest class of independent labourers, as otherwise the law would destroy the strongest motives to good conduct, industry, and frugality, and induce the idle and the vicious to throw themselves upon the rates for support. Now, in order properly to apportion the relief, the Birmingham Board of Guardians had divided the parish into five districts, to each of which a relieving officer was appointed; and it had placed each district under the care of a committee of guardians, who sat once a week at the parish offices on different days. The relieving officers visited the applicants at their homes or at their lodgings, afforded temporary relief in all cases of pressing emergency, and brought them, with reports of their cases, to the committee for decision and direction. The various classes of outdoor poor in Birmingham parish were more numerous than in some other places, because what was known as the General Prohibitory Order, issued December 21, 1844, was not in force in the town.

Sir BALDWIN LEIGHTON also read a paper on the subject, and remarked that the conditions upon which relief ought to be given might at first seem a subject of very easy solution, yet as very few boards of guardians adopted the same rules in granting out-relief to the applicants, it would appear the practical working of this portion of the Poor-law was not so easy as might be thought. He stated the results of the working of out-door relief in an agricultural parish in which there were some coal and lead mines, and the population of which was very scattered. When a person applied for relief a much stricter investigation was made into the circumstances than was the case in most unions. This board invariably refused permanent out-door relief if the applicant held more land than a garden, although relief was sometimes given in sickness. If the single adult sons or daughters were earning wages, this was taken into account, and the board considered they ought to contribute towards the support of their aged parents, even when these sons or daughters were married, if in good circumstances. When the rent of the cottage exceeded £4, relief would only be allowed for a short period, to allow time for the pauper to look out for a cheaper place, and should bedrooms be overcrowded, except with a man's own children, indoor relief was offered. When widows with families, or men with children at home, applied, the board offered to take part of their families into the workhouse. Although this plan was introduced in order that the children of widows should receive an education, and, in the case of the sick man, it was thought desirable that the home should, during his illness, be well ventilated and the cares of the parents lessened by not having so many to look after; yet it had, rather to the surprise of the guardians, turned out a most efficient test of destitution. If the applicant's character were indifferent, out-relief was generally refused, but the cases of members of friendly societies were favourably considered. The great object was to prevent the necessity of the labourer becoming a pauper, and to show him the advantage of supporting himself.

The reading of the several papers gave rise to an animated and interesting discussion. A lengthy paper was read by Mr. Wilkes, "On the Poor-law Workhouse System;" and another paper by Mr. Alfred Fleischman, "On Poor-law Reform," brought the sitting of the Department to a close.

Mr. FLEISCHMAN said the first necessity in any scheme of Poor-law reform was a better system of electing guardians. In the administration of the Poor-law there were three interests to be observed—viz., of the board, of the ratepayer, and the pauper — interests seemingly antagonistic, but in reality

identical; and every parish should have their guardians, who should represent severally each of these interests. The clergyman of each parish should be an *ex-officio* guardian—to be, in fact, the paupers' nominee. The second fundamental reform rested on the pay and status of the Medical man and the master of the workhouse. He drew an analogy between the management of lunatic asylums and workhouses. In the former, the "superintendent" was always a Medical man; whereas the "master" of a workhouse was never a gentleman, was always uneducated, and frequently happened to be an unsuccessful tradesman—often a *ci-devant* tramp-master or workhouse porter, and nine times out of ten unfit for his duty, though perhaps desirous of fulfilling it. He could see no difficulty in the way of combining the two offices. That the position of master of a workhouse would be beneath the dignity of the Profession was no true objection. It could be no worse to take charge of sane, and for the most part sick paupers, than to be in authority over crazy ones. After an experience of seventeen years of the working of the Poor-law, he felt justified in urging that Medical men should be appointed masters of workhouses, and that the post should be obtained only by competitive examinations in practical Medicine, Surgery and midwifery, and hygiene, and also in the practical administration of the Poor-law. From these might be selected a small staff of Medical inspectors. The third fundamental reform needed was the separation of sick, imbecile, and infirm children from the workhouse proper. He denied that by improving the condition of the pauper we perpetuated pauperism; and in conclusion said:—"Cure the sick pauper rapidly, educate the infant pauper effectually, treat the infirm pauper generously, punish the idle pauper severely, and immense benefit will surely accrue; the sting of pauperism will be withdrawn, and its venom neutralised."

THIRD DAY.—FRIDAY, OCTOBER 2.

The Congress on this day was opened by a learned address from the Right Hon. W. H. MASSEY, the Chairman of the Jurisprudence Department, "On Jurisprudence and Amendment of the Law." It was distinguished by great erudition, and a comprehensive knowledge of the subject. A vote of thanks, on the motion of the Earl of Carnarvon, was accorded to the speaker. There were also able and interesting papers read on "International Law," "Municipal Law," and on the "Repression of Crime."

In the Education Department a paper was read by the Rev. HENRY SANDFORD, one of Her Majesty's Inspectors of Schools, the subject of which was, "Is it expedient to make Primary Education Compulsory? and if so, on what Conditions?"

The Health Department was presided over by Dr. Rumsey. There was a very large attendance of Members and Associates. The first paper was read by Mr. C. E. MATTHEWS, "On the Administration of Hospitals."

Miss GARRETT, who was present, also read a paper "On Suggestions for increasing the Educational Usefulness of Out-door Medical Charities." She observed that this was a subject which it would be well to consider from many different points of view. In the first place, obviously, there was its eleemosynary aspect, under which they should have to consider a great number of questions relating both to the organisation of Hospital wards and to that of the out-patient or dispensary department. There was also the social and economic aspect, under which they would have to consider such questions as, to what class of patients ought Medical charity to be extended? Could the system of free admission, or of admission without a subscriber's recommendation, be so guarded as to exclude the class who ought not to need charitable help? Could the plan of part payment, or of payment for medicines only, be adopted in cases of severe or chronic illness, where the patient is just above the class for whom Hospitals and Dispensaries are now intended? Under the economic aspect would also come all questions relating to the financial administration, such as the expenditure on diets, the salaries of officers, nurses, etc. There was also the educational and scientific character of such charities. Every one familiar with a Hospital knew that a vast amount of material for scientific observation was daily brought together in its wards and waiting-rooms. The question to be asked was—How was this material dealt with? and did science gain from it? So far as this question related to the scientific study of Medicine in the wards of an Hospital, she believed that a fairly satisfactory answer might in the majority of cases be given. The amount of clinical work which came to the share of each member of the staff was rarely more than could be done thoroughly, and, as a rule, the Physicians and Surgeons who visited the patients in the wards were not less able and willing to teach the students than they were to prescribe for the patients. No doubt there were instances where this was not the case—where the official clinical teacher was quite unable to teach, or in which he was disqualified by some mental or physical defect from teaching well. It was probable, however, that, as a rule, clinical teaching in Hospital wards was not of a character to call for energetic administrative reform. The case was widely different on turning to the out-door or dispensary department. Here one man saw and prescribed for as many as 300 patients in an afternoon. Two or three students professed to watch his practice, but how much time or strength would he have to spare for the work of teaching them? How much accurate scientific observation was it possible for either students or teacher to make under such conditions? It would be far from true to say that none was made, but probably all experienced people would agree that, with the best intentions, it was simply impossible to give anything like study to any but rare and therefore especially interesting cases, and that even these could scarcely be observed with the care they demanded. No doubt the student gained a good deal by seeing the practice of an able man, even in this hurried and imperfect way. He at least learned the physiognomy of disease; he learned to look for guidance to the patient's face and aspect. If he knew enough to catch the drift of the Physician's questions, he learned something of the art of cross-examining ignorant witnesses, and of the subordinate but useful art of checking irrelevant volubility. He gathered certain fragmentary scraps of knowledge about the treatment of disease. But might he not learn all this, and much besides, under a better system of administration? Would not a well-instructed student learn infinitely more from ten, twenty, or thirty patients, if he had the responsibility of treating them himself, than he did from seeing ten times their number rapidly prescribed for by the Physician? Would it not be possible, without seriously diminishing the value of the charity to its immediate recipients, to admit the senior students to a share of the responsible practice among the out-patients? No one would suggest that the entire charge of the out-patients should be put into inexperienced hands. This would be injurious alike to patients and to students. To the patients it would certainly be an exchange for the worse, while for the students it would merely be a mode of anticipating by a few months all that they now suffered through inexperience on their entrance into private practice. But the suggestion was that the senior students should have the care of a moderate number of out-patients as the final part of their educational course, and while strictly retaining their position as pupils. It was not intended that they should supersede the Physician or Surgeon whom they represented, but that the character of his work should be changed, and that he should teach and guide his assistants instead of directly prescribing for the patients. How such a plan could best be carried out was a question of detail. An essentially similar system had been working for years in the Medical schools of Germany, and had worked well. (Applause.)

We had the privilege of being introduced to Miss Garrett in the operating theatre of the Queen's Hospital on Saturday last. We were invited to witness the operation of ligaturing the external iliac artery for femoral aneurism. The operation was very skilfully performed by Mr. West. Miss Garrett has a very intellectual face, combined with a prepossessing appearance, and seemed to be not in the least perturbed. She was warmly greeted by those present, and the right hand of Professional "fellowship" was extended to her. The Profession cannot look upon her as a rival in any way, but must rather regard her as a practical and eloquent expounder of woman's rights, and as a wise and tender alleviator of woman's distresses. Nevertheless, many of us would rather have met her under different circumstances.

A paper was read by Dr. PERCY LESLIE "On Gratuitous Medical Labour," which he characterised, as at present carried on, as the greatest bane of the Medical Profession. He advocated that the system should be steadily opposed, and especially called upon the Hospital Surgeons and Physicians, who were the first sinners, to set their faces against it.

Dr. HARDWICKE read a paper by Dr. HAWKSLEY, "On the Police of Charity." He contended that in the administration of Medical charities the staff was generally too small, especially in the out-patient department, where the poor people were kept waiting a long time. He then enumerated the advantages to be derived from a strict police of charity.

The discussion on the question was opened by Dr. Aldis, who said that what was wanted was the extension of the education department and a proper record of existing diseases. With respect to cases of abuse, he could say that his experience of dispensary practice did not bear out the idea that these cases were numerous.

Mr. Godwin hoped that amidst the very necessary reforms which the writers of the papers had pointed out, they would not omit the important necessity of a reform of the buildings themselves. (Hear.) Important steps had been taken to bring about the adoption of the pavilion plan; nevertheless a large number of the Hospitals remained in their old, disreputable, and dangerous condition. (Hear, hear.) He had been shown the plans of alterations which were being made in Salop Infirmary, and he declared he had never seen anything more dangerous and disreputable. (Applause.) He hoped the alterations would be stopped. (Hear, hear.)

Dr. Stewart (London) said he was always inclined to defer to the suggestions of Miss Garrett, but he must confess that he could not but doubt the feasibility of her suggestion about letting the senior students try their 'prentice hand in certain cases. He felt convinced that it would, in one respect, prove a great advantage; it would diminish the number of out-patients. (Laughter.) But their best men would tell them that they could not get their young men to do that very work which was pointed out. The whole dispensary system was rotten; and he believed the free dispensaries were the most efficient means for creating paupers. (Hear, hear.) They formed the inclined plane by which men descended to the workhouse. (Hear, hear.)

Dr. Stallard (London) said he had experience of country and town practice, and he had observed a great contrast between the provident habits of the agricultural labourers and persons in London who were in the receipt of between £2, £3, and £4 a week. He did not find it an uncommon thing for persons of the latter class to come to the dispensary as a matter entirely of principle and of right. This was the beginning of dependence, and the result was the demoralisation of the people and the impoverishment of the Profession. He maintained that they ought to protest against this.

Dr. Wood (Shrewsbury) regretted to say that what Mr. Godwin had said with regard to the Salop Infirmary was correct; but he was glad to add that the Medical staff had protested against the additions, which he hoped would be pulled down. (Hear, hear.)

Dr. Seaton dwelt on the injuries done to the interests of the Profession and the public generally by the present dispensary system.

Mr. Gamgee also delivered a powerful and telling speech on the subject of "Hospital Reform," and on the question of remuneration of Medical service. He also touched upon the subject of pauper Medical relief, which he stigmatised as a disgrace to a civilised nation. He concluded his speech amidst loud applause.

Mr. Furneaux Jordan said he did not believe that they had yet arrived at the period of the Hospital millennium, nor did he think that, if Mr. Mathews's "system" was in operation to-morrow, the millennium would be a bit nearer at hand. (Laughter.) As to the statement by Mr. Mathews that the more difficult and serious cases had less chance of admission than less important ones, he could only say that this was a great misrepresentation.

Dr. Mapother (Dublin) said the working of the Medical Charities Act of 1851 in Ireland was looked upon with so much satisfaction that he understood that it was thought worthy of imitation by the Poor-law Board in England.

There were no papers read in the other sections which need be noticed here, as they do not treat upon subjects which would be of special interest to Medical readers.

Fourth Day.—Saturday, October 3.

In the Health Department the attendance of members was meagre. In the absence of the President, Dr. Farr occupied the chair. The main subject of discussion was the disposal of sewage. The first paper was read by Mr. R. Rawlinson, C.B., "On River Obstructions and Pollution by Manufactories." He remarked that the growth of trade and commerce and the increase of river pollutions had been simultaneous. Was this necessary? The Aire and Calder, having a combined area of 794 square miles, was the seat of the woollen and worsted trades. The Mersey and Irwell was the seat of the cotton trade. The greatest volume of pollution proceeded from the former, the reason being that wool requires washing and cleansing. Rivers were obstructed by mining and iron-making operations, as millions of tons of solids were "tipped" into the adjoining streams to be removed by floods, to the serious injury of property below. Ashes from steam boilers were thrown into streams and rivers by hundreds of thousands of tons per annum. The pollution of Yorkshire and Lancashire waters by manufactures had in some districts proceeded so far as to have limited any extension of the trade, and the increase of pollutions towards the sources of streams had destroyed trade below, as water could not now be obtained for either washing or dyeing. Towns polluted rivers and streams by sewage, which, added to refuse from manufactures, made a compound "thick and slab," scarcely coming within the meaning of the word "fluid." The remedy for river obstructions and pollutions must be natural. Conservancy boards must be established—one which shall be official and general, others which shall be especial and local. There may be a subdivision of large river areas and a combination of small river areas. Conserving action should have no county, parish, township, or municipal restrictions as to boundaries. The casting into rivers and streams of all solids should be strictly prohibited. (Hear, hear.) All works liable to obstruct streams and rivers should be under the jurisdiction of river conservators. Trade pollution should be, as far as practicable, prevented. Refuse was usually useful material in a wrong place. There was no refuse now from gas-making, which was not commercially valuable. Much that is now termed refuse in manufactories, print works, dye works, chemical works, etc., might probably be found to be valuable. Town sewage was proved to be valuable when used in agriculture. One main restriction might at once be general and imperative—namely, solids must not be, as now, cast into running waters and rivers.

Mr. Brooke Smith next read a paper "On the Disposal of the Sewage of Birmingham." He remarked that the sewerage of Birmingham, now 94½ miles in extent, and continually increasing, disgorges 18,000,000 gallons of sewage per diem. As an experiment, the Corporation has hired on lease about 140 acres of land, which, as it lies along the river, is capable of being irrigated by gravitation without pumping. Rather less than half this land has been carefully prepared, at considerable cost, for receiving the sewage water. Some portion of the land having very little fall (1-100), great care in levelling the surface has been required. That irrigation is the most efficient scheme yet devised is now generally admitted; but the disposal of the whole volume of sewage water of large towns by this process only, whether on uplands by pumping or on lowlands by gravitation, presents great difficulties, especially with reference to the vast extent of land needed. However, it is evident that irrigation must be looked to as the chief means of useful disposal. And as to its extension, upland elevation, to be reached by pumping, seems to be the most promising, not only because high lands will be more benefited than low lands, but that from such elevation extensive districts may be commanded.

The next paper was read by Mr. W. Fowler, jun., on the same subject. It was an ably delivered and well studied address, and full of valuable detail.

Mr. Thomas Plant, the meteorologist, also favoured the meeting with a paper "On the Public Health of Birmingham," which was listened to with marked attention. This concluded the reading of papers on the question of health, which was followed by an animated discussion in which Mr. Bird, Dr. Trench, Dr. Hill, the borough analyst, Dr. Foster, and the Mayor took part. The appointment of a sanitary officer of health was strongly urged by Dr. Foster.

In the afternoon the Members and Associates, to the number of 400, enjoyed a trip to Dudley Castle to explore the caverns, which were illuminated by thousands of candles, the reflection of which presented a singular appearance. The visitors were edified by an address of a geological character by the mining agent of the Earl of Dudley, Captain F. Smith, which was very interesting and loudly applauded. The singing of the National Anthem appropriately concluded the day's proceedings.

Fifth Day.—Monday, October 5.

The Congress opened to-day by an address from Dr. Rumsey, President of the Health Department, delivered to a large audience, in the Friends' Schoolroom, under the presidency of the Earl of Carnarvon. It was a very interesting and able paper, but much too long for insertion in your journal. Amongst other subjects he discussed the physical science aspect of the question of great towns, and he referred to the

labours of Dr. Angus Smith, whose researches on the subject of the impurities of town air he alluded to in the highest terms.

In the Section afterwards, Dr. Rumsey, President, in the chair, the special question under consideration was—"What is the Relation of the Water-supply in Large Towns to the Health of the Inhabitants?" The first paper was read by Dr. Alfred Hill. He said that to establish the relation between the water-supply and the health of a town was a complex and difficult task, because (1) the water was derived from more than one source, and (2) other causes co-existed with water supply, which might independently produce disease. Among these causes were impure air, bad, excessive, or deficient food, and great solar heat. Again, owing to the freedom of Birmingham from severe epidemics, it was not easy to connect the quality of the water with the diseases which occurred. He should, nevertheless, be able to bring forward cases of undoubted significance. Absolute chemical purity was not desirable in water for sanitary purposes. Dr. Parkes gave the following numbers as probably representing the largest amount of the different substances which it was desirable to have in a gallon of water:—Organic matters should not exceed 1·5 grain; carbonate of lime, 16 grains; sulphate of lime, 3; carbonate and sulphate of magnesia, 3; chloride of sodium, 10; carbonate of sodium, 20; sulphate of sodium, 6; iron, 0·5. Boudet considered the proper amount of gases dissolved in water employed for drinking purposes was from 14 to 16 inches per imperial gallon—viz., nitrogen, 6 cubic inches; oxygen, 2·5; carbonic acid, 5 to 7. To these positive characters might be added the negative ones—absence of nitrates and much ammonia. As to the organic matter, by which was generally meant that portion of solid matter which was volatile or combustible, it was exceedingly difficult to state what quantity was sufficient to cause disease, as it varied so much in composition. It might be entirely vegetable, or entirely animal, or a mixture of the two; it might be fixed, it might be in a state of putrescent change, or it might have arrived at a state of chemical rest, as with nitrates, nitrites, or even ammonia—forms which could scarcely be considered capable of producing fermentative or zymotic change in the fluids of the animal economy. But there was no doubt that organic matter produced disease. Diarrhœa was well known to have been produced by water containing animal, and particularly excrementitious, matters, either alone or associated with vegetable matter, whether these had been suspended or actually dissolved. Water impregnated with the gases evolved from the decomposition of organic matters, such as the contents of drains and sewers, had been unmistakably proved to give rise to diarrhœa. This was most convincingly shown by a case of sudden epidemic which occurred in Salford Gaol in 1859, and which was described by Dr. Greenhow. Dr. Greenhow, in summing up the results of his investigation, in 1859, into the causes of diarrhœa in Coventry, Birmingham, Wolverhampton, Dudley, Merthyr Tydfil, Nottingham, Leeds, and Manchester, with Chorlton, and Salford, said:—"The excess of mortality has in all the places been coincident with one or other of two definite local circumstances—the tainting of the atmosphere with the products of decomposition, especially of human excrement; or the habitual drinking of impure water." As a rule, the waters supplied by the different waterworks companies were superior in most respects to the standard set up by the Brussels Sanitary Congress, as well as to that mentioned by Dr. Parkes, and also to that furnished by town wells. The ingredients of greatest importance as affecting health—viz., solid matter, volatile or so-called organic matter, chloride of sodium, nitric acid, and the alkaline earthy salts which conferred hardness—existed in the following quantities in the water supplied by the companies specified:—

	Solid Matter.	Organic Matter.	Chloride Sodium.	Nitric Acid.	Hardness.
Birmingham (average of 31 months). . .	36·00	2·65	—	trace	17·0°
Wolverhampton . .	21·52	2·17	1·73	trace	13·0°
South Stafford . .	18·48	1·40	1·63	trace	13·8°
East London . . .	18·16	0·40	1·32	—	—
New River . . .	17·16	0·20	0·06	—	—
Manchester (1864). .	5·35	0·75	0·86	—	—
Glasgow . . .	1·98	0·80	0·54	—	—

While these waters were pretty free from matters of an injurious character, the majority of the well waters of towns, almost as a rule, abounded with them. What should be guarded against in the selection of waters for internal use was great excess of any ingredient, but more particularly of organic matter and the products of its decomposition—viz., ammonia, nitrous acid, and nitric acid. Regarding some analyses which he had made of water from town wells, he said in the water of one Birmingham well there were 507 grains of solid matter, 48 grains of organic matter, and 16 grains of chloride of sodium per gallon; in another sample, 380 grains of solid matter, 39 of organic matter, and 17 grains of chloride of sodium; in a third, 212 grains of solid and 22 of organic matter, and 49 grains of chloride of sodium. The Birmingham well waters also contained large quantities of nitric acid, and were very hard. There were other bad well waters from Birmingham, though not so bad as these; and bad specimens also from Harborne, Aston, Wolverhampton, and Wednesbury. The presence of chloride of sodium in large quantities indicated contamination by sewage. Very hard waters—such as these well waters—were incapable of extracting the virtues from tea and other substances, or of rendering vegetables tender when used for boiling them. Hardness was believed in many cases to have produced dyspepsia, that complex malady which included a large number of diverse symptoms, such as loss of appetite, nausea, pain, constipation, diarrhœa. He believed that the fullest measure of health possible for communities could never be obtained until the animal excreta were properly applied to land; nations which we called barbarian understood and practised this; and, until we did the same, the water supply must remain an abundant source of the worst forms of disease.

Dr. Hill's paper was followed by papers from Dr. Stevenson Macadam and Dr. Gairdner.

Dr. Farr said in Birmingham they wanted a Medical officer who would enlighten them with regard to all the causes of disease. He thought they had been most fully satisfied that the water supply of Birmingham was not now in a satisfactory state. In reference to mortality, he maintained that it was very high in portions of Birmingham. Instead of being 24, it was 27 in the old part of the town. It was only when they took in Aston at 21 in 1000, and King's Norton (including Edgbaston), which was only 17 in 1000, that the death-rate was reduced and brought to a comparatively low figure. (Hear, hear.) If they confined themselves to the population of the parish of Birmingham, including the great bulk of the 200,000, they got a comparatively high rate of mortality. He could not agree with Mr. Webster that they were to look to their rivers for the best supply of water in the state that rivers are now. (Hear, hear.) And they could not prevent impurities finding their way into the rivers. It appeared to him that there were only two ways of practically meeting this want of a supply of pure water. They must go higher up the rivers, nearer to their source, and, if possible, they must collect the flood waters—collect from the mountains in Wales and in the highlands—and store them up in reservoirs. It was calculated that as much water flooded down the Thames in certain seasons in one day as would supply London with water for a year round. They wanted their engineers to devise means to catch the water, keep it in the mountainous parts of the country, from which the towns might draw, and draw with a certainty, without getting any of the impurities that were had now.

Mr. Postgate read a paper "On the Legislation of Adulteration of Food and Drinks and Drugs." This paper gave an abstract of the Bill proposed by the writer, and introduced into the House of Commons by Mr. George Dixon, M.P., to whom he paid a very high compliment for the services he had rendered with a view to getting the Bill passed and becoming law.

This evening a *soirée*, in connexion with the present meetings of the Social Science Congress, was held in the Town-hall, at which all the *élite* of the Association and *literati* of Birmingham were present. The hall presented a very gay appearance. There was a fine display of microscopes, which were lent by the Naturalists' Society, and other instruments supplied by Mr. Charles Collins, of London, together with specimens and appliances used in the study of zoology and microscopy. We noticed the dissecting microscope of Dr. Lawson, who was once the Lecturer of Physiology in Queen's College. It was pronounced to be a very useful instrument, and a great boon to the Medical student.

Mr. Buckmaster J. Tuck, M.R.C.S. Eng., etc., has been appointed a magistrate for the town and port of Seaford, Sussex.

OPENING OF THE MEDICAL SCHOOLS.

(*Continued from page 396.*)

ST. GEORGE'S HOSPITAL.

From the admirable address delivered by Professor Acland, F.R.S., of Oxford, at the opening of the St. George's Hospital Medical School on October 1, we have only time and space to select one or two short extracts, but the address will be published entire, and will repay perusal at length.

"The chief objects to be aimed at in training a Medical student are, to teach him to see, to hear, and to touch with precision; to think with accuracy, and to be handy: to see, hear, think, and be handy, with respect to the subject-matters of his daily life.

"Now, let us consider what these words mean.

"There is a saying among the Italian artists 'that a man can see no more than he knows.' Test this in our art by a simple instance. A man in apparently good health is bathing with you. You happen to see that the veins may be somewhat larger in one arm than the other. To the ordinary eye this suggests nothing—indeed, it is probably not noticed, and has not been observed by the possessor of the difference. The educated eye, transmitting this fact to the educated brain, evokes the desire to feel the larger vein. It is in one place hard. The owner believes the difference pointed out to be recent. The question of embolism is at once suggested, with all its terrible consequences of various diseases, and possibly sudden death in a manner formerly inexplicable."

"Be counselled by one who has seen not a little of the world that if you must devote six days of your work to the study of your bodily frame, you should claim heartily the seventh for yourself. No student who seeks true cultivation should fail to have in hand some definite and weighty study for this seventh day. Be not scoffed out of this by the scoffers. If one speaks lightly of these difficult questions, he betrays his incompetence to speak at all. But avoid all modern controversies. Read some of the manly teachers of the best period of our literature—Butler's discourses, for instance, on human nature. If such books as Cudworth's, or Pascal's, or Malebranche's, or Hooker's, or Locke's, or Whately's come in your way, read them. Depend on it that an hour with such strong men is like an hour of Highland air, which lifts you above the common cares of cramped and teeming life. From time to time read modern biographies; especially read Arnold and Bunsen. In this way widen your interests with your fellow-men. While you remember you have to serve a Profession of all the most jealous of half service, remember also there is none with so many sympathies."

THE QUEEN'S COLLEGE, BIRMINGHAM.

The Winter Session of Queen's College commenced on October 1, under very flattering and encouraging auspices. The event was celebrated in the theatre of the Midland Institute, and was made memorable by the presence of the following distinguished persons:—The Lord Bishop of Worcester, who presided; Lord Lyttleton, the former President of the College; the Hon. and Rev. G. Yorke, and the Mayor of Birmingham. The theatre of the Institute was crowded with visitors, and there was a large attendance of ladies, who took a lively interest in the proceedings. Lord Lyttleton, in his address, spoke of his former connexion with the College in the capacity of President, and said that during that time he became intimately acquainted with some of the most remarkable men he had ever known; and if the gossip of recollection was what they were assembled to listen to, he might perhaps draw on such a fund with a result more entertaining than profitable or edifying. He would not dwell on the circumstances under which he left the College in 1856; on the conditions which seemed to him to need fulfilment before he could rejoin the College; on the compliance necessarily long delayed with those conditions; on his own feelings on re-entering those familiar abodes, after an absence of twelve years, then to find again few indeed of those by whom he was formerly surrounded. He could speak very imperfectly of the history of the College during those twelve years, since he had not been able to obtain a sight of the records of the institution during much of that time. One general statement he could not but make, not only from his own knowledge, but on a very high authority, and it was one which he was sure no one, however friendly to the College, would dispute, that in many important respects the voluminous annals of human mismanagement had no more signal example than was to be found in the history of the former days of that institution. The College, under its present constitution, he believed, would supply a practical demand. The townspeople seemed desirous to give the new management a fair trial, and he had confidence that the result would be successful. He congratulated the meeting on the easy acccomplishment of what had been so often thought of, the amalgamation of the College with Sydenham College.

The address, of which the above is a brief abstract, was listened to with rapt attention throughout, and was repeatedly applauded. The Bishop of Worcester then presented the prizes to the successful candidates as follows:—

Medicine.—Medal, Mr. George England; Certificates of Honour, Mr. John Green, Mr. A. J. G. Walters.

Surgery.—First medal, Mr. Thomas Holmes Ravenhill. Second medal, Mr. A. J. G. Walters; Certificates of Honour, Mr. George England, Mr. John Green.

Descriptive and Surgical Anatomy.—Senior Class: Medals, Mr. W. H. Lambart, Mr. Edwin B. Wood; Certificates of Honour, Mr. E. B. Ravenhill, Mr. J. S. Rawlings. Junior Class: Medal, Mr. J. A. Hunt; Certificate of Honour, Mr. W. M. Yeates.

Practical Anatomy.—Medal, Mr. E. B. Wood; Certificate of Honour, Mr. W. H. Lambart.

Physiology.—Medal, Mr. Edwin Smith; Certificate of Honour, Mr. E. B. Wood.

Chemistry.—Medal, Mr. J. A. Hunt; Certificate of Honour, Mr. Montague Gillott.

Warneford Gold Medal.—Mr. W. H. Lambart.

Sydenham College.

Council Prize.—Mr. Bateley.

Medicine.—Medal, Mr. Cochrane; Certificate of Honour, Mr. Bateley.

Surgery.—Medal, Mr. George Evans; Certificate of Honour, Mr. Bateley.

Anatomy.—Medals, Mr. Allen and Mr. T. L. Webb; Certificate of Honour, Mr. Rostin.

Physiology.—Medal, Mr. E. A. Elkington; First Certificate of Honour, Mr. P. A. Bindley; Second Certificate of Honour, Mr. Greenway.

Chemistry.—Medal, Mr. J. Priestley Smith; Certificate of Honour, Mr. Edgington.

Medical Tutors' Prize.—Mr. J. Priestley Smith.

For the Summer Session, since the Union of the Colleges.

Botany.—Medal, Mr. Edgington.

Materia Medica.—Medal, Mr. C. F. Garrett; Certificate of Honour, Mr. E. C. Baines.

Practical Chemistry.—Medals, Mr. E. C. Craig and Mr. J. Priestley Smith; Certificate of Honour, Mr. J. A. Hunt.

QUEEN'S HOSPITAL, BIRMINGHAM.

The inaugural clinical address on the opening of the Winter Session of Queen's Hospital Medical School, was delivered in the lecture theatre by Mr. J. F. West, the senior Surgeon to the institution. The Rev. C. T. Wilkinson, the Chairman of the Committee, presided.

Mr. West spoke as follows:—In addressing you, gentlemen, who for the first time are assembled as students here, I experience feelings of pleasurable interest, not unmixed with some anxiety for you in your future career. I hope you will not come here simply, as the popular phrase goes, "to walk the Hospital." The merely casual attendance of clinical lectures, or sauntering through the wards in conversation with some of your fellow-students, will ill fit you for the practice of your Profession. Your object in attending the practice of this Hospital, and listening to the clinical instruction therein given, is to witness the various diseases whose course and history have been related to you by the lecturers on Medicine and Surgery at the Queen's College, and to notice the effect of such modes of treatment and such operative procedures as may be adopted by the Physicians and Surgeons respectively for the relief of the patients who are afflicted with such diseases. Now, gentlemen, you have three or perhaps, at the most, four years given you to learn an art whose bounds are never reached, and to whose service men of the

highest abilities continually are devoting their lives, who find at last that they are only on the threshold of knowledge, and who are compelled to admit with the Persian philosopher that "the little they know is nothing, what they do not know is immense." How, then, can you, with most profit to yourselves, occupy these three or four years? I would only ask you to keep up your acquaintance with some branches of education, and not to allow subjects like classics, mathematics, and natural science, which it has cost you years of labour to acquire, to fade from your memory altogether. As a rule, the better education a man has received, the higher will be the position he will take among his fellow-students; and, in after life, his literary acquirements will probably be of the same importance in raising him in the social scale. You must not, however, be satisfied with watching the sick in the wards of the Hospital; you must follow to the dead-house the bodies of those whose diseases prove fatal. That which was before obscure will now be made plain; why such a remedy did not produce its wonted effect, or why a certain disease, which the Surgeon thought he had thoroughly extirpated, has proved fatal, will now be made manifest. We all learn more from our failures than from our successes; therefore always investigate to the fullest extent those cases which terminate unfavourably; they will serve as landmarks for the future, and will help to guide you in determining the nature of any similar case which may hereafter occur to you, and lead you to the determination of a mode of treatment founded on an exact knowledge of the real nature and true site of the disease. Here, as in the wards, your note-book should ever be in use. Do not, then, suffer yourselves to be attracted by the *éclat* and excitement which well-performed operations will necessarily produce in your minds, to the neglect of those less specious but more solid acquirements which you may obtain by the use of the stethoscope, the microscope, the application of chemical tests, and in the lessons of morbid anatomy which are to be gained in the post-mortem room. If you want information, do not expect to get it from mere compilations, or what Professor Syme calls "the imperfect and perverting channels of compendiums," but go to the sources from which these are derived; examine those monographs which exhibit the distinct and plainly stated facts of original observers, such as Lawrence on Ruptures, Brodie on the Diseases of Joints, Frerichs on the Diseases of the Liver, Murchison on Fevers, Roberts on Urinary and Renal Diseases, or those of my own colleagues which specially merit attention, as Fleming on Aconite, Sands Cox and Gamgee on Amputation at the Hip-joint, and Foster on the Sphygmograph. Diseases are justly said to be experiments provided by nature. Clinical and pathological study and instruction will enable you to investigate the nature of these experiments just as completely, though unfortunately not with quite the same exactness, as a knowledge of chemistry will enable you to perform analyses in your laboratory. All your knowledge, to be solid and well founded, must be derived from the accurate study of the varied phenomena of nature, both in health and disease. Do not doubt that you have each of you genius. You have only to use perseverance, energy, and industry to acquire that "excellence in your art" which, if it does not raise you to the proud position of a Simpson, a Fergusson, or a Watson, will at least make you useful and respected members of a noble Profession. He then called attention to the peculiar characteristics of the Hospital, and to the special opportunities it offers as a place of study, and proceeded to say:—Gentlemen, the officers of this charity owe a greater debt of gratitude to the students who have preceded you on those benches than they would probably at the first thought admit. The habit of teaching has necessitated close application on their part. Twenty or thirty eager young critics have been generally at hand to notice any want of precision of expression, any hesitation in the operating theatre, or any mistake in diagnosis in the wards. Hence it has become a necessity, although in most cases a pleasurable one, for the clinical teachers to keep themselves well informed of all that is passing in the scientific world, and to be ready to adopt any new plan of treatment or operative procedure which seemed to offer fair grounds for its employment, or a reasonable prospect of success. In illustration of this statement, I may tell you that in the hands of the Surgeons of this Hospital the ligature has been almost entirely replaced by acupressure, and with the best results. I present to you a tabular statement, which has been prepared for me by our excellent Resident Surgeon, showing the effect of its employment in twenty capital operations performed here during the last twelve months. In only two cases did hæmorrhage occur; one was a case of secondary amputation of the leg just below the knee, on a delicate boy, aged 17, whose foot had been crushed by a wagon, and in whom sloughing of the leg followed; and the other was an amputation of the thigh, by Teale's method (which, by the way, is extensively employed here in consequence of its affording excellent stumps, and of which I can now show you a good specimen), for acute necrosis of the femur, with suppuration in the knee-joint, also in a boy aged 13. Yet in both cases the hæmorrhage was arrested by pressure on the femoral artery; in one instance by tourniquet, and in the other by digital compression, and both terminated favourably. Out of the whole number, only two cases proved fatal, but the result was in no way due to hæmorrhage. Post-mortem examination showed that in all the arteries which had been compressed by the needles a firm plug of clot existed, blocking them up thoroughly, and preventing extravasation of blood between the flaps. One of these pathological specimens, which really might be looked upon as affording a crucial experiment as to the merits of acupressure, I had an opportunity of bringing before the Midland Counties Branch of the British Medical Association, and also, by the courtesy of Mr. Callender, of St. Bartholomew's Hospital, before the Clinical Society of London. Both patients died from shock; one was a case of double amputation of the lower extremities, from a railway accident, and which proved fatal six hours after the operation; and the other was a case of amputation of the thigh through the trochanters, of a young strumous girl, who had been much reduced by profuse suppuration from a deep burn, and who never rallied from the effects of the operation, but sank on the morning of the fourth day. Reference to this table will show that the average length of time which elapsed before withdrawal of the needles was about fifty hours. Simple needles, used after Simpson's first and fourth methods, without ligature, have been used in all the cases. Wounds have appeared to heal more rapidly than when the ligature has been employed, and a diminished amount of suppuration has been manifest. I am, therefore, justified in stating that the experience of this Hospital is decidedly in favour of acupressure as a means of arresting hæmorrhage. Another recent introduction in the practice of Surgery has also received a trial. Carbolic acid, as recommended by Professor Lister, has been used in compound fractures, and also after amputations, and for abscesses. Although it has appeared to act beneficially as an astringent and disinfectant, it has not given us all the advantages which have been attributed to it by its talented originator. Many of the alleged benefits of carbolic acid have been obtained by dressing wounds with dry lint, instead of with water dressing as hitherto, by avoidance of frequent disturbance of the parts, by the exclusion of air, as far as possible, and by the use of silver sutures. These seem to be the essential points to be observed in the treatment of all wounds; still, carbolic acid is doubtless a useful remedy, and must have a further trial before it is condemned as inoperative. Immobilisation by the starched apparatus, in the treatment of fractures of the lower extremities, both simple and compound, has been used extensively on the plan advocated by Mr. Gamgee in his treatise on that subject, and has given us the most satisfactory results' Of the advances which are being made by the Physicians in the treatment of disease by a strict attention to physiological laws, and by the experimental study of the action of remedies, I will give you but a single instance. In analysing Claude Bernard's experiments on the pancreas, Dr. Foster first met the fact that ether, given internally, has a remarkable effect on the secretion of that gland—so marked an influence that the flow of pancreatic juice can be regulated almost at will by the administration of ether. The application of this fact to the treatment of pulmonary consumption and other diseases marked by an inability to digest fat, was made in this Hospital, and these diseases have since been extensively treated with ether, and with etherised cod-liver oil, with good results; 42 per cent. of the patients, I am informed, having improved in all symptoms, and gained weight, while in some 15 per cent. the pulmonary mischief appears to have been arrested. In conclusion, gentlemen, I am sure that, though the average number of patients in this Hospital is not more than 150, you will never be at a loss for lack of material for study. The number of patients is no criterion of the value of a Hospital as far as educational purposes are concerned. Here you will find disease treated under the most advantageous circumstances. The wards are well ventilated, large and airy, each having a bath-room in connexion with it,

where hot, cold, or shower-baths can be given at a few minutes' notice. A special ward for diseases of children, another for diseases of the eye, and a detached building in which Medical and Surgical diseases of contagion or infection —*e.g.*, fevers and syphilis—are received. The healthiness of the Hospital is shown by the fact that erysipelas is hardly ever seen attacking any accident or operation case, and pyæmia almost unknown. In the last three years, I am informed by the resident Surgeon, there has only been one case. It occurred as a sequel of phlebitis after amputation of the thigh. The patient lived a month after the operation, but at last succumbed to profuse suppuration from abscesses in the course of the femoral vein, although it must be admitted that there was also found, on post-mortem examination, evidence of purulent deposit in the lungs. Strive to be regular and punctual in your attendance, and earnest in the pursuit of every kind of Medical knowledge, and ever remember that on yourselves mainly depends this vital question: Will you become ill-informed and therefore comparatively useless members of the Profession? or will you, by diligence and assiduity. acquire for yourselves such a treasure of learning as shall enable you to advance the science of Medicine, and shall qualify you to become so able and efficient in the practice of it that you will secure the approbation and respect of the noble and the great, as well as the love and veneration of the poor and suffering?

LEEDS SCHOOL OF MEDICINE.

The Winter Session of the Leeds School of Medicine was opened on the 1st inst., when Mr. W. Hall delivered the address usually given on these occasions. He was accompanied to the Lecture Theatre, amongst others, by the following members of the Faculty:—Mr. S. Hey, Mr. T. C. Allbutt, Mr. E. Atkinson, Mr. T. P. Teale, Mr. C. G. Wheelhouse, Mr. Scattergood, Mr. R. P. Oglesby, Mr. T. R. Jessop, and Mr. Nunneley, jun.

Mr. Hall, after congratulating the students and the Profession generally on the fact that, in a very short time, the magnificent new Hospital would be thrown open, and referring to the distinguished Medical men—Mr. George Morley, Mr. W. Price, Mr. S. Smith, and T. P. Teale—who had been lost to Leeds during the last year, and to the opportunities afforded to students at the Leeds School, concluded as follows: —Gentlemen, when you have passed though your student's career, and have reached the practice of yonr calling, how may you expect to find it? What has it done? and what is it doing for the good of mankind? and what personal benefit may you expect from it? It has been said that nature and disease are engaged in personal combat with each other, and that Medicine is a blind man armed with a club, who, stepping in to settle the dispute, lays about him right and left; if he hits disease, it is fortunate, if nature, the reverse. (Laughter.) This, I trust, is no longer applicable. Is it not rather that nature is a city besieged by disease, and that Medicine, her faithful ally, is endeavouring, with all his power, either to raise the siege, or to furnish such supplies as shall enable her to hold out until the attacking force is withdrawn? As has been said before, a mighty change has taken place in our acquaintance with disease since this school was born; and the treatment of disease has consequently undergone a signal alteration. If therapeutics has not advanced in an equal ratio with diagnosis, we have at all events thrown overboard much useless rubbish. It is said that the first step towards knowledge is to become aware of your own ignorance, and we certainly have not spared ourselves in this respect. We have bid good-bye to heroic remedies—nay, in many cases, by a masterly inaction, we save, where others, more pretentious, would destroy; for, as was said by one of our most profound thinkers, "Take from us every drug we possess, and we are still powerful for good." For example, how many cases of heart disease have we saved from an untimely end by attention to the laws of hydraulics, until the embarrassed organ has had time to regain its composure and its power! How many cases of acute kidney diseases have we cured, by regard to the compensating function of the skin! How often, taking the poor maniac by the hand, do we lead him gently through his dark affliction to the precious light of reason! These, and other examples too numerous to mention, should raise in us the proud thought that, wherever our lot may be cast, we possess a knowledge which, without a single drug, can largely alleviate human suffering. Regarding the employment of drugs, the public thinks, indeed, we ought to obtain a specific for every disease; but this royal road to health we do not at present possess, and probably never shall, though we are certainly much more able than we were to appreciate the tendencies of disease towards a favour able or an unfavourable termination, and to promote them in the former, to avert them in the latter case. By the aid of chemistry we have eliminated the active principles from many of our drugs, and can rely with greater certainty upon their action; whilst by injecting some of them beneath the skin, we escape the disturbing power of digestion, and obtain not only more precise, powerful, and immediate, but even entirely new effects. Upon pain, that powerful outpost, if not the key, of the position held by disease, we have made a most energetic onslaught, generally by chloroform, locally by the refrigerator, generally and locally by the subcutaneous injection of narcotics. There is no doubt that in the vast field of organic chemistry still unexplored new remedies await us, and, as we become more intimately acquainted with the exact molecular changes which are constantly progressing in the waste and repairs of the body, we may hope that we shall be furnished with the means of so modifying those changes that we can restore with much greater certainty and power the balance overthrown by disease. But were Medicine to do no further good to the human family it could fairly lay claim to perpetual gratitude for past services. It has been said that "the practical certainties of our art have proved themselves sufficient for the well-being and preservation of our race, which would have otherwise long ceased to exist." Be that as it may, there is no doubt that men live longer, as the Registrar-General's reports testify, and we can justly lay claim to a large portion of this credit. Time fails me to dwell upon the numerous ways in which Medicine has earned the gratitude of mankind, but I would point especially to vaccination, which, within the last century, has saved more lives than war has destroyed in the same period. Indeed, it is computed that vaccination alone has added no less than three years to the life of man. But it is to Hygienic Medicine that we may justly look for our brightest jewel. In what other profession, indeed, will you see men so energetically striving to prevent the occurrence of that very thing whose presence gives them their daily occupation? It is only by repeated and unwearied assaults on our part that public opinion is fairly carried by storm, and that the mortality tables are now being watched with keen interest; and no wonder, when it has again and again been proved that one-half of our population is hurried to an untimely grave by disease which we have shown can be prevented. What a magnificent field, even for our statesmen; and how trifling do some of their aims appear, when compared with so grand an object as the prevention of wholesale disease and death! Why do not the labouring classes clamour for a clean bill of health instead of such things as the ballot? Wealth and ambition you must not think of; work must be your portion, but it will bring with it its own reward. At one time you must stand up manfully and fight our great enemy with every weapon at your command; at another you must meekly capitulate with the promise of an easy passage for the poor sufferer. And sad though you will sometimes be at the failure of your best endeavours, you will seldom lie down at the end of the day's work without the blessed thought that some pain has been relieved, some anguish soothed, by the ability granted you from on high.

LIVERPOOL SCHOOL OF MEDICINE.

The Introductory Address was delivered by Dr. F. T. Roberts. After some introductory remarks, and a word of welcome to the students, new and old, the lecturer said that it was not necessary for him to speak in defence of provincial schools on this occasion, as their influence had now been pretty generally recognised and acknowledged. He said that no student from the Liverpool School of Medicine had been rejected during the past year, either at the College of Surgeons, the College of Physicians, or the Scotch Colleges, and they had had tolerable success at the University of London. This showed they were making progress, and it ought to stimulate those who had to pass through similar ordeals in the coming year not to let the credit which had been justly won for the School by their predecessors suffer in their hands. The lecturer then alluded to the untimely death of their late esteemed colleague, Dr. Birkenhead, to whom he paid a tribute of just praise.

Addressing the students, he asked them first to consider what motives had prompted them to aim at the Medical Profession. In many cases it was a mere desire for wealth. He considered it quite legitimate to endeavour to obtain a competency; nor, judging from observation, is it such a difficult task as some imagine, for pecuniary success generally follows steady and persevering labour, as in other walks of life. But an inordinate craving for wealth is quite out of place in our Profession. Some are actuated by a desire to raise themselves in the social scale, and this is perfectly just. The Medical Profession was never instituted for any particular class, and any man who has the requisite amount of general education and the capacity for his work, and is prepared to be guided by its lofty precepts, has a perfect right to enter it. But he bade them beware "lest, instead of its being the means of lifting them up, any of them should, by their conduct, assist in bringing it down from that lofty position which, from its very nature, it ought to occupy among the professions of the world." Another frequent motive is a longing for fame; and there are ample opportunities of satisfying this, not only by discovery, but even in the mere honourable practice of our Profession. In addition to more or less selfish motives, the lecturer urged upon them, whatever other object they might have in view, to have the desire of doing good to others as the grand object of their existence. He asked them next to consider with what object they had come to that School of Medicine. Some entered as students merely because the regulations compelled them; others engaged in this responsible work with no other object than to plunge into folly and vice, and, as they call it, "enjoy life," though the latter class is not a numerous one, and he would take that opportunity of emphatically declaring that the degraded character so commonly attributed to Medical students as a class was a gross libel upon them. He impressed upon them that it was for no mere routine they became students; there was work of a grave nature before them, and they should beware of entering upon it with the intention of wasting their time in vice, else the issue could not fail to be their downfall in every respect. The great object which most students have in view is to pass their examinations successfully, and it is quite proper that this should be regarded as an important end; and, if it is kept in view from the first, and a final "cram" not relied on, a fair amount of Professional knowledge will be gained; but it is a serious mistake to look upon the mere gaining of diplomas or degrees as the grand end of a student's life. There is a future beyond that which demands for itself the most earnest preparation. How were they to obtain the instruction which would not only enable them to pass their examinations, but also fit them for their important duties in the future? There was the theoretical knowledge to be derived from lectures or reading, assisted by examinations and demonstrations. The contemptuous manner in which lectures and reading had been spoken of by certain high authorities had been productive of much evil, as it was often used as a reason for idleness and waste of time. Theoretical teaching is as necessary as practical in its proper place. With regard to lectures, he considered they ought to be no mean aids in the acquirement of the necessary information, and he urged the students not only to attend regularly, but to be attentive and take notes. They must read steadily and regularly, and not merely in a rush from time to time or at the finish. He advised them all to be very attentive at the demonstrations and examinations. He spoke in favour of the prize system, and, among other purposes which it ought to serve, thought the friendly competition for prizes should assist in doing away with that envious and jealous feeling which is more or less universal in human nature, and very prevalent in our Profession, as it will be attacked at an early period and before it has taken a firm hold upon the mind. Were this more frequently impressed upon students, we should far more rarely see those deplorable attempts to injure each other in the eyes of the public, which we now but too commonly see among members of our Profession. The lecturer then pointed out the various means of practical instruction. He urged them to be diligent in the dissecting-room, and while there to work for themselves. They must also gain a practical acquaintance with chemistry, and with the use of the microscope. They should avail themselves of the appointments offered them in the infirmary, and should strive to render themselves fit to undertake the duties of House-Surgeon at one of the various institutions in this town. They should attend to the cultivation of the senses, and give every heed to the lessons they are privileged to learn in the post-mortem room. A peroration of great eloquence on the moral duties of the student closed Dr. Roberts's address.

SWANAGE, IN DORSETSHIRE, AS A HEALTH RESORT.

(From a Correspondent.)

London is a pleasant enough place from the beginning of November till the end of June. True, it is smoky and foggy, but the houses are warm, there is a solid pavement for pedestrians, and parks for recreation. But when July comes there is sure to be a longing for wider, greener scenes, and by the time the London season is over, most things seem so stale, faded, vapid, there is such a want of that property in the air that gives colour and freshness, that one feels it a duty to send one's family somewhere to the seaside; and sometimes for oneself it is good policy to seek rest rather than diversion, and to get the bracing up for another winter's work out of the soothing monotony of the seaside instead of the exciting tour in Scotland or on the Continent.

Then the question comes—Where shall the Londoner go to, supposing he wants to avoid the trouble and expense of a very long journey, that he wants a good amount of accommodation at a cheap rate, and above all a combination of rest and variety; that he needs to escape from town life, and has no desire to see the worst features of the Serpentine reproduced on the sea-shore, in the shape of brass bands, huge chignons, flaring petticoats, and all the inanities of croquet?

Let us take the map, and trace the north shore of the Thames, and go along the fast-decaying coasts of Essex, Suffolk, and Norfolk. We may begin with Southend, Walton-on-the-Naze, and Harwich, with its appendage, Dovercourt. No place ever agreed better with my children than Harwich, but then the stinks! and for me the other places are too sad. Crossing the mouth of the Orwell, we get to Felixstowe, a picturesque sea-beach of coloured crag and sands; then Aldborough, Lowestoft, Yarmouth, Cromer, and round to Hunstanton, at the mouth of the Wash. Of all these, commend me to Hunstanton for accessibility, cheap fare, and picturesqueness of coloured cliff, although it is some few years since I was there. Cromer is well-placed, and out of reach of excursionists, but is twenty coach miles beyond the railway at Norwich. Yarmouth, Lowestoft, Aldborough, give you all you want in the shape of sea; but at Aldborough, when you have paced up and down the beach, you have used the place up. There were, when I was there, no horses or vehicles on hire, and nowhere to go to if you hired them. All along this coast there is sea and beach—little else—and accommodation not cheap.

Now, let us go down the right bank of the Thames, and, leaving out Gravesend, come to Herne Bay, remarkable for beautiful sunsets. Then going round the coast, we have the choice of chalk places and beaches. Of chalk places, it is almost needless to enumerate Margate, Broadstairs, Ramsgate, Dover, Folkestone, Brighton. Of beaches, there are Deal and Walmer, St. Leonards, Worthing, Littlehampton, Bognor, and so round to Southsea, which, of all places in England, seems to me the most vaporous and relaxing and most unsuited to the man of bile, and most soothing to the man with lungs that threaten to ulcerate. The Isle of Wight I pass over, with its great variety of sites and climates. The places along the coasts of Kent and Sussex are easy of access to the Londoner; but, if so, may be too fast, or too dressy, or too crowded and townlike, or their scenery, though good of itself, may be too monotonous. Chalk scenery, with its bare rounded hills, is very fine, and so is the air of the downs; but the horizon is too near—clear and hard. I have nothing to say against these places as health resorts; still, a man who wants rest does not want a place where the pier and its band are the main attractions, and where there are no country lanes and homely-speaking country people. We left off at Southsea; following the coast across Southampton Water, past Lymington, and the well-known Barton Cliffs, the coast has the character of great mildness, but there is no special accommodation for visitors. A very little further to the west, however, we pass the estuary of Christchurch, with a very small watering-place called Mudeford or Middleford on its left side, where the bathing is notoriously dangerous from the rapid inroads of the sea and the shifting sands. But on the other side of Christchurch estuary from Hengistbury Head to Poole Harbour is a late tertiary cliff of sand and ironstone which has become within my memory one of the greatest

health resorts of England—at one end an incipient village called Stourfield, high and airy, and good for the torpid liver in summer; near the other end, Bourne, or Bournemouth, with its beautifully dry sheltered nooks for delicate lungs in winter, but hot as the West Indies in summer on the beach: so I was told by a coastguardsman who had served in all climates. On the heath inland it is cool enough.

A little further to the west, just across the mouth of Poole Harbour, is the district called Purbeck, or the Isle of Purbeck, where begins the true rocky coast of the south-west of England, and it is the very first place on this conformation that I desire to describe to such of your readers as may be seeking health, or may have to select a health resort for their patients. Let me say first of all that many liberties have been taken with the name, which in most maps is written Swanage; but as the oldest form is Swanwich, and as the preservation of old names may be of historical importance, I shall take the liberty of spelling it Swanwich until it becomes the fashion to write Harwich "Harrige," or Norwich "Norrage."

Swanwich is a little bay at the eastern extremity of the rocky coast of Dorset and Devon. It is reached by an eleven miles drive after leaving the London and South-Western station at Wareham; a pleasanter way is to leave the train at Poole and come by steamer, but this unfortunately only plies in summer, and not then in bad weather. Thus the distance from London is not excessive, and the eleven miles of road are cheaply accomplished by private carriages or omnibuses to suit a large party, and by a public omnibus for the solitary traveller. Since leaving Southampton all the road has lain through the New Forest, with wide tracts of moor and swamp, rich glades of trees, great variety of colour in the landscape, and purple distances. Many people who rave about Scotland know not that the step from Piccadilly to Poole Heath by the L. and S.-W. R. brings true moorland scenery within three hours' distance. On leaving Wareham, the traveller passes about five miles of wild heathclad gravel, clay, and sand, extensively excavated by clay-pits, seeing before him a gigantic rampart of chalk hills which shuts in the Purbeck district. In this rampart there is a defile called in old English *corfe* (from "ceorfan," *unde* "carve")—that is to say, the *cut* or *gap*, commanded by the stupendous ruins of a castle; and through this "corfe," passing a neat little town of the same name, the traveller enters the valley of Purbeck, once called "Isle" because only to be got at through the rivers and swamps by Wareham. So at last he reaches the old town of Swanwich, built in a straggling line alongside the Beck, which in ancient times was a swannery in the midst of a forest.

Lodgings at Swanwich must be secured beforehand in the season, but are usually to be had cheap, and in new clean houses. There is one large hotel, and one small but comfortable inn. Meat is cheap and good, so are butter, milk, eggs, and poultry; bread indifferent; fruit scarce, except apples; and fresh soles and mullet sometimes procurable at London prices. The lobster, traditionally abundant, is really almost extinct. The bathing is perfect and thoroughly safe. There is a brewery which produces capital pale ale. There is an admirable institute built by a patriotic native, Mr. Mowlem, with a fine public room library and piano for the use of visitors. The air is remarkably fresh and exhilarating, with nothing relaxing about it, and the weakest wight may be set on his legs with food and exercise and an air which soon leaves its ozoniferous tints on the ruddy cheeks of the visitors. If, besides, a man wants something to think about, he will find materials of which my fear is that I shall get out of my depth in describing them.

Swanwich may be called a book of geology with all the leaves cut. Let us imagine the chalk, with all the strata below in succession down to the lower Portland beds, burst open from below, so as to leave the edges of the ruptured beds exposed on the surface one after another—all, besides, seen in section—at about an angle of 45°. That is the view of Swanwich Bay. On the north a huge down of uplifted chalk in its various divisions, with and without flints, shuts it off from Poole Harbour and the snug village of Studland; next to it the series of richly coloured clays and sands, known as green sand, Hastings beds, etc.; then the Purbeck beds of shell marble and stone. Now let us imagine all these formations set up on edge, with their sections exposed in order on the sea-shore—the soft clays and sands scooped out in the middle to form the bay, and the whole country from between the chalk and the Purbeck stone beds washed out so as to make a valley—and this will give an idea of the Swanwich Bay and valley. The chalk hills rising to the height of nearly 700 feet form a rampart on the north, interrupted by the cut in which, as I have said, the road from Wareham passes by the magnificent ruin of Corfe Castle. The Purbeck beds on the south are continuous with those hills of Purbeck and Portland formation which rise abruptly from the sea, and form the precipitous iron-bound coast known as St. Aldhelm's Head, till they are succeeded by the softer Kimmeridge shale beds. Mount one of these hills, and you get a view which for richness and variety can hardly be equalled. The Needles and Isle of Wight fifteen miles to the eastward, the cliffs of Bournemouth six miles across the sea; Poole Harbour, a glittering estuary, dotted with islands, huge tracts of "blasted heath" around it; on the west, the Isle of Portland and cliffs near Weymouth; and northward, the distant view of hills after hills, not abrupt and hard, but soft, melting, and mystical, with endless succession of blue and grey distances. It is superfluous to say what stores of specimens our geological museums have derived from this district, especially through the zeal of that accomplished naturalist, Mr. Charles Willcox, the Surgeon of Wareham.(a)

If the observer, wearied with the countless ages into which geology leads him back, should prefer something of more present and human interest, he may turn to the innumerable barrows which crown every prominent hill, the burial-places of Agamemnons who had, alas! no Homer; he may explore the immense quadrangular earthworks round the four sides of the ancient town of Wareham, sufficient to enclose a town of 30,000 inhabitants, and may speculate on the decay which seems to have fallen on the South of England, as regards political importance and population, from the time when the Danes fought for Wareham as one of the most important places in Wessex to its present state, like that of a petty Babylon, where cabbage gardens occupy the site within those ancient earthworks, once filled by a castle and stately churches, and resounding with the tramp of armed men. No district can give a better idea of the silent changes due to daily geological causes, and the sum of these changes within a given time. Poole Harbour is a huge estuary extending miles inland, but gradually filling and contracting, and its navigable part at low water reduced to a mere river between mudbanks. At the further extremity the ancient seaport of Wareham was built for security in a swamp, between the Piddle and the Frome, two streams which drain part of Dorsetshire. But the alluvia brought down by the rivers now make Wareham two miles from the shore; mere barges crawl up its rivers, and the tradition that a ship of 150 tons got up there about seventy years ago shows the state of a port which was once summoned to provide ships of war for the Edwards and Henries, and where collectors received the dues upon the wine imported from Gascony. Salmon, too, used to frequent the rivers, and there are accounts of the fry being caught and sold at 2d. per quart, and further that the spent fish, called *loggies* from their weakness and torpidity, used to be caught by the natives and sold at 2d. per pound. But the salmon are now matters of tradition, although, like the ruined churches, the fragments of ecclesiastical buildings, the human remains found wherever the surface is dug into, their extinction seems to mark the course of events in historical times. The seaport town of Poole, which arose on a neighbouring peninsula on the decay of Wareham, is now decaying of like want of water, and it is easy to foresee that vast estuary converted into a heath and meadows like those around by the gradual silting up of the harbour with detritus. But who shall tell us the time that has passed since the district was raised from its latest submersion, and the rate of elevation of the various old seabeaches around? It seems clear that all the changes which, within the last 3000 years, have converted seabed into dry land have consisted in levelling down the hills and filling the valleys and estuaries, not in uplifting the face of the country; for Wareham is now but just above the high-water level, and consequently cannot have risen, unless it had been built under water. Who, then, can calculate the time since the sea washed the old gravel and sand seabeaches, now high and dry inland, on some of which shells of recent species are (as I am told) found 60 feet above the present sea level? Whilst the melancholy man may ponder on these things if he please, he may also find the book of tertiary geology open to him from the blown sand at the mouth of Poole Harbour to the eocene deposits at Studland, just outside the chalk rampart of the north of Purbeck.

In the modern inhabitants of Swanwich and their occupa-

(a) If any visitor at Swanwich wants local information, he need only apply to Mr. Brodie, a well-known and most indefatigable collector, who is most ready to be of service to the student of geology.

tions the visitor will find plenty of interest. The shore is belted with heaps of hewn stone, and the music of the chisel is heard from morning to night. Of course, stone quarries abound, from which the greater part of the paving-stone of London is extracted. Stone of all sorts, and a dark Purbeck marble, whose slender shafts adorn the old churches of the early English style, are to be had in abundance. The quarrymen form a caste quite apart from mere labourers, and their guild is of high antiquity. The Mowlems, a respectable local family, are believed to be descended from De Moulham, the stonemason to William the Conqueror. Some of the Purbeck workmen, it is said, have attained great eminence as carvers of stone. At present they are believed to exhibit all the mischiefs of the protection afforded by trades-unionism. Many of them are said to live on the truck system—*i.e.*, to run in debt at shops for provisions, and square the account by stone. Of course they are at the mercy of the shopkeeper. The men do not look robust, although easy labour in pure air should make them so; but all accounts speak of early intermarriages of cousins, of close apartments, of scrofula and phthisis, as concurrent facts. Although their water be as full of lime as possible, rickets and decayed teeth are very common, a fact worth the attention of those who believe a hard water to conduce to strength of the bony tissues. Insanity is also said to be very common.

I learn from the Registrar-General's office that the population of the parish of Swanage was 2139 in 1851, and 2004 in 1861. Deaths from all causes, 34 in 1866; 42 in 1867, when whooping-cough carried off many children. The deaths from phthisis were five in each year. Most of the old habitations are built in the lowest and most sheltered, and consequently the dampest, spots.

But these things do not affect the visitors, who can get housed in high and dry houses. A new town is being laid out on the high Purbeck stone hills just to the south of the older town, with waterworks, roads, and all other appliances. Whilst its summer atmosphere is all that can be desired, we have no evidence yet of its fitness as winter quarters for pulmonary invalids; and, although the air is doubtless milder at Swanwich than further inland, and healthy people who want to be housed cheaply in winter can be well suited, yet the bay is open to the due east; it is a *statio male fida carinis*, for yachts always slip out in bad east winds; and it can scarcely compete with Bournemouth on the sandy cliffs opposite. Considering, then, the place to be one of resort during summer and autumn, we want houses cheaply constructed and cheaply furnished, in which visitors may be accommodated on moderate terms. The drainage must be a difficulty, because, if they allow water-closet sewage to be poured into the bay, the bathing will be spoiled. The Moule earth system is clearly the one for a small place like this, where to use the sea outlet is morally wrong and physically nasty, and where there is abundance of land and a lack of garden produce.

ON THE CIRCULATION OF THE BLOOD IN INSECTS.

A VERY important discovery in this department of comparative physiology has just been made by Jules Künckel, who has sent an abstract of his investigations to the *Revue de Cours Scientifiques*. The first reported discovery in this direction was made by Blanchard in 1847, who proved that the tracheæ fulfilled the function of arteries by conveying the nutritive fluids to all the organs. He discovered, by means of injections, the existence of a free space between the two membranes composing the tracheæ, the injected fluid expelling and replacing the blood. In a memoir published in 1849 Agassiz not only confirmed Blanchard's discoveries, but extended them by showing that, while the ordinary tracheæ terminated in ampullæ, there were others that terminated in minute tubes destitute of a spiral filament, to which tubes he gives the name of "capillaries of the trachea." After injecting the dorsal vessel of grasshoppers, he found the muscles of the legs covered with dendritic tufts of these capillaries filled with colouring matter. The author of the present memoir, in studying the organisation of the Diptera, was always able to see blood-globules between the two tracheal coats; but the animals being dead, the blood was of course motionless. He then removed a muscular bundle from a living *Eristalis*(a) without tearing it, and, on placing it at once under a high magnifying glass, saw the blood contained between the coats running along the peritracheal space, and penetrating into the finest vessels. He has since convinced himself of the existence of a system of arterial capillaries in all insects, these minute tubes not being confined to the muscles, but being distributed to the organs generally. By transmitted light the blood has a rosy tint very favourable for observation. After describing the structure of the arterial capillaries, or *arterioles* as he terms them, and their mode of distribution, he concludes as follows:—"The blood retained in the peritracheal space remains throughout its course in contact with oxygen; it reaches the capillaries perfetly vivified, and is a true arterial blood. These capillaries are not in communication with venous capillaries, but the blood is diffused through tissues, and, after nourishing them, passes into the lacunæ, and the lacunar currents return it to the dorsal vessel."

(a) A common dipterous insect.

ON ADDISON'S DISEASE.

DR. JACCOUD has recently contributed an admirable article on this subject to one of the large French Medical dictionaries now in course of publication.(a) After a few remarks on the different names that he and others have suggested for this disease—as the "bronzed disease," "suprarenal melasma," "asthenic melanodermia," and "suprarenal asthenia"—he gives an abstract of 127 "observations on melanodermia accompanied with lesions of the suprarenal capsules," arranged in a tabular form. The first case in his table was observed by Bright, and recorded in 1829, while his last case is one described by Pitman in 1864. As in each case not only the name of the observer and reference to the publication in which it is recorded, but also the sex and age of the patient, the duration of the illness, the antecedents and predominating symptoms independently of the melanodermia, the lesions of the capsules, and the other lesions independent of those of the capsules, are recorded in sufficient detail, it is obvious that the compilation of this table must have been the result of gigantic labour. He then gives similar tables of seventeen "observations on melanodermia without lesions of the suprarenal casules," and of fifty-eight "observations of lesions of the capsules without melanodermia." Of the 202 cases included in these three tables the majority have been observed by English Physicians, but America, France, Germany, Italy, Scandinavia, and Russia have likewise afforded a considerable number. Without entering into the well-known symptoms of this disease, we shall give, as briefly as possible, some of the numerical results which the author has deduced from his tables. In the 127 cases in the first table, persistent vomiting was noticed in 74; hence, excepting asthenia, which was universally present, this symptom occupies the first place in the pathological characteristics. Lumbo-abdominal pains constituted the second predominating feature, being present in 71 cases, their most common seat being the true lumbar region, where it was noticed in 34 cases. Next in order to asthenia, vomiting, and lumbo-abdominal pains, there is great disturbance of the nervous system, showing itself in the varied forms of headache, convulsions, vertigo, delirium, and coma. Transitory headaches were very common, and in 11 cases this symptom was persistent. Convulsions, which were usually confined to one or two of the limbs, and sometimes to only a special group of muscles—as, for instance, the facial muscles or the flexors of the forearm—were noticed in 19 cases. No connexion can be established between the headache or the convulsions and the stage of the disease, but coma and delirium are chiefly associated with its later stages. Excluding certain doubtful cases, delirium was noticed in 10 and coma in 12 cases. Vertigo was only specially mentioned in 6 cases, but a tendency to fainting was very common; and frequent, well-marked syncope was observed in 9 cases. Emaciation was only noticed in 32 cases, most of which were also phthisical. In the only 12 cases in which the blood was examined, leukæmia was observed in 8, but Dr. Jaccoud is inclined to refer this condition to organic changes coincident with the suprarenal lesions, and not to changes in the capsules themselves. In 10 of the 127 cases the asthenia was throughout the disease the only symptom associated with the discoloration of the skin. In 111 of the cases the discoloration of the skin was general and uniformly distributed, in 14 it was partial, and in 2 it occurred

(a) "Bronzée (maladie) ou Maladie d'Addison." In the "Nouveau Dictionnaire de Médecine et Chirurgie Pratiques." Tome sixième. 1866. Pp. 676—773. Paris: Baillière. London: Baillière; and Williams and Norgate.

in patches; and it is worthy of notice that in all of these exceptional 16 cases the disease was complicated with other serious affections, as cancer or tubercle. The morbid brown colouring is not always limited to the skin; it is not unfrequently observed on the labial, buccal, and vaginal mucous membranes, and is very common in the lymphatic glands, the lungs, and the abdominal viscera. Brown patches have also been observed on the peritoneum. In one of the recorded cases the nails, and in another the teeth, assumed the colour of the skin; and in one instance the hair, which was previously chestnut, became black.

There seems to be no law regarding the duration of the disease, but of the 94 cases in which it was noticed the range of the disease varied from six weeks to nine years. If, however, we reject cases which are complicated with other serious diseases, we have left 28 cases of the pure affection in which the duration is noted, and in more than two-thirds of these (20 in 28) the length of the disease ranged from six weeks to a year, in 2 cases it extended to two years, and in 6 it exceeded that term. Of the 127 cases, 79 were males and 48 females. The limits of age were 3 and 69 years. Between the ages 3 and 10 years 1 case is recorded; between 10 and 20 there were 24 cases; between 20 and 30, 30 cases; between 30 and 40, 31 cases; between 40 and 50, 18 cases; and between 50 and 60, 8 cases; after which age there were 3 cases.

From the second table of seventeen cases of melanodermia without lesions of the suprarenal capsules, our author comes to the conclusion that the skin affection alone does not suffice to constitute the disease in question, but that other characteristic symptoms must be present. There is, he observes, nothing in this table which tends to disprove the conclusions drawn from the former one. In regard to the third table, comprising 58 cases in which there were lesions of the capsules without discoloration of the skin, he observes that in all but three there is an omission which singularly diminishes their value, nothing being recorded of any of the essential symptoms except the discoloration of the skin. He likewise brings forward other good reasons why no safe conclusions can be drawn from this table.

His remarks on treatment are brief but judicious. After noticing iron, bark, and tonic treatment generally, including some wine rich in alcohol—as, for example, Banyuls(b)—iodide of potassium, and the bromides, he suggests that in the early stage blisters or cauteries may be applied over the region of the capsules; and, if these prove useless, and the characteristic torpor of the last stage appears, recourse may be had to the local application of electricity, with the view of exciting the flagging excitability of the central nervous system. These views, however, appear to be merely hypothetical, and not to be based on experimental trial.

The memoir concludes with a very complete bibliography.

REVIEWS.

British Social Wasps: an Introduction to their Anatomy and Physiology, Architecture, and General Natural History, with Illustrations of the different Species and their Nests. By E. L. Ormerod, M.D. Cantab, F.R.C.P., Physician to the Sussex County Hospital. London: Longmans and Co. Pp. 270.

It has been said that the Medical Profession, as illustrated by its best representatives, was the only body which implied a thorough education in arts, science, and Medicine. The boast was a proud one, and certainly not unjustified by circumstances; for up to a very recent period it might be said that almost the only votaries of natural science were members of our Profession, and at all times our Profession has furnished the most enthusiastic and industrious workers at biological science. Not a few of these have been men engaged in actual practice on which they depended for their daily bread, yet who could steal an hour for the pursuit of their darling science. Dr. Ormerod is a hardworking Physician, an examiner in his University, and an indefatigable naturalist, as these pages show. In a modest preface he assumes to himself the *rôle* of the learner rather than the teacher, yet there are few who will take up this volume and lay it down unprofited.

The race of beings which he describes are singularly attractive, yet their well-known stinging powers and their popular reputation for irascibility have led to their being overlooked to a great extent even in these days of popular natural history.

To those who may desire to take up the study, Dr. Ormerod's suggestions as to the mode of seizing nests and of treating the effects of the stings of wasps will be of interest, even although, in the latter instance, it is neither more nor less than to leave the case to Nature. Instructions are also given as to the mode of arranging and preparing specimens in this introductory portion. The real commencement of the scientific portion of the work is in Chapter II., which deals with the classification and distinction of the species belonging to the social and the solitary groups. This part is illustrated by excellent coloured drawings from the pencil of Mr. E. W. Robinson; but these, together with some admirable illustrations of the nests of wasps by Mrs. Ormerod, are consigned to the end of the volume. Chapters III., IV., V., and VI. deal with the anatomy and physiology of the *Vespidæ*, the first of these treating of the tegumentary system and the head and mouth; the second dealing with the thorax and its appendages, including the legs and wings, whilst the question of flight is also dealt with as a whole. Chapter V. refers to the abdominal portion of the insect, and treats of the respiratory and circulatory organs as well as of the nervous system. Chapter VI. contains a discussion of the digestive and reproductive systems, the latter portion dealing also with the sting of the insect. This part, which is of much interest to the anatomist, is further illustrated by a number of figures illustrative of the bodily structure of these little animals. Chapter VII., which will more readily interest the general reader, deals with the *form and construction of the nest*, and it is this portion which is illustrated by Mrs. Ormerod's admirable drawings to which we have already referred. The nature of wasp paper, or the material of which their nests are constructed, is here discussed, together with many most interesting details as to the habits of the wasp tribe. These are, however, more fully discussed in the next chapter, which deals exclusively with the social life of Dr. Ormerod's pets, and contains some most interesting details. The final chapter contains an account of some experimental inquiries into the results of removing the queen from the nest, the plan of reconstructing the partially destroyed nest, the principle of parthenogenesis, etc. The volume is in every respect an admirable one; the author deals with his subject in such a way as to bring it within the comprehension of any educated man or woman; it is strictly scientific, yet readily intelligible—a combination rarely encountered in works of so-called popular natural history—in short, it is eminently the production of a scholar and a gentleman. Besides the lucid account which it gives of insect anatomy and physiology in general, and of his favourite *Vespidæ* in particular, every page beams with some classic quotation, some quaint and kindly bit of humour, some shrewd sarcastic remark, such as we might have expected had Horace been a natural historian, and which give it a decided rank as a literary work, independent of its claims on the score of science.

(b) Banyuls is a strong sweet wine obtained from the Department of the Eastern Pyrenees; it contains about 15 per cent. (by volume) of alcohol.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

FRANCE.

Death of Professor Monneret: his Character—An Artificial Sulphate of Quinine—Lefèvre's Steam Bath: its Effects on the Skin and Influence on the Absorption of Remedies.

Paris, October 6.

The sudden and unexpected death of Professor Monneret—who was found dead in his parlour one morning after breakfast—leaves a vacant chair, which will probably be filled by some one of the young Physicians who belong to the progressist party in Medicine. Various candidates are coming forward, but no one can at present venture to predict the future.

Professor Monneret, who in his youth had been a military Surgeon, had chiefly devoted his energies to the cultivation of science, and was not extensively known in ordinary practice. His best monographs are connected with the history of hepatic diseases, a subject of which he was particularly fond. He published in 1852 an excellent paper on cancer of the liver in the *Archives de Médecine*, and another on cirrhosis in the same journal in 1857. His other works, being chiefly of a systematic character, will soon be forgotten, like all "Systems of Medi-

cine," more especially as they are strongly tinged with that artificial cut-and-dried classification which is so unpleasantly prominent in some writers of the French school, and which assimilates the study of science with that of the multiplication table.

As a private individual, Professor Monneret leaves the reputation of a highly worthy and strictly honourable man. He was a true republican of the old school—a nearly extinct species, of which there exist but few living specimens.

Some curiosity has lately been excited by the real or pretended discovery of an artificial sulphate of quinine. The inventor, a young chemist at present attached to the Venereal Hospital, keeps the mode of preparation secret, but states that it is obtained from purely mineral substances, like urea or alcohol, which have both been synthetically obtained from inorganic materials.

This preparation appears in the form of a white crystalline powder, the taste of which offers the peculiar bitterness of sulphate of quinine. The crystals, when viewed under the microscope, are shorter and thicker than those of the ordinary sulphate, although otherwise similar in form. Its chemical composition is also said to be slightly different; it is a tribasic salt of quinine—that is to say, it contains three equivalents of quinine for one of sulphuric acid. It is fairly soluble in water, but cannot be dissolved in dilute sulphuric acid, like the other sulphate; it is therefore generally prescribed as a powder. Several experiments have been tried with it, in cases of intermittent fever more especially, and it is said to act favourably. But the most important feature in its history is that it only costs half the price of our ordinary sulphate of quinine. If, therefore, all this is not a hoax (and pharmaceutical ingenuity has rendered most Physicians sceptical on these subjects), the inventor will undoubtedly realise a handsome fortune, besides rendering an invaluable service to the poorer classes.

A French Physician who has practised chiefly in the Spanish colonies, Dr. Lefèvre, has called the attention of the Medical public to a new and ingenious system for giving vapour baths, which might be called "the steam bath." The principle on which his apparatus (which we shall not attempt to describe) is founded, is that vapour baths have hitherto been exclusively composed of condensed steam, or warm water in the pulverulent state; while he maintains the vapour in a gaseous or aëriform state as long as the patient remains immersed in it. The principal consequences are the following:—1. The patient can easily stand a much higher temperature than usual (110° Fahr.); 2 Profuse perspiration is promoted; 3. The epidermis is softened, and comes off in thick layers when the patient is rubbed on coming out of the bath.

The advantages of this system are self-evident in all cases where the functions of the skin require to be excited. The effect is so intense that after the operation the patient can hardly bear his clothes on. We are far from entering into the views of the inventor, who, like most inventors, spoils an excellent idea by exaggerating its importance. But we are credibly informed that the effects of this apparatus are excellent in rheumatism, in intermittent fever, in gout, and in dropsy, whatever its cause may be, the swelling of the limbs disappearing almost instantaneously. In secondary syphilis, although it does not cure the disease, it speedily disposes of the cutaneous symptoms. In chronic laryngitis its effects are said to be favourable; and, in short, whenever sudation is likely to be of use, the apparatus of Dr. Lefèvre seems to be the speediest and most convenient method of bringing it on.

An interesting problem of physiology appears also to be solved by the use of this contrivance. The absorption of medicaments by the skin has long been doubtful, and is even now sturdily denied by various observers. The absorption of mercury is by them referred to certain chemical changes; but the penetration of most other substances through the unbroken skin is positively denied. Shortly before his death an eminent chemist, M. Réveil, published a paper on cutaneous absorption, in which he laboured to show that even the water of a bath does not gain access within the system.

The application of the steam bath conciliates the views of both parties by offering a rational solution of the difficulty. When the epidermis has been partly removed, after the operation both sulphate of quinine and iodide of potassium, and the soluble salts of morphia, strychnine, and atropine are speedily absorbed, and soon exhibit their well-known effects. As long as the outer covering of the dermis is intact there is no possibility of making the greater number of pharmaceutical substances penetrate the skin; but when, after the operation, the epidermis has been partially removed, both sulphate of quinine and iodide of potassium are speedily absorbed, and soon exhibit their well-known effects, while the soluble salts of morphia, strychnine, and atropine are as quickly introduced into the system as by means of an hypodermic injection.

LIVERPOOL.

Liverpool, October 5.

Opening of the Medical Session—Fever at Bootle.

The Medical Session of the Royal Infirmary School of Medicine was opened on the 1st inst. by an admirable address from Dr. F. T. Roberts, Lecturer on Botany to the School, and Physician to the Liverpool Northern Hospital, at the conclusion of which the prizes were distributed by the Mayor, Edward Whitley, Esq. Every part of the lecture theatre was crowded. Year by year the opening of the winter Medical session is exciting a more general interest here, and greater numbers assemble to listen to the introductory address. Dr. Roberts's address consisted of an earnest, high-toned appeal to Medical students, admirable alike both in its matter and the method of its delivery.

It is satisfactory to be able to say that the outbreak of fever at Bootle and the adjacent townships is declining. There are comparatively few fresh cases, and such as there are present no features differing from those of the cases I have already described in my previous communications. Very much has been said concerning the cause of this epidemic, and by turns the water supply, the drainage, the refuse from chemical works, the animal manures applied to the adjacent fields, and the decomposition of a particular heap of mussels, have been supposed to have produced it. How far any or all of these may have aided in giving it local intensity it is impossible to say; but that it had its origin in some more general cause seems proved by the wideness of its spread, for not only were Bootle, Waterloo, and Seaforth affected, but a fever of the same mild type prevails largely in Liverpool just now. I inspected most of the sewers as they were being examined during the progress of the epidemic, and was unable to detect the slightest unpleasant emanation from any of those along the main thoroughfares. They were well trapped, and appeared in every respect sound. There is one, or rather there are two, radical defects, however, connected with the sewerage of the district which ought to be speedily remedied. The first of these is the position of the outfall of the principal of the three main conduits by which the drainage is effected. So far above the ordinary level of the river is this that, except at very high tides, the water can never reach the self-acting sluice with which the mouth of the drain is guarded, while at all other times the sewage creeps lazily along in a dark winding offensive stream several hundred yards long before it can be washed away. Until lately, the outfall was considerably further removed from the village, but alterations undertaken by the railway company were followed by the present very undesirable condition of things. The Dock Board is said to be under an obligation, however, when its works are extended to Bootle, as they shortly will be, to carry the drain to a safe distance seaward. The second defect which requires a remedy is the existence of a brook which, after receiving into its sluggish waters the waste matters from a large tanyard, is allowed to proceed slowly through the open fields for at least a mile before it discharges its contents into the sewer. It does not do this, indeed, until it has almost reached the mouth, and it is difficult to say whether the offensive odour which arises from their joint outflow is more due to the sewage or the water of the brook. This water is almost black, and from the tanyard to the shore is a nuisance.

Fever is still prevailing in Liverpool, but its type is much milder than in the epidemics of former years. There are many cases of simple continued fever, from which the patients, who at first seem to be suffering from incipient typhus, recover in a week.

A Lunatic Fire Brigade.—A writer in the *Month* states that at the Lunatic Asylum at Lille, which is under the enlightened management of the "Brothers of St. John of God," among the various means of amusement and employment adopted, a fire brigade has been established, which on several occasions has done good services. It is served by picked lunatics, and no evil has ever resulted from their employment.

GENERAL CORRESPONDENCE.

LEAD COSMETICS AND COLOURED SOCKS.

LETTER FROM MR. WILLIAM FULLER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of last week, reference is made, under the heading of "Cosmetics and Credulity," to a peculiar hair restorer at the present moment enjoying a wide popularity, which is said to be made of herbs from Western America, but which has been discovered to be a strong solution of acetate of lead. Within the last few months it has come to my knowledge that there are a large number of similar lead washes for the hair in existence. Rossiter's and Mrs. Allen's seem to be those most extensively used in London, but I have also met with one, highly recommended, manufactured by a chemist in a large provincial town, and more recently still another supplied by one of the leading West-end chemists—so strong, that from it I manufactured a magnificent specimen of the lead-tree, by suspending in the bottle a small piece of zinc.

Not many days since Mr. Webber brought before the notice of one of the magistrates the poisonous effects on the skin of the brilliant dyes used in the manufacture of the fashionable socks of the day: three cases which occurred during the summer among my own patients confirm his observations. Now, however, we are threatened with a far more insidious enemy, and we must be constantly on guard against this new source of poisoning by lead. Is it to be believed that people would expose themselves knowingly to the risk of palsy, lead colic, or of those derangements of stomach and intestinal canal which fall short of this latter, but so often herald its approach? I can scarcely think so, but it appears to me to be our duty, as Medical men, to warn our patients against such dangers, and to explain the insidious way in which this poison enters the system by slow absorption. How many cases of poisoning from arsenical paper hangings escaped observation till the true cause was discovered; and how many cases of incipient lead poisoning may there not be at the present time baffling treatment, overlooked owing to the possibility of our meeting with such cases among the class who use these washes never entering our minds! I will not trespass further on your space, but would again draw the attention of the Profession to the fact of the existence of this new source of contamination by lead. I am, &c. WILLIAM FULLER.

111, Piccadilly, October 6.

NEW INVENTIONS.

BONTHRON'S BREAD AND BISCUITS FOR DIABETIC PATIENTS.

To obtain a bread at once palatable and nutritious, and at the same time sufficiently free from starchy material to render it suitable for diabetic patients, has long been much to be desired. But although almond biscuits, gluten bread and biscuits, and bran biscuits have been introduced, the desired end has not hitherto been attained. In Mr. Bonthron's biscuits we have probably a nearer approach to perfect success than in any other we have seen, for although they are not absolutely free from starch—that, indeed, being hardly attainable with such materials as gluten and bran—still the percentage is very small—in fact, practically unimportant. Bran bread and biscuits are prepared from carefully powdered and bolted bran, but it is almost impossible to separate the starchy material in its entirety from these constituents, and the bread itself is heavy, and we might say disagreeable. With gluten the same objection applies, only in another way. It is next to impossible to get it thoroughly freed from starch, and the bread formed from it is tasteless and insipid. In Mr. Bonthron's biscuits we have a combination of the two along with a proportion of albumen and a small quantity of butter, which gives a biscuit sufficiently free from starch to be used by a diabetic patient with impunity, with enough of the bread taste to be appetising, at the same time without any pronounced flavour like the almond biscuits, so that they can be eaten with any other food. Several patients who have used them confess to the gratification which the use of these biscuits has afforded them.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 1, 1868:—

Bell, John Albert, Rochester.
Robinson, George, Spilsby.
Spratt, Henry Howell, New Zealand.

The following gentleman also, on the same day, passed his First Examination:—

Yates, Walter Peel, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

HARRIES, Dr. GWYNNE, of Pembroke Dock.—Certifying Surgeon under the Factories Act for the District of Milford Haven.

LEY, Mr. R., jun., of South Molton.—House-Surgeon to the Devon and Exeter Hospital.

NAVAL APPOINTMENT.

PATTERSON, JOHN HERBERT, Esq., M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets on the retired list.

BIRTHS.

BARRY.—On October 1, at 3, Clifden-road, Twickenham, the wife of D. Paterson Barry, Esq., M.D., of a daughter.

BLACKMAN.—On October 2, at 4, York-road, S.E, the wife of Frederick Blackman, Surgeon, of a daughter.

CHAMPNEYS.—On September 17, at Hamilton House, Penge, Surrey, the wife of Henry Montagu Champneys, F.R.C.S, of a daughter.

LIVINGSTON.—On October 5, at Greenlaw-place, Paisley-road, Glasgow, the wife of John Livingston, M.D., of a son.

MOXEY.—On October 4, at Edinburgh House, Turnham-green, the wife of David Anderson Moxey, M.D. Edin., M.R.C P. Lond., of a son.

WELLS.—On September 30, at 20, Fitzroy-street, Fitzroy-square, the wife of J. R. Wells, F.R.C.S., of a son.

WINSLOW.—On September 25, at Hammersmith, the wife of Lyttleton Stewart Winslow, LL.B. Cantab. (the youngest son of Dr. Forbes Winslow), of a son.

MARRIAGES.

DUNNE—BARNES.—On October 1, at All Souls' Church, Langham-place, London, John Dunne, Esq., chief constable of the counties of Cumberland and Westmoreland, to Mary, eldest daughter of Thomas Barnes, Esq., M.D., of Bunker's-hill, Cumberland, and Tring-park, Hertfordshire. No cards.

GIRDLESTONE—NURSE.—On October 6, at Christ Church, Clifton, Bristol, Francis Brooke Girdlestone, late Indian Navy, Topographical Surveyor of India, to Ellen Louisa, younger daughter of the late Thomas Nurse, M.D., of Fodds, Island of Barbadoes. No cards.

ILES—RIDDIFORD.—On September 24, at Christ Church, Gloucester, Daniel Iles, Esq., of Fairford, Surgeon, to Kate, eldest daughter of George Riddiford, Esq., Northgate House, Gloucester.

ROUSE—MAUDE.—On October 3, at St. Pancras Church, James Rouse, F.R.C.S. Eng., of Wilton-street, Grosvenor-square, to Georgiana Charlotte, younger daughter of James R. Maude, M.A. Cantab., of St. Andrew's-place, Regent's-park.

STRONG—JACKSON.—On September 26, Samuel George Strong, eldest son of Samuel Strong, jun., Esq., to Amy Fanny, eldest daughter of the late E. M. Jackson, Surgeon-Major, Madras Army, H.E.I.C.S. No cards.

WOODWARD—KENDALL.—On September 24, at St. Margaret's Church, King's Lynn, by the Rev. W. Lake Onslow, Rector of Sandringham, assisted by the Rev. P. J. Wodehouse, Vicar of St. Margaret's, Edwin Woodward, L.R.C.P.E., M.R.C.S., of King's Lynn, to Agnes Georgina, eldest daughter of T. M. Kendall, F.R.C.S., of King's Lynn.

DEATHS.

EDWARD, GEORGE, M.D., late of Sandgate, Kent, at Surbiton, on October 1.

ETESON, EVELYN MARGARET, the beloved wife of Alfred Eteson, Surgeon, Bengal Army, and daughter of John Fenton, Esq., Haven-green House, Ealing, at Roorkee, N.W.P., India, on August 31, aged 22.

FISHER, JAMES HOWARD, youngest son of Charles Holdrich Fisher, M.D., at Sittingbourne, Kent, on September 29, aged 2 years.

ROYAL COLLEGE OF SURGEONS.—The library and museum of this institution were reopened on the 1st inst. It is important that students should be reminded of the necessity of registering during the first fifteen days of this month.

THE Metropolitan Association of Medical Officers of Health holds its first meeting for the present season at the Scottish Corporation Hall, Fleet-street, on Saturday, October 17, at 7.30 p.m. Dr. Druitt, President, will read a paper on the Influence of certain Customs, Habits, and Prejudices on Health.

THE Hunterian Society will hold its first meeting for the season at the London Institution, Finsbury-circus, on Wednesday, October 14, at 8 p.m. Dr. Ward promises some remarks on Exophthalmic Goître, and Mr. Bryant will show a specimen of Inguinal Hernia reduced *en masse*. A full attendance is expected.

AT the first meeting of the Western Medical and Surgical Society of London, on Friday, October 16, Mr. J. R. Lane, President, will read a paper on the Prevention of Contagious Venereal Diseases. The Society meets at 44, Sloane-street, S.W., at 8 p.m.

MR. SAMPSON GAMGEE removed the entire tongue from a man at the Queen's Hospital, Birmingham, on Saturday last. Thirty-six hours after the operation the patient was doing admirably. The operator adopted Reynell's method, by submaxillary incisions.

CATTLE DISEASE IN AMERICA.—Lord Robert Montague has called attention to the severity with which the Americans have acted in their dealings with cattle infected with disease, and to their peremptory stamping-out measures. Luckily, in America the repression of cattle plague and establishment of dead-meat markets have not been made party questions.

INDIAN MEDICAL SERVICE.—List of the candidates for her Majesty's Indian Medical Service who were successful at the competitive examination at Chelsea on August 10 last:—(Maximum 3400 marks.) K. M. Downie, 2485 marks; F. M. Mackenzie, 2240; E. R. Johnson, 2130; W. E. Wright, 2015; A. W. Lupton, 2005; W. C. Kiernander, 1945; F. H. Blenkinsop, 1910; G. Hutcheson, 1870; J. MacGregor, 1850; J. Rahl, 1775.

SUICIDE BY MISADVENTURE.—Mr. J. G. Walker, a tradesman at Mansfield, has unintentionally committed suicide under circumstances explained in the verdict at the inquest:—"That deceased died from misadventure—to wit, from the effects of laudanum, taken with the intent of frightening his mother, sister, and wife, so as to produce a better state of feeling at home, and not with the intent of taking away his life"—not a very uncommon occurrence.

DISSECTION IN THE EAST.—In the last published annual report on public instruction in the Lower Provinces of the Bengal Presidency it appears, from the statement of Dr. J. Ewart, the officiating principal, that the supply of subjects to the Medical College has been abundant, having amounted in round numbers to 1297; this large supply is owing to the co-operation and assistance of the chairman of the justices. So steady and uninterrupted has the supply been as, in the words of the principal, to make this school still the best furnished anatomical school in the world.

THE following is the list of students of the Liverpool Royal Infirmary School of Medicine who received prizes at the opening of the present session:—Exhibitioners: Mr. Hill and Mr. J. Matthews. Medicine: Mr. Paget, silver medal; Mr. Hill, certificate. Surgery: Mr. Hill, silver medal. Physiology (seniors): Mr. Paget, silver medal; Messrs. Matthews and Pughe, first and second certificates. Anatomy (seniors): Mr. Matthews, silver medal; Mr. Paget, certificate. Anatomy and Physiology (junior): Mr. Pitts, silver medal; Messrs. Pope and Fox, first and second certificates. Chemistry: Mr. Lewtas, silver medal. Midwifery, etc.: Mr. Pughe, silver medal; Messrs. Matthews and Fox, first and second certificates. Materia Medica: Mr. Paget, silver medal; Mr. Walby, certificate. Medical Jurisprudence: Mr. Matthews, prize; Mr. Sleddall, certificate. Botany: Mr. Pope, prize. Practical Chemistry: Mr. Pope, prize. Prosector's prize: Mr. Matthews. Pathology: Mr. Harrison. Thirty gentlemen from this school have presented themselves for examination at different boards during the year, and have all been successful.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this corporation held on the 5th inst., the following office bearers were elected for the ensuing year, viz.:—*President:* Andrew Anderson, M.D. *Visitor:* Harry Rainy, M.D. *Treasurer:* John Coats, M.D. *Honorary Librarian:* George Rainy, M.D. *Vaccinator:* James Dunlop, M.D. *Councillors:* The President, *ex officio*; The Visitor, *ex officio*; Robert Scott Orr, M.D.; John Coats, M.D.; George Robertson, M.D.; William Weir, M.D. *Board of Examiners:* William Lyon, M.D., Surgery and Surgical Anatomy; Andrew Buchanan, M.D., Anatomy and Physiology; James Morton, M.D., Surgery and Surgical Anatomy; Robert Perry, M.D., Chemistry; R. D. Tannahill, M.D., Midwifery and Medical Jurisprudence; J. B. Cowan, M.D. Medicine and Materia Medica; Andrew Fergus, M.D., Chemistry; George Buchanan, M.D., Anatomy and Physiology; Robert Scott Orr, M.D., Medicine and Materia Medica; and William Leishman, M.D., Midwifery and Medical Jurisprudence. *Clinical Examiners in Medicine:* The Physicians of the Royal Infirmary. *Clinical Examiners in Surgery:* The Surgeons of the Royal Infirmary. *Examiners in Arts:* John Coats, M.D., and James Steven, M.D. *Clerks:* Laurence Hill, LL.D., and William Henry Hill. *Librarian and Secretary:* Alexander Duncan, B.A.

THE FIRST OF OCTOBER AT WESTMINSTER HOSPITAL.—Westminster Hospital has alone of all the metropolitan schools retained the custom of delivering the introductory address in the evening, and of inviting the students and their friends to a *soirée* at its close. A larger number of guests availed themselves of the invitations on Thursday week than on any previous occasion, and no trouble was spared by the authorities to afford them amusement. Many objects of interest had been collected, amongst which we especially noticed the electrical instruments of Mr. Brooke, and the valuable series of original drawings illustrating the development of the chick, exhibited by Mr. Tuson. Mr. Collins supplied a large number of microscopes, and Messrs. Baker, Mayer and Metzler, and Pratt exhibited a goodly array of Surgical instruments and appliances. An unusual number of former students revisited their *Alma Mater*.

POOR-LAW MEDICAL SERVICE.—*Mile-end Old Town.*—The guardians of Mile-end have at length carried their point in the increase of salary which they granted to their Medical Officers. The Poor-law Board have now formally sanctioned the salary of £250 per annum each to Messrs. Stephenson and Robinson, and £200 to Mr. Lyell, the amounts decided upon, but at first objected to by the Poor-law Board. *St. Pancras.*—Mr. J. Richardson has been appointed by the guardians as vaccination clerk at a salary of £100 a year. *Islington.*—The board of guardians have determined "that a Pharmacopœia shall be settled and agreed upon to be observed by the Medical Officers in their official capacity." Mr. West, who brought forward the motion, said he did so on good grounds. The Poor-law Board had declined to issue a Pharmacopœia, and from the present unsatisfactory manner in which the medicines were supplied, some uniformity was necessary. While passing Mr. West's resolution, the board unanimously agreed that the drawing up of the Pharmacopœia should be left in the hands of the Medical Officers themselves.

HOSPITAL REPRESENTATION.—It appears from the Calendar of the Royal College of Surgeons that some of the London Hospitals are very well represented in the Council of that institution, as will be seen from the following abstract:—St. Thomas's Hospital sends Messrs. South, Mackmurdo, Solly (Vice-President), Le Gros Clark, and Simon; from Guy's Hospital, Messrs. Hilton, Cock (Vice-President), and Birkett; the London Hospital, Messrs. Adams and Curling; St. Mary's Hospital, Messrs. Lane and Spencer Smith; St. Bartholomew's Hospital, Messrs. Paget and Holden; St. George's Hospital, Messrs. Charles Hawkins and Hewett; University College Hospital, Mr. Quain, President; the Charing-cross Hospital, Mr. Hancock; and King's College Hospital, Sir William Fergusson, Bart. The only recognised Hospitals not at present represented appear to be the Westminster and Middlesex.

SALMON AND OYSTER CULTIVATION.—Mr. Frank Buckland, Government Inspector of Fisheries, read a paper at Falmouth on Friday, in connexion with the Royal Cornwall Polytechnic Society, on salmon and oyster cultivation. He remarked that to the sea, and not to the land, they would have to look for increased food, and the two things they had principally to consider were salmon and oysters. There was not a cleverer fish than the salmon in the world, nor one that showed greater stupidity and ignorance; if they set a trap it would walk into it, but if they spent a large sum of money to make ladders up the weirs the salmon would not avail itself of them. Alluding to the pollution of rivers, the greatest enemy of salmon, he cautioned the people of Falmouth, whatever they intended to do with their sewage, not to turn it into their beautiful harbour. The Fowey and Camel, in East Cornwall, were two of the most beautiful rivers he had ever met with, and the only reason that they did not produce tons of fish was that pollution was allowed to fall into them. Salmon would only make their nests on clean gravel. Alluding to oysters, he showed that their development depended much on the warmth of the weather, 65 to 75 degrees being about the best temperature. The water in which oysters should be reared should be free from mud and sand, the latter being their

greatest enemy, as it smothered them. Falmouth harbour he had found to be a very excellent place for oysters. They were firm and fast, but, unfortunately, too green for the London market. If removed and laid down at other places to fatten, they would be very good.

At Dublin, on the evening of Tuesday week, Meyerbeer's opera "Gli Ugonoti" was being played. In the final scene, where Raoul is represented as wounded in the struggle in a street on the quays of Paris, and the curtain falls amid the conflict and the strife of armed men, Mdlle. Titiens rushed in front of the stage, calling out, in an agitated and earnest voice, to know if there was a Doctor present. Dr. Moore, of Stephen's-green, who happened to be present, went on the stage, and found Signor Mongini sitting on a chair behind the scenes, the blood flowing very copiously from a wound on the side of the face near the ear. Dr. Moore promptly applied the necessary means for arresting the flow of blood. It is supposed the wound was caused by the awkwardness of one of the performers, and that it was inflicted by a "property" sword.

Starved to Death.—Some unusually shocking cases of starvation are reported. An old man, aged 64, was found dead in a shed in Red Lion-court, Spitalfields. Deceased lived by picking up bones and rags, and occupied a shed, a mere outhouse or lean-to, without fireplace or flooring, for which he paid 1s. 6d. per week. Here the poor wretch was found dead, half naked, and covered with vermin. The man's son was rebuked for want of feeling in neglecting his father. The landlady was also rebuked for letting such a doghole to a man to live in. It is for the benefit of personages who can let a doghole at 1s. 6d. per week that poor's rates are equalised all over the metropolis. A shoemaker and his wife were convicted of allowing their infant child to perish by neglect. There was room for doubt whether wages of 12s. per week would suffice for the maintenance of father, mother, and five children, yet the jury found them guilty of neglect as well as of poverty, and the judge sentenced them to three months' hard labour.

West of England Sanatorium or Convalescent Home at Weston-super-Mare.—This institution will, in a few weeks, be opened for the accommodation of patients, and more particularly for those from Hospitals, who, though sufficiently recovered to leave the wards, yet lack that strength which is needful to enable them again to provide for their families. Attached to the house, formerly the Strand Inn, is a large pleasure-ground, more than an acre in extent, facing the sea and sloping to the beach, where there is good bathing. The premises will, without any expensive alteration, be large enough for 30 beds; but it is this winter intended to open with only 18—six for men, six for women, and a children's ward of six. The rooms are well lighted and very airy, whilst the centre of the house forms a dining-hall 34 feet by 15, where the household may meet for meals. It is hoped that the main body of the building will be ready for patients in October. The principle of the Sanatorium is an extension of that of village Hospitals, which are now spreading throughout the country—that of letting the amount of maintenance fall on the patient or his friends; so that, instead of seeking for a large amount of contributions, which in many places is prohibitive of new Hospitals, the public generally will only pay for rent, nursing, and fuel, the locality from which the individual patient comes providing the rest. The Committee have already announced contributions amounting to nearly £500, but the expenses of alteration and furnishing will be heavy.

The English Venice.—Under this title Mr. Middleton, of Salisbury, has published an account of the present and past state of the drainage and water supply of Salisbury, and of the improvements due to the removal of sewage and to the drying of the soil by abolishing the artificial canals which once ran through the streets. He claims the merit of having initiated the idea that phthisis is due to dampness of soil—an idea worked out experimentally by Dr. Bowditch, of New England, and by our distinguished *confrère*, Dr. G. Buchanan. The following note, which he sends us, will be interesting as proving the innocuity of drainage at Salisbury:—"No human being is injured, or likely to be injured, by the sewage going into the Avon, and the fishes flourish exceedingly; in fact, large trout, often ten to twelve pounds each, are always to be found below the outlet; also other large fishes. Nor is the manure lost, for the river irrigates some of the finest water meadows in England." The following may also help to form materials for a history of woman and her rights and wrongs:—"In 1616 a very curious entry occurs in the City Records, to the effect that the Pudding-bridge being out of repair, where pudding wives were used to cleanse beasts' bellies bought from the butchers, these 'wives' had taken to a bad habit of emptying them 'in the rivers in the streets, to the great annoyance of the city;' they were ordered, under a penalty of five shillings (then a large penalty), to wash them at 'the proper bridge, or at the great rivers, or some other back river that runneth not into the open streets.'"

Dr. William Hardwicke, the Deputy-Coroner for Central Middlesex, while investigating the death of a woman unknown found while yet alive, in the ornamental water, Regent's Park, took occasion to remark that if the park constable had brought the dead body out, instead of the woman being alive, he would have been entitled to 5s. for the act, whereas, as the case turned out, he could only pay him 1s. as a witness's fee. Jenkins (the park constable) said he had saved many lives. Once he saved a boy in the reservoir of 13 ft. deep; he got nothing for that, although he risked his own life. At the late ice accident in the park he saved many, but received no emolument. Mr. Boyles, the coroner's officer, said that the Middlesex magistrates cut everything down to the lowest figure. He, in common with all the other officers, had been reduced to half fees. It had been said by Mr. Kemshead that he, for the late melancholy ice accident, had received his salary for 40 cases, which was an untruth, for he received only for four, with all the attendances; but Mr. Kemshead made this a handle for reducing the salaries or fees of the coroner's constables.

Election Intelligence.—Mr. Alfred Smee, F.R.S., has issued a second address to the electors of the city of Rochester, regretting (as we also most sincerely do) that illness should have hitherto prevented him from presenting himself to them. His political principles are unmistakable and pronounced. He is a thorough Conservative. He holds that the health, happiness, and welfare of the people ought to be paramount with legislators.—Dr. Forbes Winslow, after having, with much self-abnegation, refused to divide the Conservative interest in the University of Aberdeen and Glasgow, and rejected the overtures of the people of Hackney, has, it is said, finally determined to cast in his lot with the voters of Marylebone. We doubt, however, if Dr. Winslow is in time to do in the West what Mr. Coope seems likely to succeed in doing in the East.

Liverpool Psychological Association.—Last evening witnessed the inauguration of another session of this large and flourishing Association, in the hall of the Free Library, William Brown-street. Dr. Dawson occupied the chair, and amongst others on the platform were Dr. Burrows, Dr. Galloway, Dr. Johnson, Dr. Jones, and Mr. Gardiner. The hall was crowded by a highly respectable and attentive audience, who cheered Dr. Hitchman throughout his lecture, which occupied nearly two hours in its delivery. The Doctor took a survey of the wide field of mental and moral science, and furnished an able compendium of psychology and ethics, adopting as his text the words "mind and brain," which, in fact, embraced all the correlations of consciousness and organisation, criticising as he proceeded the various theories of mental physiology recently propounded by the British and foreign philosophers at Norwich, more especially the minute anatomy of the human brain and the important distinction between cerebral organisation and materialism and the higher faculties of perception and intellect, soul, mind, and spirit; and concluded a peroration on the psychical processes of mental phenomena and the physical constitution of matter by quoting the well-known words of Akenside:—

> "Mind, mind alone,
> Bear witness, earth and heaven,
> The living fountain in itself contains
> Of beauteous and sublime."

The curtain, he said, will shortly be drawn—the mist dissipated. Eternal truth shall descend as a bride; we shall see and know and enjoy "the things of the spirit" for ever and for ever, because God himself has declared it. Votes of thanks to the lecturer and chairman concluded the proceedings of a most enthusiastic meeting.—*Liverpool Mercury*, October 7.

Subcutaneous Injection of Morphia in Obstetric Practice.—In an interesting paper read to the Leipzig Obstetrical Society, Dr. Kormann stated that he had found this a very useful practice under the following circumstances, viz.: 1. During painful dilatation and expulsory periods, especially in primiparæ and in narrow pelves. 2. In spasmodic pains. 3. In painful complications of the process of labour

in general. 4. In severe after-pains. It is in the first category of cases that he has especially employed it, injecting one or both thighs.—*Monatsschrift für Geburtsk.*, August.

CONSANGUINEOUS MARRIAGES.—M. Voisin states as the result of a careful examination of 1077 of his patients at the Bicêtre and Salpétrière, that in no one instance of his idiotic, epileptic, or insane patients could healthy consanguinity be legitimately regarded as the cause of the affection. He believes that the ill results which have been observed after consanguineous unions are not really due to these, but are to be attributed to the ordinary hereditary causes.—*Union Méd.*, October 3.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. A. Wallis's interesting case in our next.

Wakefield.—In our next. See our number for May 16, 1868, and you will find in our Paris correspondence a mode of administering phosphorus which will doubtless answer your purpose.

G. W.—On the spleen generally, consult Gray's treatise, published by Longmans; for its diseases, consult writers on tropical and malarious diseases and on fever.

Studens Viator will see that his communication has been submitted to members of his own body, to whom we always refer for advice in matters so much out of the scope of London Practitioners.

M. A. B.—No boon that you could confer on the working classes, and on all classes who are not born with provision to enable them to do without labour, would be greater than the persuading them to prefer domestic service to handicraft. But then masters and mistresses must treat domestic servants like Christian equals, and not as slaves or dogs. Then we may expect to have intelligent nurses, honest housekeepers, and other servants, who regard their masters' prosperity as their own.

Montrose.—With regard to the matter in which Dr. Steele alleges want of Professional courtesy against Dr. Johnstone, a Practitioner in the town writes to say that Dr. Steele was himself to blame, having on many previous occasions refused to meet Dr. Johnstone under similar circumstances; hence that Dr. J. could not, without loss of Professional dignity, hold further communication with Dr. Steele.

A New Kind of Inquest.—We are told that the coroner for Sandwich, Kent, has introduced a new kind of inquest. He first allows the body to be removed out of his jurisdiction; then subsequently comes to the place where the accident occurred which ended in death, and holds an inquiry, the persons present being himself, the police, one or two witnesses, and no jury. If one of the witnesses be Medical, he gives him 5s. for his opinion; then gives a certificate of the cause of death to the registrar. We have not the smallest objection to a reform of the coroner's jurisdiction. We would not have that ignorant and useless body called the jury, unless demanded by a person accused; but then there ought to be uniformity of process and some power of summoning witnesses. Cases of violent death, with possible culpability, should not be disposed of in this offhand way.

The Penkridge Union and the Stafford County Asylum.—Mr. Mark Noble Bower forwards us a copy of correspondence between himself and the guardians of the Penkridge Union, as to the nature of an opinion given by Mr. Bower on the pauper lunatics belonging to that parish. Mr. Bower states that the report of the Penkridge Guardians "is only an attempt on the part of certain guardians to remove lunatics from the care of an asylum to the workhouse, where the charge for their maintenance is less, as the lunatics commented on are so palpably of unsound mind that no person capable of judging of the mental state of these unfortunate paupers could be mistaken as to their insanity. The cost for each of the pauper lunatics in this county asylum and the charge are the same; and, as no profit is made by retaining them, the obvious advantage of the committee is to discharge them as soon as the state of their minds renders it safe to do so, to make room for others. In my answer to the guardians' report, full information is given of the lunatics stated to be 'unaccounted for,' and if the inquiries had been made at the time of their visit, the same information would have been furnished to the guardians."

A Fellow.—The College of Surgeons is represented at the Medical Council by Mr. Cæsar Hawkins; the Society of Apothecaries by Mr. George Cooper, the Master.

University College.—Mr. Richard Quain was elected a member of the Council of the College of Surgeons in 1854, a member of the Court of Examiners in 1865, and President in July last, when he succeeded Mr. Hilton.

Assistant-Surgeon, Portsmouth.—Unless you already possess a Medical degree, you will be required to undergo an examination in Medicine before receiving the diploma of the College of Surgeons. In fact, *all* candidates, regardless of age, must undergo this examination.

Dr. Jones, Carmarthen.—Your son will be allowed to register up to the 15th inst., on which day the registration closes.

L.R.C.P. Lond.—On consulting the Roll of the College of Physicians, by Dr. Munk, you will no doubt find the desired information.

Dr. Williams.—Your pupil's name appears in the list of those who passed the Hall a few days ago; he can therefore at once commence his Professional studies. As the examination is recognised by the College, he will only have to take the additional subjects required of candidates for the Fellowship of that institution.

LATE DEVELOPMENT OF VACCINE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Would you, or any of your numerous readers, inform me whether they have observed vaccine virus to take fourteen instead of seven days to mature in the system? A weakly child of 15 months was brought to me to be vaccinated. It had just passed through a mild attack of scarlatina, and, having caught cold, was affected with discharge from both ears. I vaccinated by two punctures in the arm on a Monday, and, on the succeeding Monday, there being no appearance of its having taken effect, I repeated it. A week having again elapsed, and still no appearance, I judged the child insusceptible, and left it alone. The next Monday, however, the child was brought to me, having one undoubted vesicle; and the mother stated it had only begun to take effect on the Friday after the ears had ceased running.

Not having met with such a case before, would you kindly state whether it is unique?

I am, &c.

Broughty Ferry. J. H. PARK.

THE CURE OF APHONIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reply to your correspondent, "Z. A.," who asks the best treatment for aphonia, I have generally found two distinct kinds—viz., functional (as probably the case in point) and syphilitic. The only curative treatment I know of, for the former, is the application of galvanism to the vocal cords, by means of a particular appliance that I have used for some years, manufactured at the suggestion of Dr. Morell Mackenzie; the latter class requires specific treatment combined with galvanism. I have seen so many cases of the former when connected with the Throat Hospital, as well as in private practice, frequently cured by one application only, that I have every confidence in this remedy.

I am, &c. WASDALE WATSON.

Obstetrical Society's Library, 291, Regent-street, W., October 6.

GUNSHOT WOUNDS OF THE WRIST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Like most Surgeons of extended military practice, I can corroborate Prof. Pochazki's observation (in your last number) of the difficulty of finding gunshot wounds of the wrist suitable for excision, but I am hardly prepared to believe in their very rare occurrence as injuries. They certainly are not common in a field Hospital; still, I have over and over again amputated the forearm for complete smash of the wrist-joint and back of the hand by shell or bullet. The explanation of the rarity of these wounds in field Hospitals I believe to be that, from the positions of the wrist in a man under work as a soldier, a bullet striking it kills him, since this usually happens when firing or at the moment of aiming. The right hand ready to put force on the trigger, the left on the grip of his rifle, he is struck also on the head; and, from examination of killed on a skirmish line, fought by ultra-cool and steady shots, I am convinced of the truth of my belief and the observations on which it rests. It so happens that all the operations I have done on the forearm (with few exceptions) for wounds of the wrist have been on officers or artillerymen. In them the wrist is rather less exposed than an equal superficies of the trunk or limbs; nor is it in the soldier of the line more exposed, except in the attitude mentioned. As a rule, most men shot through the head, or brought in wounded fatally or not in that region, are men wounded on advanced pickets, or on a sharp, cool, well-managed skirmish line, under a captain knowing his work, and amongst the dead so made you will find a fair allowance of wrist-injuries. Such, at all events, is the result of my military and Medical experience in the Confederate army.

I am, &c. A. L. MACKAYE, L.R.C.S.E.,
Late Senior Surgeon of the Artillery of the Army of Tennessee, C.S.A.

POOR-LAW MEDICAL RELIEF AND MEDICAL OFFICERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A general election is near; therefore I shall feel obliged if you will permit the following queries to appear in your next issue, under the hope that some Medical officer can be found among each constituency to submit them to every candidate for a seat in the House of Commons. They might easily be written out, and handed to each candidate, with a request that he will kindly give an expression of his opinion on these important subjects.

October 1. I am, &c. PHILIP.

1. Will you, if returned to Parliament, endeavour to improve the constitution of the Poor-law Board, more especially with reference to the appointment of gentlemen competent to devise and carry out a more uniform, adequate, and efficient system of Medical relief to the sick poor?

2. Will you take into consideration the case of the Poor-law Medical officers, upwards of 3000 in number, who are daily and hourly performing most responsible duties at salaries altogether unremunerative for the time, skill, labour, and medicines which they are compelled to furnish?

Dr. Lyon Playfair says, "To give a miserable salary to a Medical officer, and to compel him, out of that, to provide medicines for the poor patients, is an amazing instance of maladministration."

3. Will you support any measure which may be brought into the House of Commons having for its object more extended appliances for the better treatment of the sick poor, and giving the Medical officer power not only to order, but to insist on, the administration of such diet, wine, and other necessary comforts as may, in his judgment, be requisite?

Unless this be accorded, the Medical officer's hands will always be crippled, and the successful treatment of the sick poor will remain a solemn but lamentable farce, discreditable to all concerned.

The labours of Poor-law Medical officers are most onerous and trying, inasmuch as they are constantly tied to their duty, and are liable to be summoned at all hours of the day and night; the risks they have to undergo are at all times serious, if not dangerous; health and life are frequently sacrificed, and there is no provision at present either for the disabled, the superannuated, or the bereaved.

4. Will you, therefore, assist in the Commons' House of Parliament to obtain justice for the Medical officers under the Poor-law? Will you endeavour to place them in their right and legitimate position as members of a learned Profession who devote their time, their energies, and their talents to the alleviation of human suffering, as witnessed in the constant treatment of the manifold diseases of the poorest of the poor?

5. Will you vote for such reasonable remuneration as will enable every Poor-law Medical officer to discharge his duty to the sick poor, and, at the same time, will pay him adequately for the supplies and the services rendered?

Army Grievances.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your correspondent, "Black Sheep," in last Saturday's *Medical Times and Gazette*, speaks of dress as a grievance in the Army Medical Department. No doubt the present dress is as ugly a one as could have been contrived, and the inferiority of it, from every point of view, to that worn by the combatant officers of any regiment to which a Medical officer might belong, no doubt helps somewhat to lower his position (ridiculous as such a fact may appear) in the eyes of his so-called brother officers, who occasionally in bad regiments take advantage of his being in an isolated position to annoy him by every means in their power; but as the inevitable march of events seems to point to the transformation of the Army Medical Department into a corps by themselves, it is likely that some change will then be made in the dress, and even if no change be made, a Medical officer will not feel himself ill-dressed by contrast. At present I must say that I believe the real grievances of the Medical officers are two—the insufficiency of pay, and the question of promotion. A man cannot live on his pay, even if he has only himself to keep, and at present he may be reduced to the position of a species of clinical clerk for the entire period during which he serves as an Assistant-Surgeon. Fancy an educated gentleman, who has obtained his degree or diploma, occupying the first ten or twenty years of his service in opening boils, drawing teeth, and putting on bandages—in fact, doing much the same kind of work performed by unqualified dressers in Hospitals, or students attending dispensaries! Can it be wondered at if, by the time he is promoted, all interest in his Profession has been knocked out of him? As far as the writer of this is concerned, he wishes the Medical Department were not possessed of a uniform at all, but supposes such a thing impossible. I am, &c.

September 30. AN ARMY MEDICAL OFFICER.

P.S.—I never heard of such a creature as an Assistant Veterinary Surgeon. Why should there be Assistant-Surgeons?

COMMUNICATIONS have been received from—

G. W.; Mr. A. L. MACKAYE; Mr. B. J. TUCK; Mr. F. S. GARLICK; Mr. BALMANNO SQUIRE; Mr. W. POTTS; Mr. SAMPSON GAMGEE; Professor HUMPHRY; Mr. ATKINSON; Mr. W. MANLIUS SMITH; Mr. R. SMITH; Mr. E. BREMRIDGE; Mr. W. ALLINGHAM; Dr. F. T. ROBERTS; Dr. KIDD; Mr. WASDALE WATSON; Mr. BRUCE; Mr. A. B. MIDDLETON; Dr. M. N. BOWER; Mr. E. HALSALL; Dr. HAVILAND; Mr. W. W. REEVES; Mr. A. W. WALLIS; Dr. ALFRED HILL; Dr. HITCHMAN; Dr. LETHEBY; Dr. J. H. PARK; Mr. LAWSON TAIT; Mr. R. G. DAVEY; Mr. HENRY BOWE; Dr. G. BUCHANAN; Dr. J. N. VINEN; Mr. H. M. CHAMPNEYS; Mr. J. HUTCHINSON; Dr. J. HUGHLINGS-JACKSON; Mr. CHATTO; Dr. J. HANCOCKE WATHEN.

BOOKS RECEIVED—

Bible Animals, part x.—Medico-Chirurgical Review, No. 84—Popular Science Review, No. 29—Practitioner, No. 4—London Student, No. 5—Roberts's Introductory Address at the Liverpool Royal Infirmary School of Medicine, October 1, 1868—Potts on Ventilation—De la Kélotomie, sans Réduction, par le Dr. Marc Girard—Westminster Review, No. 68—Skinner's Letters on Cholera—Ramsay and Coles on Deformities of the Mouth—Clinical Society's Transactions, vol. i.—Emmet on Vesico-Vaginal Fistula—Grainger Stewart on Diseases of the Kidneys—Smith on the Wasting Diseases of Infants and Children—Simpson's Introductory Address at the Manchester Royal School of Medicine, 1868—Transactions of the Fifteenth Annual Meeting of the Medical Society of the State of North Carolina—Recherches Expérimentales sur une Nouvelle Fonction du Foie, par Austin Flint fils.

NEWSPAPERS RECEIVED—

The Bainbridge Argus—Bath Express—Liverpool Daily Post—Medical Press and Circular—Birmingham Daily Gazette—North British Daily Mail.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 3, 1868.

BIRTHS.

Births of Boys, 975; Girls, 918; Total, 1893.
Average of 10 corresponding weeks, 1858-67, 1857·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	649	580	1229
Average of the ten years 1858-67	601·6	568·0	1169·6
Average corrected to increased population	..	..	1287
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,338	..	2	24	..	1	3	7	..
North ..	618,210	3	6	16	3	3	9	18	1
Central	378,058	..	5	12	5	4	5	9	..
East ..	571,158	1	2	24	5	4	14	9	..
South ..	773,175	6	1	23	3	7	9	8	1
Total ..	2,803,989	10	16	99	16	19	40	51	2

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·415 in.
Mean temperature	53·7
Highest point of thermometer	65·5
Lowest point of thermometer	40·8
Mean dew-point temperature	49·1
General direction of wind	S.S.W. & N.E.
Whole amount of rain in the week	1·17

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 3, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Oct. 3.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Oct. 3.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	1893	1441	1229	65·5	40·8	53·7	1·17	118
Bristol (City)	167487	35·7	118	75	*71	..	..	..	..	..
Birmingham (Boro')	352296	45·0	208	171	121	63·0	37·0	51·0	1·40	141
Liverpool (Borough)	500676	98·0	328	290	290	63·0	38·9	50·7	0·79	80
Manchester (City)	366835	81·8	264	208	*224	65·3	30·0	50·4	0·62	63
Salford (Borough)	117162	22·7	90	59	82	63·6	32·6	51·1	0·65	66
Sheffield (Borough)	232362	10·2	165	122	90	62·0	36·0	50·1	1·29	130
Bradford (Borough)	108019	16·4	153	55	59	..	..	..	..	..
Leeds (Borough)	236746	11·0	225	120	153	64·0	37·0	52·8	0·69	70
Hull (Borough)	108269	30·4	69	50	51	65·0	31·0	50·3	1·03	104
Newcastle-on-Tyne, &c.	127701	23·9	109	68	66	62·0	35·0	48·1	0·67	68
Edinburgh (City)	177039	40·0	118	85	107	59·7	38·0	50·1	1·00	101
Glasgow (City)	449868	88·9	331	262	267	61·6	37·3	49·9	1·67	168
Dublin (City and some suburbs)	319985	32·8	148	157	122	63·5	34·3	51·5	0·32	32
Total of 14 large Towns	6391080	34·7	4219	3163	2932	65·5	31·0	50·8	0·94	95
					Week ending Sept. 26.	Week ending Sept. 26.				
Vienna (City)	560000 (1863)	..	..	..	..	..	..	†	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·415 in. The barometrical reading increased from 29·08 in. on Wednesday, September 30, to 29·95 in. on Friday, October 2. The general direction of the wind was S.S.W. and N.E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The mean temperature at Greenwich during the same week was 58·4°.

APPOINTMENTS FOR THE WEEK.

October 10. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

12. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

14. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

HUNTERIAN SOCIETY (Council, 7.30 p.m.), 8 p.m. Dr. Ward, "Remarks on some Cases of Exophthalmic Goitre." Mr. Bryant will show a Specimen of so-called Reduction *en masse* of an Inguinal Hernia.

MICROSCOPICAL SOCIETY, 8 p.m. Dr. Maddox, "On the Papillæ of the Frog's Tongue."

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

16. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Inaugural Meeting. Mr. J. R. Lane, President, "On the Prevention of Contagious Venereal Disease."

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVIII.—Part I.

CRANIOTOMY: THE INDICATIONS FOR THE OPERATION: THE OPERATION: TWO ORDERS OF CASES: PERFORATION SIMPLE, AND FOLLOWED BY BREAKING-UP OR CRUSHING THE CRANIUM, AND EXTRACTION—EXPLORATION: PERFORATION: EXTRACTION BY CROTCHET, BY TURNING.

We have lingered long on the border-land between Conservative and Sacrificial Midwifery, unwilling to abandon the hope of saving mother and child; striving to set back, as far as the dictates of science and the resources of art will enable us, those limits where the death, certain or probable, of child or mother must be encountered. We must at length pass the boundary; we must lay aside the lever, the forceps, and turning, and take up the perforator, the crotchet, the craniotomy-forceps, the cephalotribe—instruments the use of which is incompatible with the preservation of the child's life. A law of humanity hallowed by every creed, and obeyed by every school, tells us, where the hard alternative is set before us, that our first and paramount duty is to preserve the mother, even if it involve the sacrifice of the child. As, therefore, we have striven to give the highest possible perfection to the forceps and turning in order to save mother and child, so it now behoves us to exhaust every effort in perfecting the means of removing a dead child in order to rescue the mother from the Cæsarian section, that operation which the late Professor Davis justly called "the last extremity of our art, and the forlorn hope of the patient."

The Indications for Craniotomy.

These are generally—1. Such contraction of the pelvis or soft parts as will not give passage to a live child, and where the forceps and turning are of no avail. Contraction of this kind may be due to contraction or distortion of the pelvis, which is most frequent at the brim; to tumours, bony, malignant, or ovarian, encroaching upon the pelvic cavity; to growths, fibroid or malignant, in the walls of the uterus; to cicatricial atresia of the cervix uteri or vagina; to extreme spastic contraction of the uterus upon the child, forbidding forceps or turning. Craniotomy and cephalotripsy are the means of effecting delivery in cases where labour at term is obstructed from disproportion, the pelvic contraction ranging from 3·25″ as a maximum to 1·5″ as a minimum. If labour occur at seven months, these means may be applied to contraction measuring even less than 1·50″. We are not hastily to assume, because a woman has been delivered on previous occasions by natural powers or by forceps, that it is therefore unnecessary to resort to craniotomy. It is, indeed, ample reason to pause and to examine anxiously. But it is a matter of experience that some women bear children with a constantly increasing difficulty. This may be from two causes—1. Advancing pelvic contraction; 2. Increasing size of the children. I can affirm the reality of the first cause from repeated observation. I have had to record the histories of many women whose first labours may have been natural, and whose subsequent ones exhibited difficulties increasing in a kind of accelerated ratio, rising from the forceps to turning and craniotomy. The second cause may be independent of, or aggravate, the first. D'Outrepont says he has constantly observed that in fruitful women whose first children were small, subsequent ones became bigger and bigger. On the other hand, Dr. Matthews Duncan contends that the maximum weight of children is found in women aged from 25 to 29, and that the weight afterwards falls. But I have known many exceptions to this.

2. *Certain cases where obstruction to delivery is due to the child*—as some cases of face-presentation; some cases of locked twins in which the lessening one head is necessary to release the other; excessive size of head, as from hydrocephalus; cases where there is obstructed labour, the head presenting, and the child is dead.

3. *Conditions of danger to the woman, rendering it expedient to deliver her as speedily as possible*, and where craniotomy is the quickest way, involving the least violence. Amongst these are *some* cases of convulsions; *some* cases of hæmorrhage; great exhaustion; some cases of rupture of the uterus; and generally where, delivery being urgently indicated, the cervix uteri is not sufficiently dilated to admit of other operations.

An important question is—At what stage of labour shall we begin? As most of the dangers flow from exhaustion, it is obviously proper to begin as soon as the indication for the operation is clear. On the Continent especially, it is still urged by many that we should wait until the child is dead. Now, if it be admitted, and the conditions of the case involve these postulates—1. That the child cannot come through alive; 2. That the operation is undertaken in order to save the mother—waiting till the child is dead is opposed both to reason and to humanity. It seems a refinement of casuistry to distinguish between directly destroying a child, and leaving it exposed to circumstances which must inevitably destroy it; and it is risking the very object of our art to wait for this lingering death of the child until the mother's life is also imperilled. If, then, we have clearly determined by our knowledge of the patient, by exploration, by trial, that the child cannot come through the pelvis by spontaneous action, by forceps, or by turning, it is our duty at once to adopt the best means of securing the safety of the mother. There is no need to wait for the far advance of labour. We should not wait long after the rupture of the membranes. It would, in the majority of cases, be useless to wait for complete dilatation of the cervix uteri. It is one of the necessary results of contracted brim that the cervix uteri dilates slowly and imperfectly. The head-globe resting by two points on the contracted brim cannot bear upon the cervix. It is not, therefore, often desirable to wait for more opening than is enough to admit two or three fingers to guide the perforator. When the head collapses and comes down into the pelvis, it bears upon the cervix, which yields gradually.

Although it is a good general rule to perform every operation as early as the indication for it is clearly recognised, it is not desirable, in minor degrees of contraction, to arrive at once at the conclusion that perforation is necessary. Some time and opportunity should be given to nature. The head may be small or plastic, and occasionally even a full-sized head will, under continued action of the uterus, become so moulded as to admit of delivery either spontaneously or by aid of the forceps.

Perforation should be the first step of all operations for lessening the bulk of the head. The necessary condition for full collapse of the bones of the head is that the support given by the brain and the integrity of the cranial vault should be broken down. Until this is done, you may obtain, with considerable expenditure of time and force, some amount of moulding or alteration of form, but no diminution of bulk. It is astonishing what resistance to compression the unopened head possesses. The most powerful forceps, and even cephalotribes, may be bent in the attempt to crush it in. Whereas, break the arch of the cranial vault, allow the contents to escape, and very moderate compression will cause collapse, more or less complete. It is remarkable that not a few continental obstetrists practice cephalotripsy without perforating.

Craniotomy, being used as a general term to include all the proceedings for reducing the bulk of the head, may be divided into two principal orders:—

The *first* includes those cases of minor disproportion in which perforation is enough to allow of such an amount of collapse of the head under the natural forces as will effect delivery.

The *second* order includes those cases of major disproportion in which perforation must be supplemented by breaking-up, removal of parts of the cranium, or by crushing down, and followed or not by extraction.

The *preparations* are generally the same as for other operations.

Position.—The patient lies on her left side, with her knees well drawn up, near the edge of the bed, and with the head supported on a *low* pillow, directed towards the middle of the bed.

Exploration.—The left hand of the operator is introduced, if necessary, into the pelvis, so as to explore thoroughly the shape and dimensions of the brim, and the relations of the head and cervix uteri. Three points especially should be clearly made out: First, the projection of the promontory, which in extreme cases has been mistaken for the head;

secondly, the head; thirdly, the os uteri. The finger passed inside the os should be made to sweep all round the circumference of the head.

Perforation.—The point to be selected for perforation is the most centrally presenting. It is easier to strike; it offers a better resistance to the point of the instrument. The opening made allows a freer exit to the contents of the skull, and affords greater facility for the introduction of the crotchet or the blades of the craniotomy-forceps, which have to follow. Two most essential things to be attended to are: That an assistant shall support the uterus and child externally, pressing them firmly down towards the pelvis, so as to fix the head upon the brim, and obviate the retreat or rolling of the head under the impact of the instrument. The other thing is, to take care that the instrument shall strike the head perpendicularly. If it strike at an angle, the point will be apt to fly off at a tangent, at the risk of wounding the mother.

Sometimes in cases of great deformity the uterus is so twisted from its normal direction that reposition is necessary before the os can be brought near the centre of the brim to allow of safe perforation.

Two fingers of the left hand then are passed up to the head, keeping the os uteri at their back; the instrument is run up in the groove formed by the fingers; the point having struck the part desired, the perforation is effected by a movement combining boring and pushing. When the skull is pierced, push the blades in up to the shoulders; then open the blades to enlarge the aperture, turn the handles at right angles to the first position, and open the blades again so as to make a free crucial opening. This breaks the continuity of the arch; allows free discharge of brain and ample entry for the crotchet or craniotomy-forceps.

Now you may wait a little to afford opportunity for spontaneous compression and collapse, or you may at once pass in the crotchet. This should be carried in as deeply as possible and moved freely round in all directions to break up the tentoria and the brain. This proceeding greatly facilitates the evacuation and collapse of the skull.

If the disproportion is not great, and the powers of the patient are good, it commonly happens that uterine action sets in as soon as the bulk of the head is a little diminished, and the compression and propulsion resulting will often suffice to expel the child. Reasonable opportunity should be given for this spontaneous process.

Should no advance be made, the case falls into the second order, and we must proceed to extraction, or artificial compression of the skull. Some operators advise to pass a catheter or other tube into the skull, to inject a stream of water through it, in order to wash out the brain.

Extraction may be accomplished in several ways.

1. By the *crotchet*. This instrument is generally preferred by the Dublin school. It was very naturally resorted to in preference to bad craniotomy-forceps. And some Practitioners of great experience, who have acquired exceptional skill in the management of it, accomplish delivery by its aid in cases of extreme disproportion. Until I had contrived a good craniotomy-forceps I myself trusted to it entirely. I am now satisfied that, for safety and expeditiousness in extracting a head, it is very inferior to the craniotomy-forceps. The way of using it is as follows:—Two fingers of the left hand guide the end of the crotchet into the hole in the skull. The ends of the fingers are then passed up outside the skull, to serve as a guard and support to the sharp point of the crotchet, which is fixed into the bone inside. The part to which the crotchet is first applied is not perhaps very important, since, if there be any great resistance, the part will be broken away, and the instrument will have to find fresh hold. This may have to be repeated several times, pieces of the parietal, occipital, or frontal bones being successively torn out. Whenever a piece of bone is detached it is wise to remove it altogether, which may be generally done with the fingers. By-and-by—for the process is apt to be tedious—when the cranial vault is much broken up, if a good hold can be obtained in the occipital bone or in the foramen magnum, collapse or falling in of the skull takes place, and extraction is successful. In very difficult cases, when the vault is well broken up, it is better to take hold in the orbital region, fixing the point of the crotchet either inside the skull, under the sphenoid on one side of the sella turcica, or in the eyeball. In this way the base is brought into the brim edgewise or end on.

In the last century it was a recognised plan to perforate and leave the evacuation of the brain and the compression of the skull to the action of the uterus. The process was usually slow and tedious; commonly, some degree of decomposition had to take place before the bones would collapse sufficiently, and exhaustion, or even inflammation of the uterus, and fatal prostration, would sometimes ensue. The late Professor Davis records that, in his time, this mode of proceeding was still followed by the disciples of one school in London, and that he was often called in to witness the most disastrous consequences. Indeed, when it is considered that craniotomy is not often performed except at an advanced period of labour, and after much suffering has been endured, it will hardly appear justifiable to throw upon an enfeebled system a task entailing further exhaustion, and under which it may sink. It is our duty to relieve nature, and not to leave her to struggle through unaided.

Dr. Hull says it was Dr. Kelly who first advised and practised the method of waiting twenty-four hours before using the crotchet in order to allow the head to collapse and settle in the pelvis. Dr. Osborne advocated the same practice, and went so far as to assert that delivery by the crotchet might always be effected.

By turning. When the cranial arch is broken, the bones will readily collapse if the skull be drawn through the contracted brim base first. In certain cases turning is a very efficient method of completing delivery. The torn scalp during extraction is drawn over the aperture made by perforation, and sheaths the jagged edges of the bones. The plan will be generally inferior to the use of the craniotomy-forceps. The child, being dead, does not always lend itself readily to turning. It may be necessary to pass the hand into the uterus, which is moulded upon the child, and through a brim so contracted as to oppose considerable difficulty. Turning, however, must be regarded as a valuable resource in certain cases of exceptional emergency.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.(a)

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

NOTE INTRODUCTORY TO THE THIRD COURSE OF LECTURES.

Gentlemen,—It is to me a source of sincere pleasure and satisfaction to meet you here again to study with you the beautiful, and not less beautiful than useful, science it is our duty to cultivate. If my resources were but a tithe equal to my desires, I should consider the advantage mine to open these lectures and demonstrations to every student of Medicine, young and old, who should think them worthy of his attention. But this cannot be, and I must therefore rest content with the possible, capped, as it is, by your increasing favour. In some sense, indeed, these lectures do pass ultimately to all students who may be interested in them, for, published in abstract or in full by our widely circulated Medical press—to the various organs of which, here and abroad, I am grateful for endless favours—they pass into all parts of the world, and, coming specially under the critical notice of scholars, themselves teachers, they have a publicity, after they are heard here, which, in truth, could scarcely be greater were they spoken originally to the largest of audiences.

It is my intention in the present course, as in previous courses, to carry out the combination of the experimental and the practical in Medicine. I shall aim to make each lecture, even though another or others on the same subject may follow it, complete in itself, and I shall try to infuse into each some new fact or suggestion which may be to you a subject of after-thought—something for rule or practice or refutation on such after-thought.

I have long followed a line of conduct taught by one of our most eminent scholars in science—I mean Sir David Brewster. I followed it before I heard he had enunciated it, and I shall follow it now the more determinately since I know he acted upon it during the whole of his wonderful career. The rule is, never to conceal first impressions in science under the fear—the arrant fear—that in the end these impressions may be wrong; but to put forth as it honestly comes what the mind is forced to accept as true, leaving the result to time and the correction that grows upon it. I think that to all men who would be earnest pioneers this rule must be a necessity. If it be the task of any man at the will of his massed comrades to run forward and explore

(a) Lecture delivered in October.

what is not known, it is quite sufficient on his return to them to tell the ways he has traversed, and, to the best of his unaided ability, to explain that which he has seen. It is for them, if they follow him, to make severer observations, and, in the greater leisure they have, to correct any errors which at first sight he has made. Further, it is his right, also, when he moves with the mass, his two positions of isolation and of company being distinct, to correct his own original impressions, if such corrections should be to him convincingly clear, and this without demur on his part or prejudice from the rest. I claim this simple right. I ask no man to accept my descriptions until he has verified them, and I desire that every man shall in turn, and without offence, allow me to correct myself.

I might make this request as a matter of personal comfort and convenience. I scorn the thought. The truer, the nobler ground is to admit that the mysteries of nature are too refined, too solemn, to be read off with what, in mere human affairs, the laws of which are of our own provision, is called certainty. I said in my first large book, what I repeat now after fourteen years of further and unceasing contemplation, it is the peculiarity—nay, the fatality—of natural and experimental studies, that the more one learns from them, the wider and the wider expands the argument, the stronger and stronger becomes the consciousness of the limit of mental power, and the quicker and deeper is the appreciation of the fact that the phenomena of the universe, admitting of no isolation, are seen but as material visions, beginning in the unknown, ending in the unknown, having to us, indeed, no beginning and no end.

Thus, as it is not the business of any man to set himself up as the prophet of Nature, nor to run before her, as it would seem, nor so far to try to dominate over her as to assert dogmatically that she does things which she does not, because he has given the *ipse dixi*, so now, gentlemen, in putting before you any interpretations of Nature, old or new, according to my best ability and closest observation, I hold myself the servant of Nature, ready at any moment, as I grow older and better advised of her powers, as manifested by her laws, to be corrected by her, and to accept her sure teaching as distinct from my pre-judgment of it; in which course I must be secure, because, as a true interpretation of a natural phenomenon is proclaimed so long and so often as the phenomenon is exhibited, so must the interpretation irresistibly stand, while a false interpretation, because it is proclaimed false by the phenomenon, so often as it is presented, for ever, must inevitably fall.

To this brief introduction I would add what all men who have attained some measure of success must have felt, but which few, I fancy, have said—viz., that it is as painful to the unbiassed mind to be too much believed without strict examination, as to be disbelieved without impartial inquiry. I have felt this truth often and keenly. I have heard and read mere opinions of mine, based on readings of facts, discussed as if they themselves were absolute facts acceptable and accepted as such. On the other hand, I have heard some of the purest experimental truths it has been possible to demonstrate, treated as if they were opinions or speculations. I should like to correct these errors. I know that in an age when individual thought is so hurriedly active, it is very difficult for one man to find time to analyse, with care and subtlety, the ideas or facts of another man. For my own part, I confess I have difficulty enough to find time to study Nature herself, to say nothing of the works of those who, like myself, try to interpret her. But, in spite of these hard arguments, it seems to me but fair to ask that in all references to others there should be this care taken—that facts should be separated from opinions. If I put before you an animal exhibiting the artificial induction of cataract, that is a fact. If I reason as to the cause of the cataract, then I offer an opinion, which is not likely to be better than yours; but whenever the event is spoken of, if it be considered worthy of comment, then I would that it all be spoken of, that the fact be accepted, that no error of the opinion be permitted to conceal the fact or lessen its value, and, above all, that no admiration or derision of the opinion be allowed to invalidate the fact.

For men who combine theory with experiment these conditions are essential. Laden, soon overladen, with new and clear observation in the path of original research, the healthy though cautious mind cannot help wondering on what it sees, and speculating and expounding. The combination of power to observe and of power to imagine is an absolute necessity for progress. Men who merely observe, men who merely imagine, both equally labour almost in vain. Men who observe with one half the mind and imagine with the other do, as a rule, make progress. To them the facts of the mere collector and the fancies of the mere enthusiast are, when subdued, alike comprehensible, it may be useful; and if in their own work they, for a season, become too cold or too fervid, they soon correct themselves, and balance from fact to theory or from theory to fact with undisturbed and natural ease. But, for the very circumstances thus named, these men require thoughtful and correct readings of what they do, as distinct from what they think, in science. They see in the one-sided man who merely collects, the type of the miser of money; they consider his love for his treasure morbid, and they observe his greed of fulsome praise, which no adulation can satisfy, his unassailable self-esteem, and his dream that he alone is the foundation of knowledge, with loathing: they see in the one-sided man who merely speculates, the type of the spendthrift, who gives out and lays nothing by; they accept his love for explaining everything by intuition, his readiness, his desire, to be held up as the prince of reformers and discoverers, his attempt by hazardous conjecture to fling out a mystical claim to originality anticipating real discovery, and his perpetual fancy that he shall some day, by a mere stroke of genius, do great things, as poetic frenzy weak and wanting in poetry itself. I repeat those who observe as well as theorise see these pictures, so different in kind, with infinite keenness, sometimes with humour, but mostly with pain. They would escape themselves the passing for either picture, and they beg for the exemption. With them I heartily sympathise. Claiming no special faculty for collection, no particular genius for theory, but fair industry for either and impartiality for both, I wish only for correctness of criticism, which on my side shall be returned by the most scrupulous simplicity of exposition and argument.

I cannot plunge into the work of another Medical year without remarking that there is in Medicine, at this moment, a more hopeful promise of scientific advancement than at any time, I think, in her history. Apprised, by the kindness and confidence of learned compeers in most parts of the world, of the new Medical thoughts and works of the day, I am in a privileged position to speak of what is being accomplished. I read, then, this primary fact with much delight, that the study of physical science, pure and simple, is hour by hour becoming more thoroughly applied to the investigation of the phenomenon of life and the phenomena of disease; that the empirical is, after a long struggle, giving way to the rational in principle; and that the progress intensifies in its speed as it conquers on its way. I shall trust in this course of lectures, by illustrating one or two advances in Medical Physics, to prove the accuracy of the belief I have ventured thus to express.

On Arterial Murmur not Aneurismal.

The subject proper of my lecture of to-day is simple arterial murmur. As Practitioners, we are constantly becoming familiar with cases of disease in which we detect, on physical exploration, a distinct murmur or bruit over and in the course of an artery. We often find with this, increased force of the pulsation and doubtful evidence of enlargement—tumour. Our first impression is, that we have before us an example of true aneurism, and in some cases our first impression is correct; the after-history of the case supports the truth of the surmise, and death affords the unhappy means of proving it.

But in many other cases the progress of the symptoms and the result altogether disprove the original diagnosis. The patients live on year after year, retain their good health, and show no increase of the local affection; or they remain *in statu quo*; or they actually cease to yield the physical signs of supposed aneurism; or they die of some other malady, and after death there is no indication to be found of aneurism that is, or of aneurism that has been, in the artery suspected of disease.

It is to the consideration of these classes of cases, and especially of the class last named, I now ask your attention. The subject at first sight may seem little. It is hardly so. I have seen at least seven persons suffering severe mental anxiety from the belief that they were fatally struck with aneurism, which persons, in truth, were not in the remotest danger from that disease. I have known rejection of life for insurance under the same error. I have known a case in which the propriety of performing a capital Surgical operation—viz., tying the common carotid artery—has been under consideration quite unnecessarily. The subject, therefore, is important if it can be so put, as I believe it can, that doubt as to true and

assumed aneurism may, by sound diagnosis, be entirely dispelled in the large majority of cases which come before us in our practice.

For the sake of clearness of description and condensation of matter, I shall split the lecture into the following heads:—

Typical cases of arterial murmur not aneurismal.

Physical cause of arterial murmur.

Points of special diagnosis and practice.

1. Typical Cases of False Aneurismal Bruit.

About the year 1856 a young man came before me having a loud murmur, coincident with pulsation of the left subclavian artery, under the left clavicle. The pulsation was attended with a thrill, of which the patient himself was sensible, and which the finger of the observer very readily detected. The man was anæmic, irritable, depressed, complaining much of thirst. He was a cabinet-maker by occupation. During the period this patient was under my care, we had in this part of London a very useful private society of Physicians for improvement in physical diagnosis. I brought the man before this society, and opinions respecting the value and meaning of the subclavian bruit were various. The view that there was aneurism was well argued on the one side, and I confess that my first inclinations ran that way. But on frequent examination afterwards I learned that this view was incorrect, and, by different lines of diagnostic inquiry, which I shall recount in their proper place, the fallacy was well proved. The case was not one of aneurism, and the murmur, though in sound identical with true aneurismal murmur, was indicative of no serious change in the artery from which it proceeded.

Soon after this a gentleman, young in years, short in stature, and rather too plethoric, consulted me respecting a persistent pulsation and "whirr," as he called it, in his head, in the neighbourhood of his left ear, and, as it seemed to him, within the cavity of the skull. The noise was so loud that at times ordinary sounds of an external kind were not heard. It was synchronous with the pulse. With the stethoscope applied in the front of the ear, I could myself hear the pulsation and the murmur, and occasionally I could faintly hear the murmur in the neck, immediately behind the angle of the jaw. The symptom had at first occurred after severe physical and mental exertion, with anxiety. It was always worse during periods of depression of animal power; and as the sufferer, who knew the nature and consequence of aneurism, distinctly believed he was suffering from intra-cranial aneurism, the symptom fed upon itself, and increased in its intensity with the fears it engendered. It lasted for months. At length, resultant upon a little rest and happier condition of mind, it gradually subsided, and has long since quite passed away.

A case nearly the same as the above has recently come before me in the person of a Medical friend. He, under pressure of great work, was seized with tormenting pulsation and sharp bruit in the left ear. Under the impression that the disease was connected with the ear itself, various lines of local treatment were followed up, and the tympanum was perforated, but without relief. The discovery on his own part of an intermittency in the pulse led the patient to think of the general, rather than the local character of his disease. When he came to me I found marked intermittency, and on auscultation I could easily detect the pulsation and murmur of which he complained. It was synchronous with the arterial pulse, and clearly arterial in its nature.

I met my friends, Mr. Archer and Dr. Williamson, in consultation last year in the case of a gentleman who had disease affecting the dorsal region of the vertebral column, and paralysis of the lower half of the body. The nature of this part of the case was sufficiently clear, but there was another symptom which caused great anxiety—viz., intense pulsation of the abdominal aorta, apparent tumour, and loud, distinct murmur synchronous with the arterial pulsation. The evidences of the presence of aneurism in this case were so striking that some of the Medical men who saw the patient considered them conclusive; others doubted, suspecting that there might be tumour or enlargement of one of the visceral organs overlying the artery exerting pressure upon it, and giving way before it during pulsation—a method of accounting for arterial murmur much too commonly adopted, and repeatedly proved to be fallacious by the knife of the anatomist. Guided by what I had learned in previous inquiry respecting the nature of arterial murmurs, I ventured in this instance, with much respect, to differ in opinion and to hold that there was neither aneurism nor overlying tumour: that the vessel was, in fact, not in any sense organically changed, and that the anxieties respecting the sudden death of the sufferer from rupture of an aneurismal sac might be dispensed with. The patient at last died from extension of spinal mischief. He was found to have malignant disease of the spinal cord, but in the abdomen there was no tumour, and the aorta was perfectly natural. Why it was found so, notwithstanding the physical signs present during life, I will explain in the sequel.

In 1864 I saw, with one of our most eminent provincial brethren, a young lady who was suffering from pulsation with loud arterial murmur at a spot precisely over the innominate artery. The symptoms in this case were so marked I felt coerced by them into the view that the disease was aneurism of the innominate. I have seen this lady several times since, and I believe now that the original diagnosis was wrong. The marked fact is that the pulsation and murmur do not sustain their intensity, but sometimes are lost altogether, returning again with a vehemence which, on the theory of true aneurism, were indeed alarming, and anon subsiding into natural pulsation and natural silence.

These five typical examples of arterial murmur not aneurismal in nature are sufficient in the way of illustration. In them why was arterial murmur at all? To answer this question we must pass to our second head, and, for a time, study the cause of murmur.

2. Physical Cause of Arterial Bruit.

One of the most remarkable facts in the mechanics of the animal organism is the silence of the arterial current during the natural life. We place a stethoscope lightly over the femoral artery or over the carotid, and we hear, or rather feel, the pulsation, but there is no indication conveyed of current of fluid through the vessel. In perfect health of the subject we may draw a sharp line above the base of the heart and define even the point of origin of the aorta by the silence, by the loss of the sounds which produce the rhythmical music of the heart.

When we reflect on the facts that the column of blood from the heart through the whole arterial system is never actually broken while the body is alive, we wonder how it is that every stroke of the heart is not communicated by conduction of sound through the column of blood to the sensorium. Laying the head on the pillow at night, we often hear the sounds of the heart. But we detect at once that they come through the solid substances on which we recline, and through the solids of our own body in contact with the pillow; in the same manner as sounds may be conveyed to us, when we listen, through a long rod held between the teeth, the ears and mouth being firmly closed. We reason, therefore, from the silence which reigns when there is no solid conducting substance from the heart to the brain, that the unbroken column of blood which connects these organs in one perpetual bond is not a conductor. The reasoning is true. Healthy blood is a bad conductor of sound; although water, which constitutes 75 per cent. of it, is a good conductor. What, then, prevents the conduction of sound in healthy blood? To arrive at the truth on this matter, we must seek the answer by a few simple experiments.

For this purpose we take three or four pieces of tubing—tubes of indiarubber answer best: we cut these tubes of equal length, we give them equal diameter, and we insure that the thickness of the material of the tube shall be uniform. We next fill each tube with different fluids, modifying by building up, as it were, blood from water, and then testing the conducting power by listening for the sound of the tick of a watch through layers of flannel. Each tube is thus made into a stethoscope, having a special conducting property or character. I take five such tubes. Tube *one* contains pure water. Its conducting power may be called ten. Tube *two* contains water and the saline substance of blood simply; no albumen, no fibrine, no corpuscles. Its conduction may be called ten. Tube *three* contains water, with the saline parts of blood and albumen; no corpuscles and no fibrine. Its conduction may be called eight. Tube *four* contains water, salts, albumen, and corpuscles; no fibrine. Its conduction may be called six. Tube *five* contains blood absolute, in the proportion of parts named in the table which is before us—that is to say, 78 per cent. of water, 1 of salts, 6·7 of albumen, 12 of corpuscles, and 2·3 of fibrine. Its conduction may be called five.

Our mode of testing the conduction is very simple. We take a piece of millboard the size of the cover of a small octavo volume; in the centre we make a hole, and fit in it a small circular box, in which we place a watch. We then have some leaves of flannel stitched to the board, and bring down over the watch so many as shall almost destroy the sound of the

tick when that is listened for by the ear simply through, say, thirty layers of the flannel. Next we take the stethoscopes and listen one by one through them for the tick, reading their conducting power by determining how many leaves of flannel must be removed to allow the tick to be equally heard in each case.

Thus we ascertain that the albumen, the fibrine, and the blood-corpuscles interfere with the conduction of sound—that is to say, the vibrations of sonorous bodies conveyed through water holding albumen, fibrine, and corpuscles, are not so readily propagated, in undulation, as through water in its simple state.

It might be assumed that the blood itself in motion would originate sound yielding a faint murmur over the whole arterial and venous system. It is now understood that fluids are not only conductors of sounds, but that they may produce sounds under certain conditions. Thus a sound or note of the beautiful instrument for measuring sound known as the sirene is produced by the fluid or gas which passes through the perforated plates, and if our blood were reduced to the condition of distilled water, and we could live and hear as we now do, we should probably always be conscious not only of the heart-sounds, but of a soft internal musical murmur produced in our own vessels. When, in some of my experiments for causing artificial dropsy, I charged the body of an animal with a fourth of its weight, so soon as the blood was saturated with the excess of water, soft murmurs were audible under the stethoscope over all the trunk of the animal. But in the natural body we are saved from the annoyance of a perpetual internal murmur by the physical character, again, of the blood. The blood, in fact, when it possesses the normal conditions noted in our table, and when its specific gravity is 1055, will not produce audible sounds in its course. In this case, once more the fibrine and albumen and corpuscles operate to check the production, and that in a manner singularly striking.

To illustrate these points simply and clearly, let me direct your attention to this figure or model. I have here a piece of solid hard wood five feet six inches long, two feet broad, and one inch and a half thick. Having planed one surface of this board smooth, I have drawn on it a diagram of the arterial system; next, with wood-carver's tools, I have carved out deeply the whole of the great divisions of that system according to the precise natural size; and this effected, I have got a worker in india-rubber tubing to make me a set of perfectly fitting elastic tubes to represent the arteries. The tubes are let into the grooves of the wood, and over them is placed a diagram mounted on cloth, and representing in rough the outline of the body and of the great vessels, the outline of the vessels corresponding with the tubes underneath. The tubes of the artificial arterial system escape at the back of the board, and terminate in an india-rubber bag or torcular, from whence there runs a common tube, which comes here into a receptacle for fluids. To complete this mechanical description, here is a hand-pump, which is connected with the great tube from which the artificial system starts—what we may call the ascending aorta. Thus we have an apparatus through which we can project fluids stroke by stroke, as in the arterial system. We have also elastic vessels for the fluids to act upon, and as our outer diagram indicates the course of these vessels, we can determine sounds at different points by the use of the stethoscope, as we do in the living subject.

When through this artificial system of vessels I inject steadily, stroke by stroke, pure water at 96° Fahr., I hear, when the tubing is at gentle tension, a soft, light murmur: if I make resistance with a solid body, as with the stethoscope, the murmur, at the point of pressure, becomes changed into a short splash; and, if the pressure be increased; into a sharp blow. If, instead of water, I use blood, the soft murmur is lost, and when resistance is made with a conducting substance the murmur that follows is like arterial murmur.

Lastly, in respect to sounds connected with the circulation of the blood, we might expect that in the dilatation and contraction of the arteries themselves sound would be excited. The arteries during dilatation might touch conducting surfaces, which surfaces would resist and cause friction, and therewith murmur. The muscles of the arteries, during contraction, would also, it might fairly be assumed, produce sound—a sound similar to the wave of murmur of the voluntary muscles. But, in the natural state, the first of these occurrences is prevented by the beautiful subsisting balance between the systolic stroke of the ventricles of the heart and the return stroke of the arteries. The elastic arteries give way, under the impulse of the heart, to a measured tension so nicely calculated that before the artery impinges even on its own sheath, its muscles spring into action, and the vessel contracts upon its contents. As to the second occurrence—the production of murmur by muscular contraction—if that take place, and it is almost certain it must, it is obscured by the column of blood upon which the contraction is made and in which the sound is lost.

Thus in health every provision exists to prevent murmur. Let us now inquire how certain changes of these conditions may influence to the production of sound, and from this inquiry trace out the cause of the murmur which we hear in disease.

Murmur, then, we find, may occur from two causes.

From fluidity of blood.

From resistance at some point of an artery.

That undue fluidity of the blood will give rise to murmur in the vessels has long been conceived, and it has been common practice to set down venous murmur as depending perhaps too exclusively on this cause. The idea, however, is based, not on experimental fact, but on the experience that in cases in which the blood is, or is supposed to be, "thin," there is murmur. Hence the term anæmic murmur is now one with which we are all familiar. Trying to become more precise on this point, we learn by experiment that extreme fluidity of blood is capable of producing soft murmur. If we pass fluid containing no albumen, no fibrine, and no corpuscles through our artificial system of vessels, we have murmur evidently proceeding from the fluid itself, and if we add fibrine and albumen the murmur is lost. Again, if we surcharge the blood of an animal with water, we find murmur as one result. So far this is all clear enough; but we cannot take in every fact without qualifying, to a certain extent, some part of the argument. When, for instance, animals surcharged with water died, and were examined immediately after death, I found invariably that in the heart and in the vessels there were points where the inner coats were raised from transudation of fluid beneath the membrane; in short, there was œdema. At these points the sound was much more distinct than in others, so that in these cases there were points of resistance by which the murmur was intensified. Further, there are many examples of murmur called anæmic in which the cause is purely mechanical, as I shall soon proceed to show. While, therefore, fluidity of blood may produce murmur, it rarely exists alone as a cause, and sometimes, when suspected most, it is not the real cause at all.

The principal cause of arterial murmur is resistance to the passage of blood and vibration consequent upon that resistance. Let me pass to state how in the arteries this is brought about.

In the first place murmur may be induced by direct pressure upon an artery; in this instance the sound will be greatly increased, if there be vibration of the substance causing pressure, and if there is good conduction between the artery and the ear. When we press on an artery with the edge of the stethoscope, we often produce murmur by pressure. And when I project blood of natural consistency through the artificial system of vessels, I can produce murmur at any part by merely compressing the vessel. Most cases of simple subclavian murmur are accounted for purely in this manner: here there are two modes by which the pressure is exerted. In one set of cases there is a portion of diseased lung behind the artery, solidification of the apex, tubercular deposit, or enlarged and indurated bronchial tubes. In another set of cases the murmur arises without any disease, and is the result of pure mechanical pressure. From an analysis of two thousand cases of chest disease taken as they came without selection, and which were under my observation from November 11, 1858, to August 17, 1860, I found this subclavian murmur well marked in fifty-one persons—*i.e.* in 2·55 per cent. of the whole. Of these fifty-one persons, forty-eight were men, three were women. Tabulating these cases so as to get the facts into one view, I observed the curious fact that in the majority of cases the men were handicraftsmen working in such manner as to throw the arms forwards and draw them backwards sharply; thus fifteen were cabinet-makers, four were carpenters, two sawyers, and so on. I began upon this to ask how far the occupation had to do with the sound, and, on examining eight healthy cabinet-makers, discovered the murmur in them all. Since then I have over and over again confirmed this observation, and I believe there is not a working carpenter, joiner, or cabinet-maker living in whom the murmur may not be detected. The fact extends also to men of other pursuits. Amongst the wealthier classes, amongst those who ride daily on horseback and in those who drive, it is almost certainly present. The nature of the pressure in these cases is, I think, very simple.

The pressure is exerted on the artery by the subclavius muscle; for when the murmur is best marked it can always be destroyed by so changing the position of the arm as to relax the subclavius. In brisk work with the arms, as in planing wood, the subclavius comes into active contraction, it impinges on the artery, brings it lightly down on the first rib, and in course of time so modifies the natural position of the vessel that murmur from it becomes a permanent, though of course harmless, phenomenon.

To illustrate the interesting fact of the presence of subclavian murmur in handicraftsmen, I have done what would be a risk in experiment were the knowledge of the subject not very accurate. I have asked a neighbour who at this time has several carpenters in his employ to send in any two. He has sent two, and they are here for you to examine.

[The two carpenters were introduced, and examined by several of the audience. In both men the subclavian murmur was present in the fullest degree]

In the second place, arterial murmur may be induced by resistance in the artery itself. This is the cause of true aneurismal murmur. When an artery is dilated, when its muscular coat has given way, or rather lost its power, and when the column of blood is projected through a dilated motionless tube, every point of the surface is a point of resistance and a point for the production of sound. The vessel, moreover, carried out of the line of its sheath, presses on solid surrounding, it may be vibrating, substances, and the sounds produced are conducted with great ease to the listener. This explanation is well proved by our experiment with the artificial system of vessels. In the line of one vessel, that which represents the left common carotid artery, I have had the tube dilated into a little bag, from which, whenever blood is forced through it, there proceeds a murmur like as in aneurism. In cases where an artery is changed in character from deposit in its structure, as in atheroma or osseous degeneration, murmur from resistance at the affected point will also occur.

Thirdly—and on the subject I shall now touch upon I shall dwell a little more at length, because I believe it is little understood—there is a cause of arterial murmur which may be called murmur from feebleness or exhaustion of the arterial muscular power. Of the five cases with which I prefaced this lecture, four, I believe, were true and faithful illustrations of this kind of murmur.

When, in any person, the pulse is wanting in power, the heart intermits, the mind is irritable and disturbed, there will always be times at which there is arterial murmur in certain positions. The murmur, in my opinion, is due to resistance in certain special points, owing to the arterial tension being reduced. The points are those where a large artery traverses through a fixed and resistent canal, or passes close to bone, or is deploying into spongy and very vascular bone. Two points in the body are signally included in this description—I mean the canal of the diaphragm through which the aorta passes, and the carotid foramen by which the internal carotid winds its way into the skull. During sound health, when the muscular arterial tension is good, the artery, in its dilatation, before it can touch the resistent canal in which it lies, is brought back by muscular contraction. During disease, when the muscular power is inefficient, or when the heart, from intensity of action, overcomes the arterial tension, then the vessel expands to the rigid canal; then there is vibration, conduction —arterial murmur.

What proof have we of this explanation? Will experiment help us? I think it will. I could show you, for instance, by the artificial system of vessels, that, if in injecting it I raise the temperature of the fluid, I can, by such increase as causes expansion, induce murmur at all the resistent points which catch the tube when its dimensions are increased. But we have a far better experiment to hand. We have here a fluid, with which I have worked much, called nitrite of amyl. It is the peculiar property of this fluid when it is inhaled to produce intense relaxation of the arteries. Thus, if I inhale a few minims of it from a speel of paper, my face, as you see, is suffused; my heart is pouring blood in flood into vessels which for a moment are off their guard, and if I were to continue I should quickly experience a sensation of fulness in the head, first with severe and loud pulsation, and next with diffuse murmur, painfully loud, and, from the rapidity of the action of the heart, nearly continuous. This is rather a hazardous experiment to carry out in person, and I therefore select a lower animal for the purpose. If I take a healthy pigeon, I hear, on listening at the back, the clear and quick stroke of the heart. I place the animal in a chamber in which the nitrite is diffused, and watch it until I see it influenced. I must be quick in removing it, or it will die, perchance in an instant. But if I get it out quickly, and listen where I listened before, I detect now loud pulsating murmur, synchronous with the arterial pulse, and obviously arterial. The murmur will last sometimes thirty or even forty seconds.

In this experiment what have we effected? The synthesis of arterial murmur from partial paralysis of the arteries. The agent we have used causes peripheral inaction, and as the vessels are relaxed, deprived of force, the ventricles of the heart, feeling less resistance than they are accustomed to, work under reduced pressure, drive with intense rapidity, and inject the paralysed vessels with blood, and causing murmur in all the canals or vessels in which there is resistance. The order of the phenomena is worthy of notice; first relaxation of vessel, then overaction of the heart. Speaking to us, the experiment tells us that the ventricles of the heart and the muscles of the arteries act like the flexors and extensors of the limbs, one against the other, and that there are nervous centres of balance between them.

I can illustrate this point by another experiment. I take a pigeon, turn aside or clip away the feathers from over the upper part of the spinal column in the back, and then with ether spray freeze deeply for the length of two inches. In this manner I produce a sort of stupor and extensive arterial paralysis, followed by loud arterial murmur.

This subject is worthy a separate lecture. I touch on it now only in general explanation, and will leave it for the present. It is our business at this moment to ask whence the arterial murmur when the vessels are reduced in contracting power. Is it due to change in the quality of the blood? No. Is it due to resistance in the artery itself, as in aneurism? No. The exposition of the fact I have briefly expressed above, and would now venture to repeat at greater length.

In some parts of the body arteries run through fixed canals, in the walls of which vibration is produced as in some musical instruments, and from which there is ready conduction. In the human subject there is the foramen in the diaphragm, through which the aorta passes. In the skull there is the carotid canal, through which the internal carotid winds its way, while within the skull the arterial supply through bony canals is ramified in the freest manner. In health, the arteries, under the full protection of their muscles, lie in these canals and transmit blood silently; they never touch the side of the canal roughly. But let one of two things happen—let the left ventricle of the heart inject so strongly that the arterial tension is overcome, or let the arterial tension be taken off, the heart remaining the same, and there is the mechanism of arterial murmur, as simply prepared and as certain as when the strings of an Æolian harp catch the breeze. The relaxed vessel comes at each expansion in contact with the rigid canal, and is virtually, for the time, a part of it. Now there is friction on sonorous surface, as well as friction of fluid within the vessel, conduction, and, with each systolic beat of the heart, arterial murmur.

In persistent arterial murmur, not aneurismal, the two chief points where it is found are the aorta, in the line of the diaphragm, and the internal carotid canal. In the former position, the murmur is inaudible to the patient; in the latter position, it is audible to the patient; and, as we have seen, is tormenting, in some cases, in the extreme. Case No. 4, with which I opened this lecture, was a fine illustration of aortic murmur produced at the aortic canal of the diaphragm; and cases 2 and 3 were equally good as illustrations of murmur originating in the carotid canal.

There are two other positions of the body in which arterial murmur, not aneurismal, may be present. I once found it in the groin in a case of paralysis of the lower limbs, originating clearly at the point where the artery passes under Poupart's ligament. I have also detected it near the upper part of the sternum on the right side; in this instance the unnerved vessel impinges slightly on bone. The last case I described was a case in illustration.

3. Points of Practice and Diagnosis.

With leisure at command I might take up much time in touching on the details of practice which the subject of arterial murmur suggests. It is for me an unnecessary task to undertake this if I have succeeded in establishing first principles in respect to the production of arterial murmur independently of aneurism, and especially if I have shown as the great object in view the origin of murmur in a large number of cases from deficient arterial power. My further remarks, therefore, shall be confined to two.

Firstly.—The study of arterial murmur from the idea of its origin in many cases in nervous depression explains other and hardly minor phenomena very frequently met with in practice. How commonly patients tell us of throbbings in the head, of noises of various kinds, purring noises, ringing noises, whirring noises, and the like! We treat these usually as nervous symptoms. They are so, but they are nervous symptoms developed through the blood-vessels. The sounds are the sounds of blood passing through vessels off guard, of rubbing in osseous channels on sonorous substance. They are examples of disturbed muscular balance between heart and artery. In the beginning of acute inflammatory disease, and of fever, when the heart acting under terrific pressure is injecting beyond the natural force, our patients' first complaint is of confusion and noise in the head. The balance is disturbed.

And after great exhaustion, as after hæmorrhage, when the heart recovers itself, and by the least excitement is thrown into undue action, one of the first annoyances of the patient is the throbbing, the noise in the head. The balance is disturbed.

And in inhaling a substance which by its primary action excites the heart to action, such as chloroform, what is one of the first sensations? Continuous noise in the head—noise of blood rapidly driven over sonorous surface; ringing noise, so fast is the pulsation. The balance is disturbed.

Secondly.—There are some points relating to diagnosis which are of moment in relation to arterial murmur and aneurism. The diagnosis of subclavian murmur is simple to the last degree. To move the limb on the affected side is in most cases enough. If on bringing down the arm to the side the murmur passes away, and is replaced by the natural pulsation of the artery, the nature of the case is clear. Or, if this fail, and it will sometimes when there is disease of lung, if in making the patient take a prolonged expiration the murmur subsides, until such time as the act of inspiration brings it back again, the nature of the case is clear.

The diagnosis is more difficult in the examples where there is relaxed vessel. Nevertheless, in these cases the mind is no sooner made conversant with the causes of arterial murmur than the difficulty diminishes almost at once. The position of the murmur is at once a direction. If the murmur be persistent at a point where an artery is passing through a rigid canal, or near the edge of a hard sonorous substance, the fact of the simple nature of the murmur is directly suggested. If coupled with this fact there be no sign of tension or pulsating tumour easily felt, while there is distinct indication of paralysis, local or general, the evidence is almost absolute as to the simple nature of the disorder. Presuming the seat of the murmur again to be favourable, and that there is no paralysis, but that the patient is weak, anæmic, and what is generally called "nervous," one diagnostic sign will always, I think, be found if the murmur be simple, and that is, the murmur will come and go. This fact well established, the diagnosis is satisfactory; for although a true aneurismal murmur may pass away, from obliteration of the passage through the sac, it will not return. In cases of aortic murmur there is a further distinction which is worthy of note—I mean that when the murmur is not aneurismal the murmur is undistinguishable along the spinal column, while in true aneurism pressing on the column the murmur is conducted direct to the ear through the vertebræ, and is often heard as distinctly through the centre of the back as through the anterior parietes of the abdomen.

I have reason to hope that as our means of physical investigation of disease advance we shall be able, in many cases, where there is doubt, to settle the doubt at once by making light our direct messenger. Meanwhile we must rest content with indirect evidence, which carefully studied will in the large majority of cases lead us to the truth, and enable us sometimes to effect a ready cure by the confidence with which we can assure our patient that he has no aneurism, and is not, from minute to minute, in pain and peril of death.

MEDICAL STUDENTS.—The annual registration of those gentlemen pursuing their Professional studies at the recognised London Hospitals closed on the 15th instant, with the following results—that at the eleven recognised schools there are 1142 students, including 397 new entries or first year's men. There is a great diminution in the numbers of those pursuing their studies according to the dental regulations only, to be accounted for by the interesting fact that these gentlemen intend "going in" for the diploma of Membership of the College in addition to the "D.D.S."

ORIGINAL COMMUNICATIONS.

INJURY TO THE ABDOMEN;

JEJUNUM TORN QUITE ACROSS—DEATH IN TWENTY-ONE HOURS—DIAGNOSIS CORROBORATED BY THE POST-MORTEM EXAMINATION.

By ALFRED POLAND, F.R.C.S.

(From Notes by Mr. R. B. HOGG.)

THOMAS M., aged 46, a workman in an iron foundry, a powerful, muscular man, was admitted into Guy's Hospital on July 30, 1868, under Mr. Poland. It appears that at about half-past one o'clock p.m., he had a good meal, consisting of bacon and greens, but took no beer, and scarcely any fluid; that at two o'clock he fell off a ladder from the height of nine feet on to an iron plate eighteen inches wide, striking the upper part of the abdomen and the epigastrium. He was brought immediately in a cab to the Hospital, and then walked up the steps to the surgery, and in about ten minutes afterwards walked some distance to the ward without assistance; he did not consider himself so severely hurt as to become an in-patient, and requested to be allowed to go home. Although there was no collapse, and the pulse was little, if at all, affected, yet there was evidently intense suffering, as expressed by the face, and the man acknowledged having great pain all over the abdomen, especially in the epigastric region. He was persuaded to get into bed, a catheter was passed, and nearly 8 oz. of natural, clear urine drawn off. In about half an hour from this time, and about two hours from the time of the accident, he had vomiting, and brought up the greater part of his dinner; and very shortly after this the pain in the abdomen became most intense and excruciating; he was found lying on his back with his legs drawn up, the pulse had become quickened, there was intense thirst, and the breathing was short and thoracic. Mr. Poland saw the man, pronounced at once that there was some rupture of the intestine, and most probably at the upper part of the jejunum, and that the man would not live very long. He was ordered opium every four hours, to have ice to suck, and to moisten his mouth with milk. In the evening the vomiting was still continuing and very distressing, the pulse was small and hard, about 60, the skin covered with a clammy perspiration, insatiable thirst, the abdomen swollen and tympanitic, the countenance anxious and distressed. A catheter was again passed, and about 6 oz. of high-coloured urine drawn off.

On the following morning the water was again drawn off, and all the symptoms were still persisting, the respirations more hurried, the pulse almost imperceptible at the wrist, the surface of the body pale, cold, and clammy, the abdomen much swollen and tympanitic. He died calmly at a quarter to eleven a.m., about twenty-one hours after the accident.

Examination of the Body five hours after Death.—Weather warm and dry, body warm, rigor mortis present and strong, no signs of decomposition. A large powerful frame, well nourished. No signs of bruise, except a slight one over the right ribs, where a simple fracture of the fourth rib existed, about two inches from the costal cartilage. There was a brown subcutaneous bruise just to the right of the umbilicus, and was as large as a crown piece and defined. The whole cavity of the peritoneum was distended with gas, separating the anterior wall from the omentum, which lay on the viscera. The lining membrane of the abdominal wall was coated with a small quantity of flaky brownish lymph, forming an incomplete but generally a well-marked semi-tenacious separable layer. The omentum was in the same state, and under it lay the intestines, among the coils of which, about the injured spot, was a moderately large quantity of yellow "lymph," and in one part a triangular interstice was observed, about three-quarters of an inch across, filled with sulphur-coloured lymph. There were scarcely any intestinal contents in the cavity. The first portion of the small intestines was distended so as to be of the usual size of the colon; the rest of the intestinal canal was rather smaller than natural, but not very much smaller. The distended part ended in a complete division of the bowel just about one foot from the end of the duodenum. The gut was quite torn across. The rent ran for one inch into the mesentery. The ruptured ends were about two inches apart. The mucous membrane was

everted: that on the distal side had two valvulæ conniventes coming into view, and that on the proximate side there was only one seen. The liver had a small superficial tear on the convex surface.

Remarks.—There are one or two points of extreme interest in the above case. First of all, the remarkable fact of the absence of all symptoms indicating a mortal injury for upwards of two hours, insomuch that it was difficult to persuade the patient to remain in the Hospital. After the accident, notwithstanding the jolting in the cab and the walking into the Hospital, his undressing himself, and getting into bed, yet no evidence existed as to the severe nature of his injury until the expiration of two hours. This fact is by no means uncommon, and must be well borne in mind by the Medical jurist. In Dr. Alfred Taylor's work will be found related the case of a boy, aged 13, who received a blow on the abdomen, and walked a mile with but little assistance. He died in thirteen hours, and the duodenum was found ruptured completely across. In the second place, there was no very marked evidence of contusion observed on the surface. The elasticity and resiliency of the abdominal parietes are such that severe internal lesions may take place without any external appearance. This has been fully noticed by all Surgical observers and in all works on Medical jurisprudence. The absence of discoloration of the skin is perfectly consistent with ruptured bowels caused by external violence. In the third place, the site of the lesion was accurately diagnosed before the post-mortem examination was made. Now, was this a simple guess, or was the Surgeon led to expressing an opinion, which ultimately proved correct, by basing his diagnosis on correct deductions? The following are my reasons for making the lucky guess, if some may be pleased to call it:—There could be no doubt that two hours after admission the man had suffered some internal lesion. The intense pain in the abdomen, the incessant vomiting, great thirst, and thoracic breathing, fully corroborate this. The next point to arrive at was the organ or part injured. It was not the urinary bladder or kidneys; for the urine was drawn off perfectly clear and natural, and was again secreted, flowed into the bladder, and again drawn off without any trace of blood. In the next place, it could not have been any of the solid blood organs, the liver or spleen, as there was no evidence whatever of internal hæmorrhage, and in rupture of these organs the symptoms generally are not of such a rapid and intense form, the ensuing peritonitis being less severe. Thus, then, the sudden accession of the most violent symptoms coming on after an interval of two hours from the receipt of a severe injury, followed by extreme vital prostration, at once led one to infer that some portion of the bowels had given way. The patient presented the exact condition one finds in cases of hernia, where, after the reduction of the bowel by herniotomy or by the taxis, it gives way from sloughing or ulceration, which the practical Surgeon at once is fully aware of by the sudden collapse, the cold clammy surface of the skin, and the deathlike pallor with sunken eyes which the sufferer exhibits. The last point we have to consider is the precise point at which the bowel was ruptured. We must recollect the man was very abstemious, he was a labourer, had a very early breakfast, and his usual early evacuation of the bowels (not mentioned in the report); he went to work and had a good dinner in the middle of the day, taking little or no fluids; he fell half an hour afterwards, nine feet, on an iron plate eighteen inches wide, falling so that he was struck just above the umbilicus in a transverse manner. Let us consider for a moment the probable condition of the bowels at the time of the accident—the stomach was full and digestion actively going on, none of the contents had as yet left to pass into the duodenum: the duodenum and small intestines were in all probability empty, as likewise the colon. The stomach could not have been ruptured, for the contents would have immediately escaped and the symptoms set in at once, and the vomited matters would have contained blood. The man thought nothing of the accident, and he walked some distance; it was not until over two hours when the actual symptoms set in, and exactly about the time when some of the contents of the stomach had passed the pylorus into the duodenum or upper part of the jejunum. Knowing this fact, we concluded that the injury was in one of these two parts of the alimentary tubing. We may safely put aside the other small and large intestines; they were probably empty at the time; if not, and had they been ruptured, the contents would have escaped and the symptoms been immediate; and again, if they had been ruptured while empty, a longer interval would have elapsed before some contents arrived at the rupture to escape and give indications. Thus, then, we arrive at pretty near the mark, the duodenum and the upper part of the jejunum. If the reader will refer to my paper on "Contusions of the Abdomen," in the *Guy's Hospital Reports*, Series III. vol. iv. p. 123, he will find that at page 142 I remark "that rupture of the duodenum is comparatively rare. Undoubtedly it is the most fixed portion of the canal, yet its position renders it so far safe, for its first portion is protected by the liver, and its third portion is placed between the folds of the mesocolon." With regard to the upper part of the jejunum, at page 147 I say, "We have given a summary of fourteen cases of ruptured jejunum, of which no less than seven cases had the rent in the upper part of the canal close to the duodenum. The jejunum had been forcibly torn away from the duodenum. There is no doubt that the junction of the duodenum with the jejunum is a fixed point, and any pressure upon the abdomen causing a dragging downwards of the bowels must tend to put this part on the stretch, and in some instances, as the cases quoted, cause complete separation." Hence, then, in the present instance I was fully justified in presuming the rupture to be at the seat in which it was afterwards discovered by post-mortem examination. The fractured rib and slight superficial rent of the liver were but secondary matters.

ON THE TREATMENT OF PSORIASIS.

By BALMANNO SQUIRE, M.B., F.L.S.

The difficulty that is often experienced in treating so common and so serious a skin-disease as psoriasis is a sufficient apology for bringing under notice a remedy which, if properly used, offers, we think, better prospects of success than the mode of treatment usually adopted in cases of this disease.

Creosote, as we shall endeavour to show, has never been fairly tried against psoriasis, and, therefore, has never enjoyed the reputation it justly deserves. The remedies usually prescribed for psoriasis are arsenic given internally, and tar applied externally, and the use of either of these singly is, in many cases, sufficient to produce a successful result. The frequent efficacy of tar-ointment, and the not infrequent failure of a prolonged course of arsenic, in cases of psoriasis, have induced some authorities of note to advocate the administration (in place of arsenical mixture) of tar-pills in conjunction with the use of tar-ointment. This plan of treatment also, as we have had occasion to see, is undoubtedly a very efficacious one.

Some time since, being desirous of ascertaining how much of the successful result was due to the internal administration of the tar, an eligible opportunity presented itself in the case of a man severely affected with psoriasis, whom we had caused to undergo a prolonged course of arsenic, and who bore the remedy very well, but without the slightest benefit to his complaint. He had the strongest objection to any local application being used, and therefore was directed to take tar internally. As we wished to try the remedy fairly, tar-capsules were ordered him, and in a short time he was taking as much as three drachms of pure tar daily; this he continued to do for the space of three months without any notable impairment of his digestion, but at the end of that time his skin was no better.(a) After this he was at length persuaded to use tar-ointment, and with this he gradually got well.

But even tar-ointment is, in most cases, a tedious remedy (although not so slow in its operation as arsenical mixture), and it is furthermore objectionable on account of its staining the patient's clothing black, and on account of the impossibility of washing it off from any fabric that it has once fairly lodged on. Its tenacity, too, prevents the patient walking about if anything like an extensive surface has to be dressed with it, and it is a substance which cannot possibly be used in cases where the disease (as will often happen) affects the scalp, unless the scalp be shaved to allow of its use—a proceeding which is, in most cases, sturdily objected to by the patient.

These considerations induced us to make a systematic trial of creosote, which offered the inducements of a near relationship to tar, and of forming a clean and manageable ointment. But we were greatly disappointed in its effects. Creosote ointment, although of some efficacy, was evidently far inferior to tar-ointment as a remedy for psoriasis. It occurred to us, however, that in thus testing creosote against tar-ointment, we might possibly not have been using ointments of equivalent (therapeutical) strength. We had been using

(a) Since then we have tried the same experiment on several occasions, but always with the same result.

the officinal preparations—the ointments of the London Pharmacopœia—viz., the tar-ointment composed of equal parts of tar and suet, and the creosote ointment containing thirty drops of creosote in an ounce of lard. These ointments might, for all we knew, be therapeutically equivalent, but they certainly did not contain the same proportion by weight of their prime constituent. There must be some reason, we thought, for this very considerable disparity in their composition, so we began with caution to increase the strength of our creosote ointment. At first we merely doubled it; we soon doubled it again. On each occasion the increase of strength appeared to result merely in increased efficiency, without any qualifying drawback. We once more doubled the quantity of creosote in our ointment (using a mixture of equal parts of creosote and lard). This made rather a liquid preparation, an inconvenience which was remedied by the addition of a suitable quantity of white wax. We found the ointment still better than before. We next increased the strength of the ointment (using it still on the same cases) until two-thirds of it was composed of creosote. This necessitated the omission altogether of lard, and the substitution of white wax in place of it. We found that a mixture of two parts of creosote with one of white wax produced a beautiful, semi-transparent, consistent, smooth ointment, possessed of greater efficacy than any of those of less strength that we had employed, and decidedly a far more efficacious as well as a more "elegant" preparation than the unguentum picis liquidæ.

Our experiments with creosote in the treatment of psoriasis brought also to light two other facts which are worth noticing, inasmuch as they serve to show more clearly what is the precise therapeutical value of the compound we have been praising. One of them is this paradox—that pure creosote is not so (therapeutically) strong an application as creosote mixed with half its quantity of white wax. The other is that, while the patches of diseased skin can readily tolerate the application of our mixture without occasioning any discomfort, the sound healthy skin is far more sensitive to its action, and in most cases becomes speedily vesicated and painful.

If exceptional toleration of a drug is to be accepted as an indication for its use, we have here, in the ready endurance by the diseased skin of a dose which is intolerable to the sound skin, an indication of this kind. But such a proof is not needed for the remedy we are advocating. The speedy amelioration of the disease is a better argument in its favour.

It is a curious fact that pure creosote should not produce so strong an effect on healthy skin as is caused by the application of our mixture—this blisters, that does not.

There is one misapprehension which might arise from our account, and which we may anticipate. It might be supposed that the reason why the patches of psoriasis can more readily tolerate a strong application than can the sound skin, is to be found in the strong, thick, rigid, imbricated, epidermic incrustation with which the diseased skin in psoriasis is generally so abundantly covered, and which may be supposed to protect it from the action of any irritating application far more completely than the thin supple epidermic covering of the healthy skin. It is right, in view of so valid an objection as this to our theory of "toleration," that we should explain that, in order to avoid this source of error, the incrustations were directed to be daily softened by soaking them with tepid water, and then to be carefully peeled off, and that we satisfied ourselves by frequent inspection of our patients that this was duly done.

Employed in cases of psoriasis affecting the scalp, it was found that, as a rule, speedy and complete recovery ensued on its use, and that, too, without requiring that the scalp should be shaved.

It will be recollected that the ointments with which we commenced our comparative experiments were ointments of the Pharmacopœia of London. Since then alterations have been made in the composition of the officinal ointments, both of tar and of creosote. The creosote ointment, as we have stated, used to consist of half a drachm of creosote with an ounce of lard; it now consists of one drachm of creosote with an ounce of simple ointment. This alteration is a step, though a small one, in the right direction. Again, the tar ointment, which was formerly composed of equal parts of tar and suet, is now made of a mixture of five parts of tar with two of yellow wax. This change also is an improvement.

We may add that, after a careful trial of strong creosote ointment on more than a hundred cases of psoriasis, our opinion of its efficacy remains unshaken. There is one caution to be given respecting its use, and with that we will conclude. In persons of lymphatic habit the strength we have recommended is too great to be tolerated even by the patches of diseased skin. In such patients psoriasis very commonly assumes a moister (more eczematous) type than it does in others, and too strong an ointment is apt to increase the flow of plasmatous exudation—in short, will aggravate, rather than amend, the disease. In cases of this kind a weaker ointment (one containing only half, or rather less than half, its bulk of creosote) is to be preferred. But in all other cases of psoriasis the maximum strength will be found the best.

Weymouth-street, Portland-place.

CASE OF FATAL HÆMATEMESIS FROM ULCERATION OF ŒSOPHAGUS AND PERFORATION OF AORTA.

By C. LAWRENCE BRADLEY, F.R.C.S.,
Surgeon to the Pentonville Prison.

P. J., aged 21, by trade a shoemaker, but who obtained his living as a "smasher," or passer of base coin, was received into Pentonville as a convict in January last. On reception he appeared in good health, and up to the day of his death worked at his trade, and ate the food allowed him. Occasionally during his imprisonment he complained of vague pain in the chest and other slight symptoms referred to dyspepsia, and latterly of a slight cough without expectoration. In August (about seven months after his reception into the prison) he first stated that he had swallowed a bad half-crown some time previous to conviction, to which he attributed his ailments. In the absence of intense pain, spasm, dysphagia, or other indication of the presence of a foreign body in the œsophagus, it was concluded that the coin had lodged in the stomach, thus accounting for the dyspeptic symptoms, or that it might be still in the intestines, or else have passed out of the body. To clear away the second hypothesis and expedite the passage of the coin through the intestinal tract, it was thought expedient to put the patient upon a gentle purgative course, with a bland diet, and examine the stools. This was only persisted in for a few days, as the prisoner declared himself well. On September 24, for the first time, he vomited a considerable quantity of blood, and was removed to the infirmary. About two hours afterwards, while sitting up in bed to take some food, the hæmorrhage recurred; a large quantity of blood was again vomited, he sank down upon the bed and died.

The post-mortem examination showed the body to be well nourished and all the viscera healthy. The stomach was distended with coagulated blood. The intestines also contained blood more or less altered and mixed with the secretions, except the descending colon and rectum, where solid healthy fæcal matter was found, free from any admixture with blood. In the œsophagus was discovered a somewhat circular ulceration with dark edges corresponding with the edge of the coin, and in its centre a perforation of the size of a crow-quill, through which a probe could be passed into the aorta at the commencement of its thoracic portion. The coin, of white metal, and uncorroded, would appear to have been held in a shallow pouch of the œsophagus with its flat side opposed to the wall of the tube, and out of the way of the descending food. It was not found *in situ*, having been dislodged probably by the manipulation employed in removing the parts for examination.

The above case is remarkable for the absence of symptoms sufficiently marked to denote the presence of a foreign body in the gullet; for the position of the coin and the impaction not being either at the commencement of the tube, opposite to the cricoid cartilage, or at the distal end above the diaphragm; and for its termination by ulceration through the œsophagus into the aorta.

COLLEGIATE EXAMINATIONS.—Notice has just been given that the next Primary and Pass Examinations for the diplomas of Membership and Fellowship of the Royal College of Surgeons will commence on the 7th, 14th, 21st, and 28th proximo, and that the final examinations both for Fellowship and Membership will include an examination in *Medicine*, except in the cases of candidates exempted therefrom by the regulations of the College.

THE

TORPEDO EXPLOSION AT PORTSMOUTH.

By ARTHUR M. GARRINGTON, M.D.

As some few particulars regarding the above lamentable occurrence appeared in most of the newspapers at the time, it may not be uninteresting to your readers to peruse my notes of the case.

The unfortunate gentleman, Lieut. Hon. H. G. Meade, R.N., and his assistant, William White (engine-fitter in H.M. dockyard), who have fallen victims to this accident, had been engaged for a long time (with a sergeant of the Royal Marine Artillery) in the construction of a torpedo, which was composed of a series of cylinders filled with an explosive material called Schultz's wood powder, and connected by means of wires with a galvanic battery. Each cylinder consisted of a piece of iron gas-piping about a foot long and seven or eight inches in circumference, firmly soldered at one end, and having a brass cap fitting on the other. As a matter of precaution, the cylinders were filled with the explosive material in an upstairs room, then brought down into the lower room, where they were received by White, who fitted on the brass caps to close them, and then handed them to Lieut. Meade, who "sealed" them with a stick of gutta-percha composition heated by a lighted candle, and applied in the melted state to fill up the interstices of the cap and render it water-tight. It was while thus engaged that the explosion took place. Lieut. Meade was sitting at a low bench with the shell in front of him held by his left hand (White being three or four feet from him), and it is supposed that, in his anxiety to complete his torpedo for the official trial on board H.M.S. *Excellent* the following day, he applied the gutta-percha in a too heated condition and with a flame attached to it. The shell burst into fragments, most of which struck Lieut. Meade, hurling him to the floor at the further end of the room; a portion also struck White upon the shoulder and threw him from his seat. On my arrival I found Lieut. Meade in a horribly mutilated condition, covered with blood, and perfectly collapsed. After extinguishing the smouldering portions of clothing that remained attached to his body, I had him carefully removed to an adjoining room and laid on a mattress. Seeing that his left arm was completely shattered, and that there was an extensive laceration of the abdomen with protrusion of the intestines, I considered the case to be a perfectly hopeless one, and therefore directed my attention to relieving his sufferings by the administration of stimulants and opium. Subsequently Drs. Rowe, Cree, and Miller gave me the benefit of their assistance and advice; and as, after a few hours, he rallied sufficiently to bear moving to a bed, and took large quantities of nourishment, and the reaction had not produced further hæmorrhage, a consultation was held, and an extended examination of the injuries made, with the view of determining whether any operative interference would be possible; but we decided that it would be of no avail. He passed urine several times without difficulty, and fæces once. His pulse gradually failed, and he expired just ten hours after the accident. William White, recovering slightly from the shock of the explosion, was removed to the Royal Portsmouth, Portsea, and Gosport Hospital, where he was attended by Dr. Simpson and other members of the staff. On examination there was an extensive laceration of the front and upper part of the right arm, laying bare the humerus, which was completely shattered; there was also a smaller wound at the back of the arm nearer the elbow, which was most probably the point of exit of the portion of shell by which he was struck. The integuments in the neighbourhood of these wounds were much scorched. Unfortunately he was a man of delicate constitution; there had been extensive hæmorrhage, and severe nervous depression. However, as a *dernier ressort*, Dr. Simpson amputated the arm at the shoulder, but he never rallied, and died seventeen hours after the accident. Fifteen hours after death, I (in conjunction with Staff-Surgeon Cree, of H.M. Dockyard) made a *post-mortem* examination of the body of Lieut. Meade. The face, ears, and neck were thickly dotted with coarse grains of powder, and the hair was much singed. The skin on the anterior and lateral portions of the thorax was scorched, and altogether destroyed in some parts; just below the left axilla was a contusion, and several minor incised wounds. The bones of the left forearm throughout were completely fractured into splinters, and the muscles, tendons, and integuments so lacerated as to hang literally in ribbons. The left thumb was merely attached to the hand by a portion of skin, and all the bones of the fingers presented compound comminuted fractures, the joints being everywhere exposed. There was a compound fracture of the first phalanx of the thumb, and a contused wound of the forefinger of the right hand, and the integuments and muscles of the right arm were extensively torn and injured. The lower extremities were perfectly free from injuries. In the abdominal parietes we found a gaping rent, with clean cut edges, of six or seven inches in length, extending upwards in a semicircular direction from the pubes to the left of the umbilicus; branching from this towards the left groin was a smaller ragged rent, one inch and a half long, and at this point there was considerable loss of substance. Through these wounds about four feet of the small intestine, with a large flap of omentum, were protruding, all in a state of gangrenous inflammation. The cavity of the peritoneum contained several small clots of blood, but there was not any injury to the viscera or large blood-vessels. On passing the hand into the pelvic cavity, the edges of the promontory of the sacrum, and of the contiguous portion of the brim, were found to be rough and jagged, and lying in the hollow of the sacrum (rather to the left) was the brass cap of the cylinder, together with portions of cloth and linen. The bladder and bowel were intact, and we could detect no fracture of the pelvic bones. As might be expected, the upper extremities, receiving the full force of the explosion, were subjected to the greatest amount of destruction, and the lower extremities only escaped by being protected beneath the bench. I believe the principal rupture in the abdominal wall to have been caused by a sharp triangular portion of the shell flying across it, as such a piece was found entangled in the flannel waistcoat in the left axilla when the body was stripped after death, and the smaller wound was undoubtedly the point of entry of the brass cap, which was driven downwards. The deficiency in substance was so considerable that it was with some difficulty the intestines were retained, and the edges of the wound brought in contact after the post-mortem, and the tension on the stitches was so great as to render the healing of such a wound very problematical.

It is somewhat interesting that a piece of metal three quarters of an inch thick, two inches and a half in diameter, and weighing seven ounces and a half, should have forced its way to the position in which it was found, in close proximity to many important structures, without materially injuring them, and that life should have been prolonged, with comparatively little suffering, for ten hours after such fearful mutilations; I attribute this greatly to the slight amount of hæmorrhage, the possession of a robust constitution, a strong mind, and the freedom from excessive pain. Even had it been thought advisable, the closure of the wound in the abdomen would not have been attended with any more favourable results, as the presence of so large a foreign body in the cavity must, sooner or later, have occasioned fatal inflammation; and I think any search for it during life would have been most unjustifiable, although we conjectured it might be there, as the poor fellow said several times he felt something "pressing on his spine." The only way in which I can account for the cap being in the pelvis is that in its flight downwards and backwards (in the sitting posture) it impinged on the edge of the sacrum and brim, and, its force being there expended, it dropped gently into the cavity. It was wonderful to observe "the ruling passion strong in death" in this gallant young man; his fortitude and clearness of intellect never forsook him, and his greatest anxiety appeared to be the enforcing upon his brother officers his dying wish that his experiments should be continued, as he had the utmost confidence in the ultimate success of his torpedo and other destructive weapons.

Mr. Prescott Hewett arrived with the friends just as he expired, and it was satisfactory to us to find that (after an examination of the wounds) he quite coincided with our views that the system of non-interference was the best under the circumstances.

Portsea.

A Breeding Mule.—At a meeting of the Société Impériale d'Acclimatation, it was stated that a mule, twelve years old, had dropped a male colt at Mont-de-Marsan; it was born at full period, and perfectly formed. The dam gives milk, and the foal sucks, but the mother manifests a profound indifference for her offspring, and does not exhibit the slightest yearning when separated from it.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

OPERATIONS AND CASES.

The Medical Session has just opened, and all the Metropolitan Hospitals have had, as is usual, introductory orations; and on the last day of the week a good many have the first or opening day of operations. On Saturday several cases of an interesting character were in the theatre of King's College Hospital, of which a short account may be interesting to our readers.

Fistula in Ano.

The first was one of fistula in ano, operated upon by Mr. John Wood. The case was one of blind external fistula extending up for some distance by the side of the rectum. Mr. Wood laid open the track, and so paralysed the movements of the sphincter ani, and in the usual way placed oiled lint in the wound in order to cause granulation from the bottom. In his remarks addressed to the numerous visitors and new men who were present upon the occasion, Mr. Wood said that though the fistula was of the character known as "blind," yet he could not hope any such case to get well by the action of stimulants to the sinus, and that it was only by quite paralysing the sphincter by cutting through it that benefit could be afforded to the patient.

Fibroid Tumour from the Breast.

Next came the excision of a fibroid tumour from the breast of a female patient who had a cancerous history. Both grandmother, mother, and one of her sisters had died from this disease. The tumour, which was in the right breast, and of about the size of a walnut, was removed by Mr. Wood, who made a single incision, and, carefully carrying the knife well away from the disease and through the surrounding tissues, thus obviated as far as possible all chance of return. The "roots," as cancer curers call them, in this case extended not by the usual and more round-about way along the glands into the axilla, but along the lymphatic mediastinal glands.

Operation for Bursa.

Another case of but comparatively little importance, but showing forth a new plan of treatment advocated by Mr. Wood, was next placed on the table. It was one in which the bursa of the right knee was connected with a fibrous mass, and where the bursa over the tendon of insertion of the great extensors of the left leg was also similarly diseased. These tumours were both removed, and Mr. Wood stated it as his strong conviction that in cases of this sort it was a great mistake to stitch the edges of the wound together; for he had found that almost all patients so treated suffered from subsequent erysipelas, while, when the wound was simply left to itself, quick healing invariably resulted.

Removal of a Large Calculus from the Female Bladder.

A woman with stone in the bladder was next brought into the theatre, a patient of Mr. Henry Smith's, and operated upon. The case was as follows, and is worth noting:—

Elizabeth G., aged 38, a widow, was admitted into King's College Hospital, under the care of Mr. Henry Smith, September 2, 1868. She stated that ten years since she first experienced great pain in the region of the bladder, and that this pain has been continuous up to the present time. She subsequently became pregnant, and was delivered of a healthy child, the labour being natural. The pain in the hypogastric region still continuing, she sought Medical advice, but was informed that nothing was amiss. Pain was followed by incontinence of urine, and from this the poor woman had suffered for a considerable time. Eventually she applied at the Hospital, and was admitted as above.

When admitted, it was found that, on examination per vaginam, a large hard body could be felt in the bladder, apparently occupying its whole cavity. A sound passed along the urethra encountered a stone-like mass, and could with great difficulty be passed between the foreign body and the wall of the bladder. The mass appeared to fill the bladder entirely, and there was a considerable discharge of muco-purulent matter, seemingly caused by irritation. The patient was ordered—℞ Balsami copaibæ ♏x., mucilaginis acaciæ ʒj., tinct. opii ♏v., aquæ ad ʒjss.: t. d. s. This medicine being of even no palliative service, the patient was on October 3 brought into the operating theatre, and placed under the influence of chloroform.

Mr. Henry Smith then proceeded to operate forthe removal of the stone. He made an incision in the median line of the upper wall of the vagina, upon a grooved staff previously introduced into the bladder. This incision was prolonged backwards for about one inch and a quarter, so as to divide the posterior part of the urethra and the neck of the bladder. The finger was then introduced, and came in contact with the stone, which was felt to be of enormous size, entirely filling the cavity of the bladder. Finding it so large, Mr. Smith passed a lithotrite through the wound, and afterwards along the urethra, hoping to be enabled to crush the stone, but he found it impossible to separate the blades sufficiently widely to embrace it. He next introduced a pair of lithotomy forceps, and grasped the mass, but was utterly unable to extract. However, much of the external crust of the calculus was broken down, and repeated attempts to remove it were attended by copious withdrawals of the phosphatic encasement of the nucleus; but as it seemed impossible to lessen the size of the stone materially by these means, a pair of "sequestrum forceps" was then applied, and the whole of the phosphatic deposit was broken up. An additional incision was then made in the neck of the bladder, of about an eighth of an inch in length, when, by using a scoop with a large curve, the entire nucleus was removed. The patient lost but little blood; but as the operation was, as may be imagined, considerably protracted, she was much collapsed, and was therefore taken to the ward, Mr. Smith not thinking it prudent to attempt to close the opening between vagina and bladder. Of course, not much of the enveloping coat of the calculus was preserved, but what remained was weighed, and turned the scale at five ounces and a half. The nucleus consisted of oxalate of lime, and appeared like a mass of slate. The other coverings, in concentric laminæ, were formed of phosphates, the diameter being before breaking, as nearly as could be guessed, three inches. At 10 p.m. on the day of operation the patient was as well as could be expected, but suffering severely from shock.

On October 4 she had rallied somewhat, but was much collapsed, and nutriment was administered chiefly per rectum. Brandy ʒxij. in the twelve hours. Free secretion of urine. However, the patient sank gradually, and died at 8 a.m. on October 6.

Post-mortem.—The post-mortem examination was made on October 7. On reflecting the abdominal walls there was found abundant evidence of extensive peritonitis, especially on the left side. The wound in the vagina and urethra was about an inch and a half in extent, and did not open the peritoneum. On examining the bladder it was found considerably thickened, and some of the mucous membrane lining it separated, while at the apex and towards the left side the tissues were in a sodden and sloughing condition, readily admitting the finger to be passed through. The right ureter was much dilated, and the corresponding kidney consisted almost entirely of a big cyst.

Mr. Henry Smith was most careful, throughout all the steps of this most difficult and trying operation, to avoid, as far as skill and prudence could avoid, injury to so important an organ as the bladder.

Strangulated Hernia and Radical Cure.

Abdominal herniæ, or ruptures, may be divided into three classes—viz., reducible, irreducible, and strangulated, and it is the latter class to which we wish to direct the attention of our readers. Strangulated hernia is an everyday occurrence in our large metropolitan Hospitals, and most Hospitals could furnish ample records of operations performed for the relief of such cases. Such operations afford great benefit to the patient at the time, and save his life most likely; but they leave him much as when they found him—*i.e.*, that the hernia may come down again if he does not wear a truss. The following case of Mr. Wood's, of King's College Hospital, shows that not only is it possible to relieve the patient for the time being from the consequences of a constriction of the bowel, but that, by a due and proper application of Surgical skill, the sufferer may be cured of the affection altogether. For accomplishing a radical cure, various proceedings have been adopted. To effect this in a satisfactory manner, it is necessary to shut up permanently the inguinal opening, and to this end, in times gone by, a ligature was applied to the neck of the sac, or in scrotal hernia the sac was entirely removed, together with the

testicle of the affected side:—"An itinerant operator was in the habit of feeding his dogs with the organs which he thus removed." It is fortunate for mankind that no such methods of treatment are now adopted The most obvious way of making a radical cure of hernia, congenital or otherwise, appears to be by the application of sutures through the sides of the canal in such a manner as to insure its complete closure both behind and in front of the spermatic cord, and upon this plan Mr. John Wood has worked and operated for many years. In the case reported here, however, not only was a radical cure effected, but the man operated upon was a patient who, at the same time, was suffering from strangulation of the gut.

Case.—Alfred F., aged 21, a coal-porter, was admitted into King's College Hospital June 29, 1868, suffering from strangulated hernia. His history was as follows:—He had been ruptured for about three years, and first noticed the swelling after carrying an unusually heavy sack of coals. From this time to the time of his admission the hernia had often "come down," but he was always able to reduce it, except on one occasion when he was obliged to seek Medical aid. During the morning of June 29 the rupture came down suddenly, and caused him much pain; he could not get it back. He applied at the Hospital, and was admitted. When received, he stated that he was in very great pain, and that he had been very sick. The bowels had acted once since the rupture had come down.

A warm bath, chloroform, and the taxis having been employed in vain, and as the tumour was large and extremely tense, Mr. Wood proceeded to operate. He made a vertical incision three inches long over the hernial tumour, and dissected down to the sac, plainly demonstrating the various coverings, felt for adhesions, but finding none, he opened the sac, and, dividing the stricture, returned the gut. The hernia was found to consist partly of bowel and partly of omentum. The intestine was slightly red, but no lymph was effused upon its surface.

Mr. Wood then determined to do the operation for radical cure. He passed his hernia needle under the lower border of the internal oblique muscle, and through the conjoined tendon upwards to the surface. The wire was then hooked on, and the needle withdrawn. The needle next passed through the anterior aponeurosis close to Poupart's ligament, and emerged opposite the scrotal aperture, and the operation was completed in the usual manner. A compress and spica bandage applied.

June 30.—Slept fairly; no sickness; very little pain; pulse 76.

July 1.—Pulse 88; no pain, but scrotum and adjacent parts somewhat inflamed. Ordered a poultice.

2nd.—Slept well; wound looked much healthier; very little discharge; the scrotum less inflamed. Ordered—℞ Spir. chloroformi ♏xv., liq. cinchon. ♏xx., aquæ ad ℥j. : t. d. s.

3rd.—No pain; pulse 120; bowels open thrice during the night; parts about the wound not so tender or so discoloured; tongue moist, but furred.

4th.—Felt better; pulse 80; bowels acted once; no tenderness of abdomen.

6th.—Good deal of pus removed by squeezing scrotum.

10th.—Wires removed.

13th.—Discharge much diminished; water-dressing applied.

16th.—Wound filling up; red lotion ordered.

20th.—Wound granulating fast; general health good.

31st.—Allowed to get up; argenti nit. applied to wound.

August 12.—Patient was discharged with Mr. Wood's "horseshoe" pad truss. There was no impulse on coughing, and he appeared quite well.

On September 3 the patient called at King's College Hospital. The wound was quite healed. There was no impulse on coughing, but, by Mr. Wood's recommendation, the man still wears a truss.

Poor-law Medical Officers' Association.—The quarterly meeting of this Association will be held at the Freemasons' Tavern, Great Queen-street, Lincoln's-inn-fields, on Tuesday, October 27th, at 5 p.m. After the meeting the members, honorary members, and friends of the Association will dine together.

The London Hospital.—In accordance with a recent alteration in the bylaws of this Hospital, Mr. Couper, who has held the office of Assistant-Surgeon for seven years, is promoted to be Surgeon to the out-patients.

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Medical Times and Gazette.

SATURDAY, OCTOBER 17, 1868.

REGISTRATION MEDICAL OFFICERS, OR CORONERS?

An accident occurred last month at Walmer which may furnish material for a short comment. A well 100 feet deep required repair, for which purpose a stage was set up within it at sixty feet from the surface. One morning a workman named Chandler made an attempt to go down, having, as usual, lowered a lighted candle as a test of the quality of the air, but he was soon driven up again. Nevertheless, an hour or two later he was let down again, and, so soon as he reached the stage, cried out that his light was out, and was hauled up directly, "speechless and staggered." Soon after the master builder arrived, and seems to have expressed displeasure that the work was not finished; whereupon a barrel of water was thrown down "to drive the foul air out," and as a light which was lowered was not extinguished, Chandler was let down again with a lamp. But soon he was heard to groan, and he had evidently become insensible; whereupon a labourer named Holliday volunteered to go down, which he did, and soon sent up Chandler's body quite dead. But when his own turn came immediately afterwards to be hauled up, and he was half-way to the surface, he too was overpowered, and fell thirty feet to the stage below. Then followed a series of rash attempts to get up poor Holliday, and, after three men had risked their lives to no purpose, an air-pump was procured from a brewery, and even with this one or two unavailing efforts were made, and two hours passed ere Holliday was brought up into daylight. The bystanders were surprised to find him still alive, but owing to the humane and skilful treatment of Mr. Davey, the Surgeon, he soon began to recover, and, spite of severe cuts and bruises, is likely to do well. In his case, as in some others, the faintness caused by the fall probably diminished the rapidity of the circulation and the need for oxygen, so that he bore the confinement in foul air during the two hours without loss of life.

We should have thought this case to be one in which an inquest should, on all grounds, have been held. The public mind needed to be instructed as to the nature of the accident, and the means of avoiding the like loss of life in future, and the question would have been discussed whether there had been any want of precaution, and whether the poor man's master had used undue influence in inducing him to go down again to finish his dangerous task. The account in the *Deal Telegram* of September 12 certainly leaves this question open, although it conveys no direct accusation.

Instead, however, of holding an inquest, the coroner is said to have given permission on Sunday, the day after the accident, to remove the body out of his jurisdiction, and on the Monday to have held an "inquiry" at an inn in the town, having before him the owner of the well, one of the workmen, Mr.

Davey, the Surgeon, and a policeman. He is said to have given notice on the Sunday to Mr. Davey of his intention to hold a private inquiry without a jury. He, it is said, often does so in order to avoid the necessity of holding inquests, and is in the habit of tendering to Medical witnesses the sum of 5s. for the opinion they give. In the case before us, Mr. Davey declined to be a party to any such private inquiry.

Now a coroner, before proceeding to summon a jury and hold an inquest, is bound to satisfy himself, in his own discretion, that there are grounds for such a proceeding, and is liable to censure for holding inquests on grounds that are frivolous or unnecessary. But this is a very different thing from holding an extra-judicial inquiry, with imperfect judicial forms, as a substitute for the inquest. Nor do we see what authority the coroner has for holding that kind of inquiry (except it be that a party is accused of homicide before him, in his ancient capacity of justice of the peace), nor yet for giving a certificate of the cause of death, which this coroner is said to do. The coroner's real function is to summon and preside over a jury, who, viewing the dead body, are to inquire when, how, and by what means deceased came to his death—the view of the body being only dispensed with, and burial being permitted, when the body affords no evidence, or when the coroner is credibly informed that the death was not a violent one, when of course no inquest is held.

But if an expert coroner, a legally educated man, can in such a case as this, of violent death incurred in the exercise of an occupation always hazardous, where there is no evidence that adequate precautions were taken in spite of repeated warnings—a case, too, where the popular function of a jury might well be invoked as an expression of the public voice, that no workman should be overpersuaded to incur palpable hazard of life—if, we say, in a case like this, the inquisitorial and protective functions of a jury are to be superseded by an inquiry made by one competent person, why not in others too? Why not reserve the cumbrous machinery of a jury for occasions when it is really needed, and have in common cases an inquiry made by a competent Medical officer, such as the Registration Medical Officer proposed by Dr. W. Farr, or the analogous officer demanded by Dr. Rumsey?

We want an officer to verify the fact and cause of death in every case open to suspicion. Such an officer, with power to make inquiry publicly or privately, to compel the attendance of witnesses, examine them on oath, and pay their reasonable expenses, might be left to determine whether death had been caused by carelessness, misadventure, or crime, and in the last case would direct proceedings to be taken before the proper authorities. Such an officer, chosen for his acquirements in chemistry, toxicology, and pathology, would superintend the post-mortem examination and chemical analyses, or would cause them to be put into competent hands, and would accomplish the work quickly, quietly, and effectively.

On the other hand, many of the coroners are chosen by the votes of the freeholders, and many a man admirably fitted for the duties is deterred from seeking the office by the expense and hubbub of the election. No greater reform is needed anywhere than in this venerable and most useless and pernicious mode of election. The jury in ordinary cases consists of persons whose opinions no rational man would seek on any point of law or fact; they are not always sober; and consisting as they may of the lowest class of tradesmen, or of mere loafers and bystanders, they sometimes make use their brief authority to annoy a respectable witness, Medical or otherwise, and to throw out insinuations of neglect or misconduct. The author of the "Evils of England" points out, amongst other flagrant instances of waste, the waste of time caused by summoning juries away from their own affairs, to determine questions which were far better left in the hands of an educated and impartial judge. If, as in the county court, one of the parties demands a jury, that is one thing; a person accused or wronged might have the option if he distrusted the judge; but as for the "common jury" (or, in newspaper language, a *respectable jury*) no sane party to an action likes to be at the mercy of their ignorance and prejudice, and the "special jury" of educated and well-to-do men (in common parlance, a *highly respectable jury*) is that which is emphatically demanded for the coroner's court, if there be need of a jury at all. It is said that in the year 1867 no fewer than 24,648 coroners' inquests were held in England and Wales; therefore between 295,776 and 300,000 petty householders (allowing about fifteen to each jury) were taken from their own affairs, brought to be judges of matters in which the only remedy against stultification is that they shall find according to the coroner's ruling; and most inquests are held in public-houses, where, after the court, the jury adjourn to the bar. But not only is the coroner absurdly and wastefully elected (for why should an able public servant be forced to pay the thousand pounds or more waste in a popular election?), and the tribunal over which he presides destitute for the most part of dignity and intelligence, but very many of the cases brought before him are such as to make such an expensive and cumbrous machinery a mere waste of public time and money. Surely an examination and certificate by a Medico-legal expert would answer all the purpose of a coroner's inquest.

We are strongly of opinion that human life should be surrounded with all the protection which a deliberate inquiry into the causes of death can create, and desire that such an inquiry should be made in every case not "certified" by a legally qualified Practitioner. But such an inquiry may be conducted promptly, carefully, and effectually by a competent Medical officer, without the pretentious hubbub of a coroner's jury; and we strongly suspect this is the opinion of the Coroner for Sandwich.(a)

THEORIES OF CHOLERA.

ATMOSPHERIC, CONTACT, AND SPONTANEOUS GENERATION THEORIES.

Resuming our analysis of the theories of choleraic causation and diffusion which Dr. Farr has brought together in his valuable monograph on the epidemic of 1866, we have briefly to notice how the theories named at the head of this article stand the test of critical examination.

And first of what is known as the *atmospheric theory*, which assumes that cholera, originating in the East, in course of time traversed the Continent, found its way to England, found a congenial home in East London, was there developed amidst excessive pollutions of soil and water, and its poisonous exhalations were thence diffused by the air-currents throughout the localities where its ravages were most severely felt. Our readers will perhaps remember that in the *Medical Times and Gazette* of April 18 last, we admitted that the statements brought forward by Mr. Orton, the health officer for Limehouse, in respect of the exceptional filth of East London "were quite enough to account for the severity of any pestilence on the spot;" but then we all know the tendency of Asiatic cholera to spread rapidly, and that it by no means spares the wealthy or the dwellers in the bettermost parts of a town or city in which it has secured a footing; and, therefore, Mr. Orton's views that the primary *cause* of outbreak was atmospheric left the medium through which the disease was *diffused* within so remarkably restricted an area still an open question. Supposing, in fact, the cholera miasm to have risen from the foul alleys and stinking channels of Limehouse, how came it to pass that it was not carried by the winds to the southern and western

(a) Since the above was in type we have received the correspondence printed at page 464.

districts in anything like the degree in which it evidently rested upon East London? As Dr. Farr puts it:—

"Any gas generated in any point of London is, by the law of gaseous diffusion, speedily distributed through the atmosphere; and matters in suspension are distributed by the winds, which are thus described during the first four weeks, extending from July 8 to August 4, which saw the rise and decline of cholera: Variable; N.E. and E.N.E.; variable; W. and W.N.W. The winds were not still, but blew in various directions over London at the rate of eight miles an hour during the first three weeks, and then with double that velocity. If they carried cholera on their wings, they must necessarily have shed its poison over all London: the action of the winds could not have been confined to the small area of East London. In India the cholera matter is scattered by the natives on the surface of the earth, and may be either washed into the tanks, or be dispersed in clouds of dust. But in a town of water-closets and privies, the diffusion of dry cholera dust must be exceedingly circumscribed."

"The air," Dr. Farr adds, "is breathed by the whole population, yet only a certain number die of cholera; so the [atmospheric] theory, on this score, encounters as great difficulty as the water theory, and may claim analogous solutions." And the general conclusion arrived at is that although it is quite probable that to a certain extent the population of London during the last epidemic inhaled "cholera corpuscles" floating in the open air and rising from polluted waters and sewers, yet that the quantity thus taken from the air "would be insignificant in its effects in comparison with the quantities imbibed through the waters of the rivers or of ponds into which cholera dejections, either in the diarrhœal stage or the stage of collapse, had found their way, and been mingled with sewage by the churning tides." And further, if there be any ground for the supposition that the specific excitant of cholera is a living molecule or vibrion, it is important to remember that neither in sewer air nor in the air of cholera-wards was Dr. Dundas Thomson able to detect in 1854 but the smallest quantity of vibrions. No facts, it is alleged, can be cited to prove that cholera is propagated by the breath of cholera patients.

The *contagion* theory, in so far as it assumes *personal* contact, is open to objections similar to those raised against the atmospheric theory, as regards the diffusion of cholera within an area of remarkable limitation. The population of London, it is argued, is in free intercommunication; there is a constant mixing together of the residents on both sides of the river, for example, and therefore mere personal contact would have distributed cholera indiscriminately all over London, which cannot be said to have occurred. The true contact theory, Dr. Farr holds, is "that the disease spreads from person to person, not by contact with the cuticle, but by contact of the colourless inodorous flux with the mucous membranes." That dirty people in crowded houses take the disease from a first case in unusual numbers is explained, consistently with this theory, by the contact first of the soiled linen with the hands, and afterwards with the mouth or the food taken with unwashed hands.

Like the origin of species, the origin of plagues is a *vexata quæstio*, which Dr. Farr can only note the difficulties of without attempting its solution. He argues that Pasteur's researches, designed as they were to negative the *spontaneous generation* theory, are inconclusive to that end. Because, for instance, fermentescible matter, after exposure to great heat, remained unchanged for a definite time, is it certain that an extension of time would not have given a different result? Such knowledge as we have of the developments of zymotic matter—in puerperal fever, in gangrene, erysipelas, pyæmia, and in typhus—tends to show that under given conditions specific diseases are generated, a variation in the condition resulting in a modification of the type so generated. But all that can be said about the *spontaneous generation* theory is thus lucidly put by Dr. Farr:—

"With regard to all the plagues—and to Asiatic cholera among them—we are necessarily driven back to the hypothesis of spontaneous development. There was a date when the Asiatic cholera leaven did not exist; it has therefore been developed out of prior-organised substance. Like species of the animal kingdom, plagues lie hidden in the strata of past history; they live, they flourish, they perish like organic forms, because they are in their essence successive generations of organic forms at enmity with the corpuscles of which the human race consists.

"If the algid cholera in its active pandemic state can be spontaneously generated in Asia, why can it not be spontaneously generated in Africa, in Europe, in America? We know that the summer cholera is generated in London. We know that sporadic cases of algid cholera were fatal in remote villages of England before the wave of Asiatic cholera reached our shores. 'Why then,' asks the sect of anti-contagionists, 'refuse to admit the spontaneous generation of cholera in England? Why resort to the theory of importation? Before the first outbreak of algid cholera in England, the water-closets poured their contents into the rivers from which the towns drank. Then came diarrhœa in an intense form; then came summer cholera; then came what you call Asiatic cholera. Is not small-pox subject to the like eruptions in England?' The sect of contagionists has much to say on the other side; but it is on either side difficult to prove a negative. In the meantime, it is difficult, looking at the chain of evidence, to refuse the conviction that Asiatic cholera came from Asia."

MEDICAL EDUCATION IN GERMANY.—V.

CONCLUSION.

In reviewing the facts which we have laid before our readers on this subject, we find several important differences existing between the systems of education adopted in Germany and in this country, and we shall now proceed to compare the two, and point out the advantages possessed by our continental neighbours. The first difference which strikes us is in the relation of the Profession to the State; and as this has necessarily an important influence upon the status of Medical men in the eyes of the public, it will be well to consider on which side the advantage lies. There can, we think, be no doubt that the complete and absolute severance of Medicine from the more mercantile department of the apothecaries or druggists, which exists in Germany, has a beneficial effect in maintaining the dignity of the Profession and elevating the character of its members. This separation of Doctor from Apothecary is so perfect that it precludes the latter from selling his drugs as *remedies*—*i.e.*, he may not recommend them as remedies for any disease from which his customer may be suffering, although, of course, he may sell them as merchandise. Being thus excluded from giving any Medical advice under a severe penalty, which, in case of a repetition of the offence, may extend to the loss of his licence, he is, on the other hand, protected by similar prohibitions against the sale of drugs by the Medical Practitioner or by unauthorised persons. The adoption of such a system of protection may be impossible with us, where the principles of free trade are so universally adopted, but the advantages derived from it are manifold. As indicating the influence for good which State interference may exercise in Professional matters, we may mention a fact which has recently come under our notice. A Medical man gave a certificate respecting the health of a certain individual which proved to be incorrect, and was judged by the supreme court to be culpably so; the writer was consequently deprived of his licence to practise, and has been therefore obliged to leave the country. This may seem to be a severe measure, but the result is that Medical certificates are given far more cautiously in Germany than with us, and are held in far higher esteem, and a public functionary is obliged to accept such a certificate whenever it is offered.

Another important difference exists in the manner in which examinations are conducted in the two countries. We fear no contradiction when we state that with us the examinations for the diplomas, which correspond to the Staats Examen of

Germany, are lamentably deficient as practical tests of the candidate's knowledge. The principal source of this deficiency is in the large number of the examining and licensing boards, and in the complete want of uniformity in their requirements, so that a candidate may obtain a diploma to practise without having been examined in some of the most important subjects. The perfect immunity of the licensing boards from all pecuniary considerations is perhaps the most important point in any improvements which can be effected in this direction, whilst the absolute control of the General Council is necessary to produce anything like uniformity as to the minimum of knowledge required of a candidate. As long as competition is allowed to exist between the different corporate bodies which grant licences to practise, the examinations will be framed rather with a view of attracting the greatest number of candidates than as tests of real knowledge, and the public will have no guarantee that the diploma is any proof of sound Professional training. We fully recognise the recent attempts at improvement in this direction made by the Medical Council, but we also feel assured that any change, to be efficient, must be a radical one. As a natural consequence of such change, greater time and care would be considered necessary in conducting the examination, and instead of a candidate receiving his diploma as the result of a few hours' written and *viva-voce* examination, he would be required to show that he possessed some skill in examining and treating patients, and in performing such operations as he may at any time be called upon to do in daily practice.

It would be of no small advantage to the country and the Profession if an additional and special diploma in State Medicine were to be granted after suitable examination in the subjects of Medical Jurisprudence and Public Health, as we should then have a body of skilled and trained men within the Profession, from whom the parish Medical officers might be chosen, and to whom the public might look for guidance in all questions relating to sanitary matters.

We hold that it is absolutely essential that every Medical man should possess a certain practical knowledge in all branches of Medicine, Surgery, and Midwifery, and that a greater proportion of the time spent by the student at the Medical school should be devoted to these subjects than is at present possible. This would imply that the preliminary education should be more thorough and, above all, more scientific than it is at the present day, so that the youth might at once devote himself to his Professional studies without wasting his time upon the merest rudiments of scientific principles, whilst such subjects as zoology and botany, physics, and the elements of inorganic chemistry should be mastered before he be allowed to enter on his Professional studies.

The present examination is in some parts utterly inefficient, and we have ourselves recently seen candidates examined and passed in Latin who knew scarcely one word of that language, and who of course were quite incapable of translating even a single sentence. The preliminary examination must, if any improvement is to be effected, be under the direct and sole control of the Medical Council, and be conducted by a board of examiners specially elected for the purpose, and no candidate who fails to pass such an examination should be admitted to a Medical school. The advance of Medical science in the present day imperatively requires that the student should possess a thorough knowledge of at least one of the modern languages in addition to his own, and this should, therefore, be an essential and not, as at present, an optional part of preliminary education.

We must now consider a subject which has perhaps a greater influence than any other in keeping alive that constant activity and desire for progress which is so characteristic of both the students and teachers in the different Medical schools throughout Germany. We refer to the custom of students passing from one university to another during their period of study, and thus not becoming attached in any special manner to a single school. The student is thus enabled to hear and study under those teachers who are more especially renowned in their special subjects, and the teacher is stimulated to maintain as high a standard of excellence as possible, knowing well that it is in his power to attract an audience from the whole of Germany. It is thus that single teachers raise the reputation of a whole university, and influence the thought of the age more powerfully than is possible with us. Thus it is also no school can lay claim to any student, and no such feeling of rivalry can exist between school and school as is too often the case with us. There is also perfect freedom as regards the selection of teachers; no university ever thinks it necessary to appoint a man because he happens to have studied within her walls, and consequently every man knows that he has only himself to trust to. At the same time, when a teacher once acquires a great reputation, he is eagerly sought for by any university where a vacancy may have occurred, and can therefore place his own conditions upon his acceptance of the offer. Many instances might be given of this fact, such as the concessions made to Virchow on his accepting the Professorship at Berlin, or those recently offered to Billroth by the University of Vienna in order to retain him. This system can, however, only work well where any qualified man is at liberty to gather round him a circle of pupils, and teach them within the walls of the recognised school or university, and thus to prove to the world that he has that in him from which good teachers are made. There can be no doubt that the system of "Privatdocenten" is an excellent one, and that there is a great want of some similar system in this country.

We would, lastly, draw attention to the importance of such an institution as the "Scientific Deputation" of Prussia—a body composed of men of the highest reputation in their respective branches, and holding the highest positions in their respective faculties—which is formally recognised by the State, and to which all questions relating to Legal Medicine, Public Health, or Professional conduct may be safely referred by the Judges or the Minister. The establishment of such a council in this country would tend much to lessen the evils attendant on the present unseemly system of giving evidence on Professional questions in both criminal and civil cases, and would lessen the responsibility of the Crown Minister, who has so often to determine the momentous question of the sanity of a reputed criminal.

In thus pointing out the defects of our own system, and the possible remedies which have presented themselves to our minds, we would disclaim any desire to glorify a foreign system at the expense of our own; but we earnestly desire to induce our readers to examine the question for themselves, and to seek for those remedies where they may be most easily met with.

THE WEEK.

TOPICS OF THE DAY.

As the general election draws nearer, we cannot but feel regret that a larger number of distinguished Medical names are not found in the list of candidates. It is not necessary to restate the reasons which may be urged for Medical representation. The Profession is fully alive to them, but unfortunately it is clear that in too many instances they have been outweighed by mere political motives. The chance of returning a Medical candidate for either of the new University constituencies seems fast vanishing, and several of the Medical men who were spoken of as probable candidates for boroughs or counties have declined the trouble and cost of political contest. We confess that we are sorry for this, for the opportunity presented by a new Parliament, returned by new constituencies, with a new franchise, is not likely to recur very soon. There remain, however, yet several chances to the

Profession. Sir Dominic Corrigan, than whom the Profession in Ireland could not have a more creditable representative, is still prepared to contest the city of Dublin if a fair prospect of success open. We do hope that Medical men, independently of party, will rally round Sir Dominic, and give him all the support that the Profession can yield. Few men are so thoroughly fitted by talents and education for a representative assembly as Sir Dominic Corrigan, and it would be impossible to find one who is better acquainted with the special requirements of the Profession. His long experience in the Medical Council of Education and Registration has given him an intimate knowledge of the defects in the present system of Medical laws, and of the points which are most open to reform. Sir Dominic is, moreover, an orator of no mean power, an accomplished gentleman, and a Physician whose eminence in his Profession has won from his sovereign the highest reward custom allows her to bestow. We shall be greatly disappointed if the Medical men of Dublin, setting aside their political leanings, do not unite to throw all their direct and indirect influence into the scale for their distinguished colleague. The Dublin correspondent of the *Times*, in writing of Sir Dominic's probable candidature, after paying a just tribute to his "Professional eminence, clear intelligence, and independent character," adds—"Conservatives would find some consolation for defeat in seeing a gentleman returned who would do credit to the city, and of whom it is already proud."

Dr. Sandwith of Kars still continues his canvass amongst the Liberal party in Marylebone, and has, we hear, a fair chance of success. He would undoubtedly be a valuable acquisition to the little band of Medical members. We are informed that Dr. Gladstone, the late Lecturer on Chemistry at St. Thomas's Hospital, intends to offer himself in the Liberal interest to the electors of York. Dr. Gladstone is not a Medical man, but his reputation as a distinguished chemist and his former connexion with Medical teaching will doubtless insure him a favourable reception amongst our Profession.

We have little to say on the subject of University representation this week. At Oxford Sir Roundell Palmer and Mr. Mowbray are to be brought forward for the seat vacated by Sir W. Heathcote. In the London University the only remaining candidates are Mr. Lowe and Mr. Quain, Q.C.; the former expects to walk over the course. The position and prospects of the candidates who offer themselves for election by the Scottish University constituencies have undergone no material change. We have received from Dr. Andrew Wood, the Chairman of Mr. Campbell Swinton's Committee, a copy of correspondence, wherein Mr. Swinton pledges himself to support the representation of the Profession in the Medical Council, together with measures of reform in the Army, Navy, and Poor-law Medical Services. Mr. Swinton, it will be remembered, is the Conservative candidate for the Universities of Edinburgh and St. Andrews.

Mr. Vanderbyl, who has always shown the deepest interest in all that concerns his old Profession, is again seeking the suffrages of the Liberal electors at Bridgewater. Mr. Vanderbyl has a right to expect all the assistance which the Profession in Bridgewater can render him. His strenuous, although unsuccessful endeavours, to procure modifications in the clauses of the Vaccination Bill which were generally held to be objectionable by the Profession, should not at this juncture be forgotten.

The venerable parent of our Medical societies, the Medical Society of London, commences a ninety-fifth year on Monday, Under the energetic and supporting treatment of the present President, Dr. Richardson, and the Council, the old lady has undoubtedly taken a new lease of her life. The apartments in George-street have been newly decorated and arranged, and the meetings, instead of being held fortnightly, are to take place on every Monday. Papers are, we hear, promised by many of the most able workers of the day, and a large accession of country Fellows has followed the promulgation of a new rule which provides that "Fellows elected into the Society while residing out of the metropolitan postal district shall be admitted upon payment of the entrance fee only, but shall be liable for their annual subscriptions on coming to live within the said district." The session will commence on Monday evening, at eight o'clock, when the President will read a paper "On Bloodletting as a Point of Scientific Practice." A subject of such practical importance treated by Dr. Richardson cannot fail to draw, and a large audience and animated debate may be expected.

The attractions of the Pathological Society are so powerful that it is scarcely necessary to remind our readers that its session commences on Tuesday, the 20th inst.

Amongst the newspaper paragraphs of the past week there has been a horrible tale of cruelty practised on a little boy, the subject of stone in the bladder, by a brutal stepfather, who visited the child's loss of power over the sphincter muscles with the most barbarous treatment. The case occurred at Cirencester, and was brought to light by Mr. Hodges, M.B., the parochial Surgeon. The stepfather has been sentenced to four months' imprisonment with hard labour; and the boy has been successfully operated on for stone in the workhouse infirmary by Mr. Hodges, and is said to be rapidly gaining flesh and strength.

Poisoning by spirits is not uncommon, but acute poisoning by wine is certainly rare. A pauper, however, has died in Islington from drinking port wine from a gutter into which it had flowed from a pipe that had burst in a neighbouring cellar. The man fell down insensible, and was taken to the union, when a pint and a half of wine was removed from his stomach by the pump; but he died a few minutes afterwards. It would be interesting to know the percentage of alcohol in the so-called wine.

We have received a Salford paper containing a report by Dr. Syson, the Medical Officer of Health, on the causes of the recent high death-rate in that town, which in August and September rose as high as 42·3 per week. The diseases producing this great mortality seem to have been typhoid fever and infantile diarrhœa; its causes, filthy privies and untrapped drains. But one of the most remarkable statements in Dr. Sysons' able report is that at least 25 per cent. of the children who die in Salford are attended and certified for by druggists. We commend this fact to the consideration of the Pharmaceutical Society and to the Medical members of the new Parliament.

We regret to notice the death of a distinguished son of a distinguished father. Dr. W. Bird Herapath, the analytical chemist, and son of Mr. W. Herapath, of toxicological celebrity, died on Monday last at Bristol, it is said from jaundice. Dr. Herapath's attainments as a toxicological chemist were undoubtedly very high, and his death entails a great loss on that branch of Medical science.

At a Convocation of the University of Oxford, held on October 10, Mr. Marmaduke Alexander Lawson, M.A., was admitted to the Professorship of Botany, having been appointed to the Chair by the Royal College of Physicians.

A large meeting of the supporters of and subscribers to the Medical Club was held on Wednesday, the 14th inst., Sir William Fergusson presiding. A somewhat stormy debate on the management of the Club took place, which was brought to a close by the adoption of a resolution that "the questions of the future government of the Club and the responsibility of its members" should be referred to the Committee for consideration, and that a meeting for the reception of the report of the Committee be called on November 14. The Club now numbers about 700 members.

Amongst the incidents of the week which may serve to point a moral is the case of a man who was summoned, at the Bloomsbury County Court, by a Professor of the Royal

Academy of Music, to pay for some music lessons given to his daughter. He possessed, amongst other furniture, a piano, on which his daughter practised, and he confessed to holding two shares in a building society, and having other investments, on which, however, he said he had borrowed money. He pleaded inability to pay—said that he was a beggar, and that whilst the music lessons were being given his family were in receipt of outdoor relief from the parish. In contrast with this case, we place another which occurred last week in St. Luke's. A needlewoman, named Hester Roberts, having been refused outdoor relief, and declining to enter the house, was found lying dead in a corner of her room. She had no bed nor bedding, and all the furniture was a broken table and two chairs without bottoms. The post-mortem examination showed extreme emaciation, and not a trace of food in the stomach or intestines. Certainly our Poor-law system of relief is not perfect. With a proper system of inspection, neither of these cases would be possible.

COLOURED SOCKS.

It seems that there is really truth in the statement that certain colouring matters used in dyeing socks are capable of producing severe eczema in the human skin. For the observation of this fact the public is undoubtedly indebted to Mr. Webber, who evidently has had no small trouble in getting a hearing for one of the most curious facts in the causation of disease with which we are acquainted. We believe Mr. Webber is still busily engaged in investigating the matter to its bottom. In order to set the question of arsenic at rest, we obtained, from a well-known chemical Professor, an analysis of a sock, which had been proved to produce the effect even after washing; but he was unable to discover the presence of the metal by the most delicate tests. Arsenic, therefore, is out of court. We may add that Mr. Webber recommends glycerine as the best application for eczema arising from this cause.

A VERY HARD CASE.

We have already had occasion to remark on the hardships connected with the life of an Irish Poor-law Medical officer; but the case of Dr. Suffield, of the Clifden Union, County Galway, presents features calling for peculiar sympathy. For twenty-seven years he has served the Poor-law authorities, and now, being incapacitated by disease acquired from the hardships connected with their service, he seeks in vain for a superannuation allowance. A law was passed long after he had served the full time necessary for securing a pension limiting these allowances to those who had devoted their whole time to the service of the State, and it is this which occasions the difficulty with regard to Dr. Suffield. For performing his too arduous duty, being at the beck and call of every one morning, noon, and night, Dr. Suffield received the munificent salary of £60. His superannuation allowance would be £40, or about fifteen shillings a week; yet the Poor-law authorities refuse it. We shall allow Dr. Suffield to tell his own story.

"I presume that the difficulty is that I did not devote my whole time to the duties of my office. As to the other facts, there can be no question that for over twenty years I acted as Medical Officer to Clifden Workhouse; that I was forced to resign from continued ill health, broken down in your service; and that I am now rendered helpless by disease, and incapacitated from making any exertion. Now, as to my whole time not being devoted to my workhouse duties. It appears that I was appointed as your Medical officer in the year 1848, by a vacancy caused by the then Medical officer having died from violent typhus fever, which raged in your workhouse. This was in the midst of the famine years, and now I fearlessly assert that for many years after my appointment I did devote my whole time to the discharge of my workhouse duties, not only in attending to the sick and dying, but also in assisting to procure food and other necessaries for the pauper inmates. I have frequently been engaged at your workhouse from an early hour in the morning till ten, eleven, and twelve o'clock at night, and when cholera and typhus fever prevailed, I scarcely obtained time to eat my meals. I had the workhouse, a fever and cholera Hospital in Clifden, five auxiliary workhouses in different localities under my care, one of them at Bunowen, a distance of eight miles from Clifden. I need not tell you, to do justice to all these I must have devoted *my whole* time to my workhouse duties. So far did this reach that, during the years I allude to, the Board of Health then existing in Dublin were obliged to send down two Medical men from Dublin to take charge of my dispensary duties, as I was unable to meet them, my whole time being taken up in the discharge of my workhouse duties."

Comment on such a case is useless. A man of education has spent his life and given his strength in a service for which, if for any, he ought to be rewarded, but for which he received the miserable pittance which would be rejected by a mere mechanic. Now, when he is disabled, he is to be left to starve. Such treatment speaks volumes as to the desirability of entering such a service. Most frequently, in such cases, the guardians are to blame; here it is the central authority.

FROM ABROAD.—THE PARIS FACULTY—THE FRENCH LUNACY LAWS – ARGENTINE ALBUMINURIA.

M. Latour, after contrasting the indifference which now prevails regarding the changes which have recently taken place in the Paris Faculty, with the animated interest which formerly attended the bestowal of vacant chairs through the *concours*, observes :—

"For some time past these changes have been so frequent and so rapid, in nominations, mutations, and permutations, that it has become very difficult always to realise their significance, to understand their motives, and appreciate their reason. The mind is lost amidst this constant crossing of chairs, and one ends by asking whether this high Medical Instruction is instituted for the public interest, or for the gratification of certain personal conveniences. Opinion becomes less and less favourable to an institution which presents all the inconveniences of a monopoly, without conferring any of its advantages. To this kind of anarchy prevailing in our Faculty, exhibiting itself especially by unexpected competitions of Professors for chairs to which they have never been nominated, by successive transmigrations from chair to chair, and by these changes at sight in vocations and aptitudes—to these causes, we say, must be attributed the progress made in the aspirations, often ill enough defined, for the 'liberty of Medical teaching.' That which we have, says opinion, is not good; let us seek for something else. In this way, by the abandonment of rules and principles, the most useful institutions lose their *prestige*, their activity, and their authority.

"Amidst the large batch of Professors that has entered the Faculty during the last eighteen months, only a few seem contented with their position. Almost all the others have exchanged or demanded permission to exchange. This is very strange. Scarcely have they had time to prepare the programmes of their courses, or have lectured for a few months, when an irresistible vocation impels them to another subject of teaching. It would seem that at the present time one may enter the Faculty for any chair, taking care to place one's hat on the next chair likely to be vacant. This may be convenient enough, but we have a right to ask whether the interests of Medical teaching and the instruction of the pupils are sufficiently guaranteed and taken care of during these constant mutations. Can it be that some of the professors, so anxious for change, have not found that eagerness around their chairs they had expected, and have not enjoyed the privilege of attracting pupils hoped for at their nomination? That has been said of several of them, and, if it be true, it is indeed a singular mode of justifying permutation. Is the professor of pathology, who has not succeeded in attracting pupils to his didactic lectures, likely to be more fortunate in a clinical chair? The clinical chair left vacant by the death of M. Monneret is much sought for, and will be filled up by permutation. But, if rumour is correct, this permutation is especially sought for by three professors, who, it is true, are newly made, but who have met with success in the chairs they now, with some ingratitude, seek to abandon—viz., M. Lasègue, Professor of General Pathology, who has succeeded in attracting a large class for a difficult subject, towards which pupils are little disposed; M. Hardy, Professor of Therapeutics,

whose lectures are well attended; and M. Sée, a great favourite with the pupils."

Our readers are aware that there has been of late a great outcry in France respecting the confinement of alleged lunatics, and that the political newspapers, together with several petitioners to the Senate, maintain that efficient guarantees against this practice do not exist. On the other hand, the officers connected with asylums, both public and private, as also the Profession at large, maintain that the law of 1838, by the provisions of which the incarceration is regulated, gives every security that is requisite, and, indeed, more than enough, for many persons are at large and in prisons who, for their own sakes as well as for the welfare of society, would be much better within asylums. M. Bouchard has commenced a series of interesting articles upon the subject in the *Gazette Hebdomadaire*. He observes that the system of keeping silence respecting alleged abuses, instead of boldly meeting the charges and reducing them to their true and exceptional value, has been very mischievous, and has powerfully aided the growth of prejudice in the public mind. This has been further fostered by the contemptuous opinions expressed by some of the judges, and by a man in so high a position as M. Troplong, as to the insufficiency of Medical evidence in proof of the existence of insanity, and the slight grounds on which the diagnosis and prognosis are based. Still, as M. Bouchard admits, in some of these opinions there is a certain amount of truth.

"We frequently meet with certificates of insanity that denote remarkable ignorance on the part of Practitioners, and doubtless M. Troplong, during his long career, has met with plenty of Medical noodles, just as he has met with incapable magistrates and clumsy advocates. It is indeed remarkable that among men who, for the most part, pursue their calling in a creditable manner, we find so many Practitioners absolutely incapable within the province of mental alienation. We must not shrink from avowing that among fifty of these there may not be more than one who is capable of thoroughly appreciating the condition of a lunatic. As a general rule, what they know of insanity is little more than what is known by the world at large. And, indeed, how can it be otherwise when the State, which confers degrees and determines on instruction, has no chairs for psychiatry, and when pupils are almost everywhere formally interdicted from access to asylums? Those who have had the opportunity of seeing lunatics before the time when they are called upon to take care of them, or to act as experts with respect to them, are very fortunate exceptions. All the others are necessarily incapable, and it would indeed be a misfortune that their signatures could deprive a person of his liberty, if the sequestration were not liable to be immediately annulled by another Practitioner habituated to the care of lunatics, and in general possessed of ample psychiatrical information."

To the taunt that insanity cannot be defined, and that we are dealing with a mere abstraction, M. Bouchard replies that it is not usual in other diseases to defer their treatment until we are satisfied as to the correctness of their definition, and all he requires is that insanity should be placed in the same category with other diseases. We may be thoroughly and justly convinced of its reality as such without being able to circumscribe it within any unexceptionable definition.

"Insanity, being a disease, should be studied and treated medically, for it is curable; and if in a court of law we wish to be assured whether it is real or feigned, we must resort to the man who is conversant with lunatics, and has long studied their peculiarities. We must seek out the savant who is also a man of honour and of good sense—three guarantees that we do not, it is true, always find united, but from which the fact of being a Physician is no exclusion. I am well aware that I shall have objected to me Medical errors and exaggerations. These I accept: but what is to be done? Is the fear of error to condemn us to absolute immobility? We must act, proceeding even in the shade, without waiting for the advent of perfect science and the brightness of broad daylight. Because I may have been once deceived, am I to abandon those who are best informed, to advise with the most ignorant? I need not insist on this, but conclude by saying: In the scientific as in the social point of view the lunatic may become a dangerous person, but before all things he is a sick person. From this double character a double obligation results, for we have to protect the lunatic against himself, and also to protect society against him. We have moreover to care for him, as from the very nature of his malady he resists all treatment, and, so to say, to force him back to reason. Protection and assistance are the two obligations which logically ensue."

The regulations and operations of the law of 1838 M. Bouchard will consider in a future article.

In its *clinique hebdomadaire* of October 10, the *Gazette des Hôpitaux* calls attention to the production of albuminuria as one of the results of the prolonged administration of the nitrate of silver. This substance is now so frequently resorted to in consequence of the success with which Wunderlich, Charcot, and Vulpian have employed it in locomotor ataxy, that its possible ill-effects require to be made known. The slate colouring of the skin from its prolonged use is familiar to all, and recent investigation has shown that a kind of general impregnation of the economy takes place. MM. Charcot and Ball, in their article "Argent" in the new edition of the *Dictionnaire des Sciences Médicales*, now publishing, relate the results of series of experiments which they have performed on dogs. In those which succumbed to intercurrent affections, having taken medicinal doses of the nitrate during a month or six weeks, a singular circumstance was observed. While the mucous membrane of the stomach and of the upper part of the duodenum presented its natural colour, a little lower down the slaty colour was observed, which became more and more deep as the end of the ileum was approached, its maximum being reached immediately above the ileo-cæcal valve. Here it suddenly ceased, the normal colour reappearing in the cæcum to be presently replaced by the slaty tinge, the lower portion of the rectum attaining the maximum of discoloration. When the nitrate had been administered for a longer period, the intestinal mucous membrane became more uniformly slate-coloured, and the decided line of demarcation between the jejunum and ileum no longer existed. After two or three months, however, another phenomenon appeared, the subjects exhibiting black spots of the gums opposite the necks of the teeth, and especially of the canines.

According to MM. Charcot and Vulpian's observations on man, the effects of the nitrate are divisible into four periods. During the first there is no irritation of the intestinal canal produced, unless gastralgia arise from too large a dose, itching of the skin, or sometimes a little papular erythema, being all that is observed. When a more or less quantity has been absorbed (the minimum being a total of thirty grains), a deep blue line is observed at the necks of the teeth, the buccal membrane also exhibiting black patches. This is generally after about three months' administration; and when the nitrate is still longer continued the blackened skin may be produced. To these three periods a fourth may be added, which is characterised by a general impregnation of the economy, producing black granulations in most of the tissues and viscera. To one of these organs, the kidneys, M. Lionville has lately directed attention, while communicating a case to the Biological Society. A woman, aged 34, the subject of locomotor ataxy, died in the Salpêtrière. During nine months of 1862-63 she had taken, in small doses, about 105 grains of the nitrate. The improvement which at first occurred did not continue, and other means were tried; but in 1868, although five years had elapsed since she had left off the nitrate, there was some discoloration of the skin and a blue line at the gingival edges of the teeth. At the autopsy, among other morbid appearances, the kidneys, supra-renal capsules, and choroid plexuses were found impregnated with the nitrate. On dividing the kidneys they were found sprinkled with small isolated black or blue points or grains, the Malpighian glomeruli being discoloured by them not only on their contour, but their interior. The impregnation was almost confined to

the cortical substance. Numerous alterations, resembling the granulo-fatty lesions in Bright's disease, were observed, and the urine was observed several times during life to be albuminous. It would seem, then, that another special form of albuminuria may be described, analogous to that produced by lead, and termed by Ollivier saturnine albuminuria. It is desirable, therefore, during the prolonged administration of the nitrate, that the urine should be examined from time to time in order to see whether its suspension may not be indicated in this direction.

OPENING OF THE MEDICAL SCHOOLS.

(*Continued from page* 428.)

MANCHESTER ROYAL SCHOOL OF MEDICINE.

The Introductory Address was delivered, at the commencement of the Session 1868-69, by Dr. Henry Simpson. He said: This, gentlemen, is a restless age. There is no quiet journeying by easy stages, but a scream, a whistle, and where are you? You must change at every station. All things come under review. Reverence is gone, authority is dead. Everything is questioned, and sometimes, before an answer can be given, the fiat goes forth—"Sweep it away!" There is said to be no harm in all this. It is merely the spirit of the age. And as savages kill off their old relations, so some would consign the innocent introductory lecture, along with most other institutions with any antiquity to vouch for their respectability, to the limbo of forgotten things, as it serves, according to them, merely for the airing of wise saws and empty platitudes. But they forget that the lecture is a centre around which other attractions cluster. They forget that men are not made up of lines and angles only; that old times and old memories have a charm that leads the student of years gone by to visit once more his *alma mater*, and be reminded of former days, when he sees them mirrored in the student of to-day. Whatever the lecture may be, "old students"—proud of a title which carries them back to the dawn of their Professional life, and tells us that though freed from academic restraints and the fetters of a curriculum, they are and ever will be students still—are glad of the opportunity of again recalling the scenes of former toil and pleasure, and of conjuring back the time when responsibility was sought for and care sat lightly.

I shall endeavour to bear in mind, that though a discourse is sometimes valued for its breadth, sometimes for its depth, it is seldom thought the better of for its length.

One thing, gentlemen, I may say, and no one will contradict me. You have a great deal of work to do in the next three or four years. You will find enough and more than enough for all your working hours. And I may add, that on the manner in which this period is spent—on the use you make of your opportunities, your prospects for life depend. It follows, then, that you should dispose of your time with thoughtful economy.

There is nothing we are so apt to estimate erroneously, when young, as the amount of work we can accomplish in a given time, and the speed at which that time passes. A year seems a vague and almost endless future, and our power of work in it equally without limit, until we sit down and begin. Hence the temptation to give to-day to pleasure and to-morrow to work, feeling sure that the morrow will give us abundance of opportunity and a strong inclination for work. And so the thief, procrastination, steals our time. . . . . .

The only way, gentlemen, to attack the work before you successfully, is to do it with method. Calculate the amount to be done and the time you have for it; then divide and arrange it in the way that seems best. Do not work without a definite plan—if you do, you will often find that the time goes in discussing with yourself what you shall do, instead of doing anything at all. And when your scheme of work is carefully thought out, keep to it rigidly. It will give you a vigour and directness in your work which you will find of great value. But do not err by attempting too much—you must pay due regard to your health and recreation, and I assume that your recreations will be such as conduce to health. The truest enjoyment and the best results as regards health will be found in athletic exercises, used in moderation, and out-door amusements, and they will be the best counterpoises to hard reading, dissecting, and Hospital practice. Taste and inclination will lead you to choose variously, and the only caution needed is, not to allow what is intended as a relief and a rest from mental toil, to become an engrossing pursuit, and supplant what it should only supplement. Your heads will be clearer and your brow cooler the day after a game of cricket, an eight-mile walk, or a pull even on the pellucid Manchester waters, than after a night at a crowded theatre, or whist till three in the morning; and one or two hours a day spent in active exercise will not count against you at the close of your student-career. Steady, persevering, regular work will before long begin to tell, and week by week your task will become more manageable. But this satisfactory progress can only be made by systematic, methodical application, involving much self-denial. It is not to be gained by spasmodic efforts of close reading, alternated by periods of simple indolence or feverish dissipation. None of you will ever regret a day of pleasure given up for one of honest work; but it is possible that some may lament the converse.

What has just been said of the need for self-denying perseverance is applicable to the majority among you; but some of you, endowed, or supposed to be endowed, with abilities above the average, may affect to despise such common-place suggestions. You may be under the impression that you can live hard, and read hard, and may indulge in fancy pictures of yourselves, with the traditional wet towel about your heads, looking, by the light of the midnight lamp, like a halo round the brow, making up for lost time by what you would call a "vigorous spurt." The tortoise and the hare, with the result reversed, will occur to your minds; but it is unsafe for any of you to suppose that your mental powers are greater than those of your neighbours. You may have formed an erroneous and partial estimate, and the result may be discreditable failure. But if these gifts be yours, if, in spite of idleness, dissipation, and damaged health, you succeed in obtaining the legal qualifications to practise, you will ever have the consciousness of rich gifts too little valued—of great powers thrown away. No spectacle is so sad, or so contemptible, as a wasted life. It is a grievous thing to see one with brilliant talents, well fitted to aid in solving the many unsolved problems still before us, sink down to mediocrity, or lower still, and to know that careless over-confidence, an absence of high aims and moral tone, have lost to the world results of unknown value, and that names which might have stood high in the ranks of science will pass away unhonoured and unknown.

Brilliant powers, however, are not required for honourable and useful life. Most great works are the result of the plodding, persevering industry of men more intent on the subject they were toiling at than on the talents they were using. And in your own special calling the chances are in favour of the energetic, earnest student, of fair average ability, rather than of the brilliant genius who thinks he can evolve from his inner consciousness all the hard facts he will need for his examinations. Nothing is so safe, or so likely to lead to success, as genuine honest work. You may see proofs of it every day. It is not long since I heard one of the most deservedly successful men in our Profession—Sir William Jenner, to whose teaching and example I gratefully look back—attribute the whole of his good fortune, as some would call it, to steady, honest work. The keener the intellect, the more to be deplored if it remain a "waste product," and the greater the responsibility of its possessor. If you aim at success in life, remember that the game is played with the lives of your fellow-men. None of you will be too learned, too wise, for the calling you have chosen, for, next to one other, it is the noblest a man can follow. . . .

One hears occasionally a good deal as to the social status of the Medical Profession, and a definite point in the scale is said to mark its position. But you will find that you must make your own social standing. In our Profession, as in most others, there are various grades, and it lies in the power of the individual to place himself very much where he pleases. Even in this metropolis of trade, where the "guinea stamp" is looked upon with marked respect, and where, according to its enemies, a purse of exceptional length indicates the possession of all the virtues, or, at any rate, calls forth the charity which hides a multitude of peculiarities, the man of culture and good breeding will find the people not only given to mammon, but ready to value qualities which those may have who will, but which, at the same time, cannot be purchased.

But while you need not despise, but may take of the pleasures of society in moderation and as a rest from toil, do not look to it for profit or advancement. You will be called for in sickness, not because you are useful or even ornamental guests at a dinner-table, but because you are believed to be good Doctors. And as your lot in life may be cast among the poor, or those whose tastes and avocations unfit them for your associates, it is a satisfaction to know that the interest of your calling, if you are earnest in its pursuit, will render you more independent than most men of extraneous resources; and that the man who labours among the poor may be as able and honourable, and follow a career as useful, as he to whom the smiles of fashion are familiar.

SHEFFIELD SCHOOL OF MEDICINE.

Mr. Sorby took for his subject the uses of the spectrum analysis, in which he has earned so much distinction. Spectrum analysis, he said, is really nothing more than a very refined and accurate method of distinguishing substances by their colour. This is of course very commonly employed—for example, we at once recognise the difference between gold and silver—and it is also a most important means of distinguishing substances which give coloured precipitates on the addition of particular chemical reagents. The chief advantage in spectrum analysis is that it enables us to distinguish colours which are almost or quite the same, when viewed in the ordinary manner, and at the same time also enables us to detect a substance, even when the natural colour is completely changed by its being mixed with another coloured substance. However, as in judging merely from colour, we should not rely on one condition alone. We all know that a metal may look yellow like gold and yet be only brass, and we soon decide which it is by the weight or some simple test. In the same manner it is quite possible that in certain conditions two distinct substances may give so nearly the same spectra that it would not be desirable to trust to one spectrum alone, but by adding some reagent they may be made so completely different that there could be no more doubt. In illustration of these facts, I could scarcely choose a better substance than blood, even if it were not desirable to restrict our attention to a particular class of facts. The remarkable spectrum of blood exposed to the air, which must be considered equivalent to that of arterial blood, is rapidly changed by deoxidising reagents, or more slowly by being kept from contact with the air, and becomes the equivalent to the spectrum of venous blood. This change in the blood can be easily followed by the change in the spectrum, and clearly shows that various substances contained in the blood have the power of depriving the colouring matter of arterial blood of part of its oxygen, which is again restored to it by exposure to the air. I need not say that this interesting discovery of Stokes's throws a great amount of new light on the phenomena of the circulation. Then, again, we may add a little acid to blood, and watch the gradual change in the spectrum; and on adding excess of ammonia we notice that the original spectrum is not restored; thus proving that weak acids do actually change the colouring matter into a new substance. This, like that in arterial blood, can be quickly deoxidised by deoxidising reagents, and gives a new and very remarkable spectrum of the greatest value in detecting blood-stains. If, after having been acted on by citric acid, excess of ammonia be added, and this solution be sealed up in a glass tube, a slow process of deoxidisation takes place, so that in the course of a year or two the spectrum of the deoxidised hæmatine is seen to very great perfection. It had been noticed that when animals had been poisoned by breathing carbonic oxide, the blood remained of a very bright scarlet colour. This led to the study of the spectrum of a solution of blood through which carbonic acid had been passed. It seems as if carbonic oxide can replace the oxygen in arterial blood, and that it cannot be removed by either oxidising or deoxidising reagents. I have kept such a solution for months in a tube, and it has not undergone any change. The spectrum is nearly the same as that of arterial blood, but yet differs from it very perceptibly in having the absorptive bands a little nearer the blue end. That the circulating fluids in some of the lower animals, which do not contain the same colouring matter as the blood of the vertebrata, contain a substance which can exist in an oxidised and deoxidised state, may also be ascertained from the spectra. This I have proved in the case of some red insects; and Mr. Ray Lankester has also observed other similar cases. Evidently, therefore, the transformation of their tissues is thus brought about in the same sort of way as that of higher organisms, by the transference of oxygen from a peculiar state of combination; and probably this may occur in other cases where the fact cannot be proved by means of the spectrum. Before leaving the question of blood it will be well to say a few words about its detection. There is no difficulty in detecting as small a quantity as the hundredth part of a grain in cases where the usual methods would entirely fail, and this has been applied with complete success in several important trials. I also find that the spectrum method may be employed to great advantage in detecting very small quantities of blood in urine. For this purpose a long experiment tube should be used, in order to observe the effect of a long column, and by that means as small a quantity as one ten-thousandth can be recognised. This is equivalent to about one grain to a pint, and is so little that it produces scarcely any effect on the general colour. The study of bile by means of the spectrum microscope was long since pressed on my attention by Dr. Letheby; and I have always thought that it was a promising field of inquiry. Our friend, Dr. Frank-Smith, has examined the question, and was kind enough to show me some of his preparations. In concluding, Mr. Sorby pressed on the pupils the absolute necessity of perseverance.

GENERAL CORRESPONDENCE.

COLOURED SOCKS AND ECZEMA.

Letter from Dr. J. Gibbs Blake.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send you the following particulars of a case of eczema of the feet produced twice by wearing the same pair of socks, the second time after being well washed; and I also enclose one of the socks for analysis:—

J. K., aged 35, a man in tolerably good health, June 22, 1868, reported that yesterday he first noticed an eruption on his feet, which are much swollen and itch a great deal; as far as the socks extend the eruption goes, and consists of vesicles like those of ordinary eczema, full of clear watery fluid, with inflamed base. The eruption appears in rings around both legs and feet, exactly corresponding with the red bands of the socks; some of these bands are narrow, almost linear, so are the lines of eruption corresponding. A week later he came again, and the feet were so swollen and painful that he could not walk; he then lay up for a week, and with fomentations, etc., he got well; but for many days after the brown stains of the skin marked the pattern of the socks upon the feet. On September 14 he came again and told me that the socks had been well washed and put away, but that inadvertently he had put them on again for a few hours yesterday; but the feet very soon began to tingle, and he took them off as soon as he was able, but not soon enough, for the feet are again marked with a pattern of eczema, more slight, however, than the former attack and of shorter duration. I am, &c.

J. Gibbs Blake, M.D. Lond.

24, Colmore-row, Birmingham, Oct. 12.

*** The sock in question has been submitted to analysis by an able chemist, who writes:—"There is not a trace of arsenic to be found in the red stripes of the sock you sent me. I have used the most delicate test known."

RELATION OF PHTHISIS TO DAMPNESS OF SOIL.

Letter from Mr. A. B. Middleton.

[To the Editor of the Medical Times and Gazette.]

Sir,—Finding that much attention is now being paid to the causation of phthisis by wet subsoil both in America and Continental Europe, in the former by Dr. Bowditch, and in the latter, as I see in your journal of December 14, 1867, by Dr. Gross, of Berne—also finding that in England the Privy Council Report of 1867, and various journals, since its appearance, contain references to the same fact, all of which wrongly attribute its first public notice in England to Dr. Buchanan—I shall feel much obliged by your recording the exact origin of such discovery in this country, the main circumstances of which are detailed in the accompanying pamphlet. Briefly stated, the facts are consecutively:—Sixteen years ago I caused deep drainage to be done at Salisbury; in

1864, publicly noted the effects of those works upon phthisis, and formed a theory that moisture mainly caused phthisis; in 1865, explained that theory to Dr. Buchanan, and urged his special attention to the subject; at first Dr. Buchanan did not find corroborating facts, but afterwards did find them very abundantly in many towns, as tabulated in the Privy Council Report of 1867.

As far as I can learn from comparison of dates, I can fairly claim, by means of Salisbury drainage as a true *experimentum crucis*, to have founded, and in my paper read at Bath in 1864 to have first publicly noted in England, an important fact, since further corroborated by Dr. Buchanan and others.

I may remark that the paper read at Bath, published as a pamphlet, entitled "Benefits of Sanitary Reform in Salisbury," received very warm commendations in your first volume for 1865.

Salisbury city, with only four exceptions out of twenty-eight English cities, being the highest (150 feet) above the sea level, and, since drainage, being also one of the driest, it is worthy of note that both conditions suggested by Dr. Gross, in the *Journal de la Société de Statistique*, and quoted in your article before alluded to as *desiderata* against phthisis, are possessed by Salisbury city—good elevation above the sea and a dry subsoil. I am, &c.

A. B. Middleton, M.R.C.S. England.

The Close, Salisbury, Oct. 5.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 23, 1868.

Henry Lee, Esq., F.R.C.S., Vice-President, in the Chair.

Dr. Edward Ballard read a paper entitled

STUDY OF THE INFLUENCE OF WEATHER AND SEASONS UPON PUBLIC HEALTH.

II. Comparison of the Influence of Variations of Temperature upon General Sickness in the Colder and Warmer Seasons of the Year.—This paper is in continuation of a former paper in which the influence of a rise of mean temperature in producing an increase of general sickness, and of a fall in producing a decrease of general sickness, was established, as well as the limits within which this operation is exerted. The question now discussed is whether the influence of a rise or fall of mean temperature is similarly exercised in the colder and warmer seasons of the year. Drawing a line at 50° of mean weekly temperature, the author tabulates the results of his observations as to increase or decrease of sickness with rises or falls of mean temperature, as in his former communication, keeping separate the 191 weeks of which the mean temperature was below 50°, and the 198 weeks of which the mean temperature was 50° and upwards. It is observable that the two sets of tables thus constructed unite in confirming many of the inferences drawn in the previous paper. But then the fact comes out that, whether we regard the frequency with which increase of sickness occurs in association with rises of mean temperature, and decrease of sickness with falls, or whether we regard the clear gain by way of increase of sickness as the result of the conditions operating in the weeks of rise, or by way of decrease in the weeks of fall, or the amount of increase or decrease of sickness in each set of weeks, the grand result is that, on the whole, the association of increase of sickness with rises of mean temperature and of decrease of sickness with falls is very much more marked in the *colder* than in the warmer seasons of the year. The author points out that this difference in result is probably in great measure due to the difference which exists in the diurnal range of temperature in the colder and warmer seasons—a subject which, however, he proposes to consider separately at a future time. The above points are fully wrought out in the paper, which concludes with a comparison of the frequency and force with which various supplementary meteorological conditions influenced the result of the rises and falls of mean temperature in the colder and warmer weeks respectively.

III. The Influence of Daily Range of Atmospheric Temperature.—In discussing the influence of variations of daily range of temperature upon the fluctuations of general sickness, the first question which arises is this—whether a mere alteration in the extent of the range (irrespective of whether it is by way of increase or diminution) has any influence. The data in the possession of the author supply him with a record of 393 weeks, the fluctuations of sickness in which are known, as well as the mean daily range of temperature. The weeks are the same as those employed in his former paper, with the addition of four weeks in which neither rise nor fall of mean temperature was noted. The author infers from his tables and the calculations based upon them that slight (under 2 degrees) and moderate (under 5 degrees) alterations of range tend to promote decrease of sickness, and so are favourable to public health; while, on the other hand, considerable alterations of daily range (5 degrees and upwards) tend to increase sickness, and so are detrimental to public health. Inquiring next whether the result of alteration of daily range is the same whether the alteration be by way of increase or of diminution of range, the conclusions arrived at are—1. That an increase of mean daily range, regarded generally, was in the weeks tabulated promotive of the occurrence of a decrease rather than of an increase of sickness; and, on the other hand, that a decrease of mean daily range was, on the whole, promotive of the occurrence of increase of sickness. 2. That, putting aside the weeks of slight alteration of range as those in which the effect of the variation of range was most likely to be disturbed by the predominant operation of other influences, there is reason to believe that a moderate increase of range promoted the occurrence of decrease of sickness more decidedly than did a moderate diminution of range; and 3. That a considerable increase of range was certainly not promotive of an increase of sickness, being apparently more or less antagonistic to it; while, on the other hand, a considerable diminution of range powerfully contributed to the occurrence of increase of sickness. The author then proceeds to inquire into the influence exerted by alterations of mean daily range upon the operation of rises and falls of mean temperature. Taking first their influence upon the operation of rises of mean temperature, which were shown in his former paper to promote increase of sickness, he infers from his tabulations that rises of mean temperature are assisted in their normal operation upon sickness by a simultaneous reduction of the daily range of temperature, and lessened in their normal operation by a simultaneous increase of the daily range of temperature; and that this fact is established by observing—1. That the clear gain by way of increase of sickness in the group of weeks in which rises of mean temperature were associated with reduction of daily range was greater, and in the group of weeks where the rises were associated with increase of daily range was less, than the relative extent of the rises might have been expected to occasion. 2. That the frequency with which increase of sickness occurred in the former group of weeks was greater, and in the latter group of weeks less, than the relative extent of the rises of mean weekly temperature might have been expected to occasion. 3. That in the weeks of increase of sickness there was plainly in operation some cause rendering the normal operation of the actual mean rises more powerful when associated with lessened range than when associated with increased daily range; and in the weeks of decrease of sickness there was also plainly in operation some cause rendering the influences at work to produce this abnormal result less powerful in the weeks of diminished than in those of increased daily range. 4. That considering separately the weeks of rise in which the daily range was slightly increased or diminished, moderately increased or diminished, and considerably increased or diminished, the only exception to the above facts was found in the weeks in which the daily range was only slightly altered. In these the clear gain by way of increase was greater in the weeks of slightly increased than in those of slightly diminished range—this being due apparently to the more frequent operation of other causes of increase of sickness, as yet unconsidered by the author, in the former than in the latter set of weeks, and to the fact that when such causes did thus operate to augment the normal influence of the rise, they operated very forcibly. Next, as to their influence upon the operation of falls of mean temperature, which were shown in the author's former paper to promote decrease of sickness, he infers from his tabulations that falls of mean temperature are assisted in their normal operation upon sickness by a simultaneous reduction of the daily range of temperature, and lessened in their normal operation by a simultaneous increase of the daily range; and that this is established by observing—1. That the clear gain by way of decrease of sickness in the

group of weeks in which falls of mean temperature were associated with reduction of daily range was greater, and in the group of weeks in which they were associated with increase of daily range was less than the relative extent of the falls might have been expected to occasion. 2. That the frequency with which decrease of sickness occurred in the former group of weeks was greater than in the latter—a fact partly accounted for, however, by the difference in the mean extent of the falls. 3. That in the weeks of decreased sickness there was obviously in operation some cause rendering the normal operation of the actual mean falls more powerful when associated with lessened than when associated with increased range. Other supplementary causes appear to have thrown into the shade the operation of alteration of range in those weeks in which increase of sickness abnormally occurred. 4. The exception to the above facts is to be found in those weeks in which the daily range was considerably altered. In these the clear gain by way of decrease of sickness, and the frequency of occurrence of decreased sickness, were both greater in the weeks of increased than of diminished range. This result was probably due to the overwhelming operation of other supplementary conditions not yet investigated by the author. Comparing, now, the influence of variations of mean daily range in the weeks of rise of mean temperature with that exerted in the weeks of fall of mean temperature, the author infers—1. That such influence is more obvious in the weeks of fall than in those of rise of mean temperature generally. 2. That this difference, more observable in respect of the amount of clear gain of increase or decrease of sickness than in respect of the frequency with which increase or decrease of sickness happened, probably resulted from the different frequency and force with which other more powerful supplementary conditions operated on the weeks of rise or fall respectively. 3. That in the weeks of rise these overwhelming supplementary conditions operated most obviously to disturb the result in the weeks of slight alteration of range, and in the weeks of fall most obviously in the weeks of considerable alteration of range.

A paper, by Dr. Reginald E. Thompson, was read on

PARALYSIS OF THE EXTENSORS.

The object of the present paper is to illustrate by six cases a form of paralysis which has hitherto, as far as the writer is aware, escaped description. The true nature of the paralysis was first recognised by the author in March, 1866, but no opportunity of verifying diagnosis was afforded by post-mortem examination until April, 1868. The form of paralysis is that which has been attributed only to lead poison or to hysteria. The extensors of the feet and hands are paralysed, either or both forms of paralysis being present; and this condition may be preceded by, or accompanied with, disturbed sensation—in two cases it was preceded by hyperæsthesia. In none of the cases was any history of lead poison obtained, nor was any blue line round the gums detected. The author is not aware of any cases of lead poisoning recorded where the extensors of the feet have been paralysed. The disease has also, to the writer's knowledge, been mistaken for hysteria, but in none of the cases was any spasmodic condition of the muscles observed which could be attributed to hysteria. *Case* 1.—A man, aged 41, was seen March 28, 1866, with paralysis of the extensors of the hands; the legs were also paralysed. He was a large corpulent man, and had been of intemperate habits. Two months before admission into Hospital he had suffered from pains in the limbs attributed to rheumatism. There was no evidence of rheumatism nor of lead poison. He improved slightly, but for a short time, under the bichloride of mercury. He was sent out incurable. *Case* 2.—A woman, aged 46, was admitted with a history of four weeks' illness. She suffered from paralysis of the extensors of the hands, and from paralysis of the legs; it was not then discovered whether the extensors only were affected. This woman had been lately very intemperate. Various remedies were tried, but she was sent out in four months incurable. *Case* 3.—A woman, aged 38, was admitted in a very nervous condition from delirium tremens. After she had been in the Hospital three weeks it was observed that she was losing the power of grasping; subsequently the hands dropped, and the feet became affected in the same way. No lead line could be detected about the gums. This patient was also sent out incurable. In this case there was considerable hyperæsthesia, and the patient would cry out when touched. *Case* 4.—A woman, aged 40, was admitted in 1846 with paralysis of the extensors of the hands. No history of lead poison, nor was there any blue line round the gums. She was subsequently seized with a succession of epileptic fits, in which condition she died. The brain was found to be anæmic and wet. The spinal cord was (apparently) not examined. *Case* 5.—A woman, aged 32, was admitted with paralysis of the extensors of the feet, of seven weeks' duration. The woman had for three months been drinking intemperately, through grief at the loss of a child. There was in this case commencing paralysis of the extensors of the hands. No signs of lead detected. She improved slightly under treatment. *Case* 6.—A girl, aged 19, of very intemperate habits, was admitted with well-marked paralysis of the extensors of the hands and feet. The extensors of the hands had been paralysed five months, those of the feet for a much shorter period. She was seized with epileptic convulsions three days after admission, and died. At the necropsy, the abdominal viscera were found perfectly healthy. The brain was anæmic and wet; the spinal cord was softened in two places; the softening might have been covered in each instance with a threepenny-piece, and was found opposite the sixth cervical and twelfth dorsal vertebræ. The posterior columns were the parts diseased. The musculo-spiral and peroneal nerves were much attenuated. The extensor muscles were in a very early stage of fatty degeneration.

Dr. W. H. Dickinson read a

DESCRIPTION OF THE SPINAL CORD IN A CASE OF TRAUMATIC TETANUS.

A man, 25 years of age, died in St. George's Hospital of tetanus, the result of a spike wound in the left hand. The tetanic symptoms were very violent, and produced death in eighteen and a half hours. At the post-mortem examination there was nothing requiring especial remark, excepting the condition of the spinal cord. This structure was intensely injected throughout, and presented three remarkable swellings upon its surface. An oval swelling, about the size and shape of a split bean, lay on the right side of the cervical enlargement between the roots of the nerves. A much larger tumefaction lay upon the posterior aspect of the cord in the lumbar region, causing the width of the cord in this situation to be nearly double what it ought. This swelling was about an inch in length, and involved both sides of the cord. About halfway between this enlargement and the lower end of the cord was a small hemispherical prominence, which lay on the left posterior column. These swellings all presented the same colour and texture as the adjoining part of the cord. A microscopic examination showed profound alterations which corresponded with the superficial tumefactions. The morbid changes were—First, a general intense injection of the cord, with dilatation of the blood-vessels, in the grey matter more than the white, and in the left posterior horn more than in the rest of the grey matter. Secondly, a structureless transparent exudation had been poured out around the blood-vessels in many situations, and, by its forcible intrusion into the tissue, had torn the cord in many situations, and had been the chief cause of the external swellings by the displacement it occasioned. Thirdly, there were certain circumscribed changes in the white columns. The cord was described in detail, following the changes from above downwards, and showing that the swellings in the cervical and upper lumbar regions were chiefly due to exudations in the grey matter, in the lower lumbar region to an exudation of the same sort in the left posterior column. It was surmised in conclusion that a change in the innervation of the blood-vessels had led to their distension, and formed the first tangible departure from the natural state, while the exudations described had resulted from a consequent forcible extrusion of the fluid portion of their contents. Further changes in the nervous elements were attributed to a solvent or disintegrating action, resulting from the contact of the effused material. It was shown that the morbid changes were developed almost equally along the whole length of the cord, and that they were manifested in the anterior and central parts of the grey matter on the side opposite to the original injury, in the postero-lateral white columns chiefly on the side from which the irritation had originated. The changes described were illustrated by drawings.

THE CLINICAL SOCIETY.

FRIDAY, OCTOBER 9.

JAMES PAGET, Esq., F.R.S., Vice-President, in the Chair.

Dr. W. Snow was elected a member of the Society.

The Chairman having mentioned that all members joining

the Society during the present session would receive copies of the first volume of *Transactions*,

Mr. PAGET proceeded to say:—I regret, as you do, the absence of our honoured President. No one who heard or read the address with which, in few and weighty words, he inaugurated our Society, can fail to wish that we might again to-night have been guided and encouraged by him. In his absence I invite you, at the wish of the Council, to commence the work of another session, and in doing so I think I may justly congratulate you on the success of the first year of our Society's existence. Already about 200 members are enrolled, and among them are, I think, nearly all the best workers in our best places for clinical study. What work was done in the last brief session is partly shown in the volume of *Transactions*, for the punctual publication of which we are indebted, as we are for much more of the useful and regular work of the Society, to our excellent Secretaries. But the *Transactions* only partly show the work done; they do not tell the knowledge elicited in discussions, or the activity of further inquiry which the discussions have provoked. They who look through our *Transactions* may think that the advice of our President was in one respect disregarded. He spoke very forcibly of the need of acquiring more accurate knowledge in the therapeutic part of our Profession, and told us of his hope that the Clinical Society would be of great value in the pursuit of this branch of knowledge. Yet among the contributions of last session there is not one that deals expressly with the value or means of using any single medicine. In reference to this matter, the Council have, I think, judged wisely in appointing committees for investigating the use of certain medicinal substances; and five committees are engaged in their several works as actively as may consist with the caution necessary in such researches. We may hope, I think, for great good from their combined inquiries; for surely, if there be one part of our science in which more than in all the rest our own beliefs need to be tested by the scrutiny of others, it is in respect of our belief in the use of medicines. The motives to believe ourselves possessed of more means of curing diseases than we really have are so many and so various, and some of them are so good, that we can hardly resist them. The several committees are desirous of receiving contributions from all members of the Society, and these contributions may be of any one of three different kinds, either of facts respecting the successful use of the medicines under study, or of facts relating to their failures, or of such as tell of the course of the diseases for which the several medicines are given when they are left alone. I venture to think that it is chiefly through want of knowledge on the last two of these three heads of inquiry that our therapeutic science is so uncertain. We are too apt to assume that every beneficial change following the use of medicines is caused by it, too ready to regard the seeming successes of treatment as being evident beyond dispute, and to put aside or explain away the failures as facts, the successes as things that may be explained away. And yet I suspect the history of Medicine would tell that in the case of most supposed and doubted remedies the facts have been on the side of the failures, the fallacies on that of the seeming successes. With these few words, I invite you to the beginning of your new year's work. We have every motive to induce us to prosecute it vigorously. Our best feelings must be stirred when we see the masses of human misery that can be alleviated by no human power but by that which may be gained by the exercise and increase of our knowledge. Our highest intellectual aspirations may be attracted by the magnitude and variety of the problems that are within our study, by the difficulties which, vast and deep as they are, will yet yield to steadfast work as surely as the rock to the ever-running stream. Our fair ambition for personal success may be excited by the opportunities for scientific contest which our discussions will offer, and which can never be too earnest, so long as they are consistent with Professional honour and mutual goodwill and the unswerving love of truth.

Dr. PEACOCK communicated an

ANALYTICAL SUMMARY OF 146 CASES OF ACUTE AND SUBACUTE RHEUMATISM.

Of these cases there were only eighty-four free from serious cardiac complication. Pericarditis was shown to be more common in cases of slighter rheumatism, and endocarditis in those of greater intensity. Pericarditis alone, often with endocarditis, occurred in the course of the attack in 11 per cent. of the cases; endocarditis alone in 25·3 per cent. In by far the greater number of these cases of recent complication the heart affection already existed at the time the patient was admitted. In the cases in which the rheumatism was of short duration at the time of admission or arose during the course of treatment, the evidences of disease generally wholly disappeared before the patient's discharge.

Dr. SIBSON desired to know, in respect of those cases in which Dr. Peacock considered that endocarditis had supervened during the attack of acute rheumatism, what method had been used to ascertain that no valvular disease had existed previously.

Dr. PEACOCK was well aware of the difficulty to which Dr. Sibson had referred, and was ready to admit that recent endocarditis could not be distinguished from old disease by the physical signs. He knew of no method by which the conclusion could be arrived at in any given case that the heart complication was recent, excepting that of carefully studying its previous history and progress. He had found the difficulty of discriminating between anæmic murmurs and those of organic origin still more serious than that to which Dr. Sibson had adverted.

Dr. SOUTHEY asked whether Dr. Peacock had observed differences between different years or periods in the liability of patients suffering from acute rheumatism to disease of the heart. He observed that during the last two or three years acute rheumatism was less frequently complicated with endocarditis than formerly, and that the complication was much more frequent in cases of long duration (*e.g.*, six weeks) than in those of rapid course, in which pericarditis was more common.

Dr. WILLIAMS stated that his attention had at a very early period been directed to the question under consideration. He thought that recent valvular disease might be distinguished from old by the variable shifting character of the murmurs. As regards the percentage of cases in which it occurred, much would depend on the mode of investigation, for the physical signs are so transient that unless observations are made daily throughout the whole progress of the case they are certain to be overlooked.

Mr. HULKE read an account of a case of

ICHTHYOSIS GLOSSÆ,

where, after nearly twenty years, epithelioma supervened. After considering various points in the history of the case, he favoured the idea that the two diseases occurred independently. The final supervention of epithelioma in the only two cases of ichthyosis glossæ which he had met with, and the anatomical parallelism presented by the very active multiplication of cells of an epithelial type in both diseases, were not, however, without significance.

Mr. PAGET had examined a similar case some years ago, which ended in epithelial cancer, one of the first cases in which epithelial cancer was described in this country. He doubted if there was a greater tendency in this ichthyosis to run into cancer than with other continued irritations, such as that caused by syphilitic diseases of the tongue. Cancer, without doubt, was provoked by the long-abiding influence of chronic irritation.

Dr. ANDREW CLARK had met with cases in which glass-blowers became subject to the formation of an opaque leathery sort of membrane, not warty, on the surface of the tongue. In two cases after the use of irritants cancer supervened. It seemed as though the continued irritation exhausted the local power of development, leaving the growing power to run riot.

Dr. DOUGLAS POWELL read a case of

PHTHISIS AND CONTRACTED LUNG,

in which the signs and symptoms closely resembled those of fibroid phthisis as described by Dr. A. Clark, notwithstanding that the history and the *post-mortem* results showed it to be a case of chronic tubercular disease. Dr. Powell postponed his remarks on treatment until two other cases (for the examination of which a committee was requested) had been considered.

Dr. FOX, in commenting upon Dr. Powell's case, observed that chronic pneumonia, the thickening of the alveolar walls, which result from the inhalation of irritating substances, and especially tubercle, frequently terminate in fibroid change. With reference to tubercle, he remarked that certain cases had lately been described as "fibroid phthisis," in which distinct granulations were found in the lung. As the result of his own personal observations, he imagined that these granulations were tubercle, and that the grounds for regarding them otherwise were purely arbitrary. The cases in question are so rare, that, in the absence of more distinct evidence of their independence of pneumonia or tubercle, we are not justified

in erecting them into a separate species. Admitting that there is a certain antecedent improbability that tubercle should attack one lung only, the cases may be fully explained on the hypothesis of a pneumonia, to which many facts in their history point.

A committee, consisting of Dr. Pollock and Dr. Andrew Clark, was appointed to investigate Dr. Powell's cases.

NEW BOOKS, WITH SHORT CRITIQUES.

St. Bartholomew's Hospital Reports. Edited by Dr. Andrew and Mr. Callender. Vol. IV. London: Longmans and Co. Pp. 336.

*** The first of the now annual volumes of Hospital reports, that by the staff of St. Bartholomew's, has just issued from the press. This year the volume is smaller than that of last year, but its contents are very valuable. Mr. Savory deals with spasmodic stricture, Dr. Ormerod with fatty degeneration, Mr. Holmes Coote with lithotomy and lithotrity. Two of the most important and interesting papers in the volume are by Dr. Gee on the subject of rickets. Mr. Holden writes on the removal of an enormous pendulous tumour from the back, and Mr. Callender deals with the subject of masked hernia. Dr. Church sends some contributions to cerebral pathology. Dr. Dyce Duckworth writes on molluscum contagiosum. Mr. Howard Marsh contributes some notes on diseases of the joints and on specimens added to the museum. Other writers on miscellaneous subjects are Mr. Barrow, Mr. Delagarde (of Exeter), Mr. B. J. Vernon, Mr. Jackman, Mr. Willett, Mr. Sympson, and Mr. Coombs.

The Transactions of the Clinical Society of London. Vol. I. Pp. 192.

*** The first fruits of this Society's labours are now before the public in the shape of a neat but small volume of *Transactions*. It might be questioned whether the publication of such a volume was advisable at this early period, seeing that the Society was scarcely in existence for three months during last session; but there are arguments on both sides of the question. It is perhaps a matter for regret that a Society formed chiefly for forwarding therapeutical inquiry should have issued a volume which does not contain a single contribution to our knowledge of that department of Medicine.

MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 8, 1868:—

Foss, Robert William, Stockton-on-Tees.
Fox, Richard Dacre, Beccles, Suffolk.
Haddelsey, Charles Turner, Whitechapel-road.
Higham, Joseph, Manchester.
Ilett, Geoffrey, Brigg, Lincolnshire.
Orton, John, jun., Foleshill.
Smith, William Woodriff, Sittingbourne.
Wharton, James Fraser, Durham.

The following gentleman also, on the same day, passed his First Examination:—

Dawson, Frederick W. E., Westminster Hospital.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

BELGRAVE, THOMAS B., M.D. Edin.—Lecturer on Medicine at St. Joseph's Missionary College, Mill Hill, London.

HILL, JOSEPH HIGHAM.—Medical Officer for the Male Inmates of St. Pancras Workhouse.

PAYNE, J. F., M.B. Oxon, M.R.C.P.—Physician to the St. George's (Hanover-square) Dispensary, Mount-street.

VINCENT, OSMAN, M.R.C.S.E.—Surgeon to the St. Marylebone General Dispensary, Welbeck-street, W.

WARD, W. DYSON.—Assistant-Surgeon to the West Riding House of Correction, at Wakefield.

NAVAL AND MILITARY APPOINTMENTS.

COLDSTREAM GUARDS.—Assistant-Surgeon John Henry Connel Whipple, M.D., from the 21st Foot, to be Assistant-Surgeon, *vice* Robert Farquharson, M.D., who resigns.

21ST FOOT.—Staff Assistant-Surgeon William Henry Garde, to be Assistant-Surgeon, *vice* Connel Whipple, M.D., appointed to the Coldstream Guards.

81ST FOOT.—Staff Surgeon William Marshall Webb, to be Surgeon, *vice* Grahame Auchinleck, M.D., who exchanges.

MEDICAL DEPARTMENT.—Surgeon Grahame Auchinleck, M.D., from the 81st Foot, to be Staff Surgeon, *vice* William Marshall Webb, who exchanges; Staff Assistant-Surgeon Frederick Mackenzie Skues, to be Staff Surgeon.

BIRTHS.

BRENCHLEY.—On October 11, at Denmark-hill, S., the wife of Horatio Coare Brenchley, Surgeon, of a son.

RENDELL.—On October 10, at 4, Anglesey-crescent, near Gosport, the wife of Surgeon W. J. Rendell, 2nd Battalion 13th (Prince Albert's) Light Infantry, of a son.

DUFF.—On August 6, at Shafton House, near Maritzburg, Natal, the wife of A. Groves Duff, M.D. (late of H.M.'s Bengal Army), of a daughter.

MARRIAGES.

ATKINSON—MORTON.—On August 1 last, at All Saints Church, Sandhurst, Australia, by the Rev. W. R. Croxton, Harry Leigh Atkinson, M.D., eldest son of the late John Atkinson, Surgeon, formerly of Wenverthorpe, to Christiana, youngest daughter of the late Captain John Morton.

BROWNE—WATSON.—On October 7, at the Congregational Chapel, Upper Clapton, Henry Browne, Physician, of Manchester, to Sophia, daughter of the late Joseph Watson, Esq., Christopher-street, Finsbury-square, London. No cards.

COUPER—CAMPBELL.—On October 13, at St. John's Church, Edinburgh, John Couper, F.R.C.S., M.D., of 28, Park-street, Grosvenor-square, London, to Helen Macfarlan, daughter of the late Alexander Elliott Campbell, M.D., Surgeon in H.M.'s 1st Regiment of Life Guards.

DEAN—MACCORMAC.—On October 8, at St. Ann's Church, Belfast, Joshua Dean, Esq., 5, Westminster-chambers, London, and Bickley, Kent, to Elizabeth, third and youngest daughter of Henry MacCormac, M.D., Belfast. No cards.

FINCH—BEATTIE.—On October 8, at Holy Trinity Church, Paddington, Walter John Finch, R.A., to Alice Frances, daughter of Alexander Beattie, M.D., 45, Porchester-terrace. No cards.

NESHAM—ANDERSON.—On October 8, at St. Peter's Church, Newcastle-on-Tyne, Thomas Cargill Nesham, M.D., youngest son of William Nesham, Surgeon, of Newcastle-upon-Tyne, to Caroline Jane, youngest daughter of the late Robert Anderson, Esq., of the Branch Bank of England, Newcastle-upon-Tyne. No cards.

TURNER—SHARPE.—On October 8, at St. John's Church, Brixton, John Turner, Esq., to Harriett Matilda, third daughter of the late George G. Sharpe, M.D., of Stamford and Epsom.

WILKINSON—SUCKLING.—On October 10, at Holy Trinity Church, Sydenham, Dr. George Frederick Eachus Wilkinson, eldest son of F. E. Wilkinson, M.D., of Sydenham, to Louisa Blanche, youngest daughter of William Nelson Suckling, Esq., of Sydenham.

WINKFIELD—WAITE.—On October 6, at St. James's Church, Shirley, W. B. Winkfield, L.R.C.P.E., of Shirley, Hants, to Agnes Harriet, youngest surviving daughter of the late D. Waite, Esq., of Crawley.

DEATHS.

LAMB, JOHN STEWART, M.D., at 4, Windsor-terrace, Maida-hill, on October 10, in the 47th year of his age.

OGILVY, EMILY SARAH, wife of George Livingston Ogilvy, M.D., of Newton Mill, Forfarshire, N.B., at Cleveden, on October 11, aged 48.

SCHOLFIELD, EDWARD, M.D., at Doncaster, on October 8, in the 64th year of his age.

SWALLOW, SARAH, the beloved sister of Dr. J. Dodd Swallow, after a brief illness, at 61, Kennington-park-road, on October 11.

THOMAS, LUCY C. L., widow of the late William Thomas, M.D., and elder daughter of the late General Sir Samuel Hawker, G.C.H., Colonel of the 3rd Dragoon Guards, at Upper Porchester-street, Hyde-park, on October 8.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Milford and Launditch Union.—The Fransham District is vacant; area 15,744; population 3497; salary £55 per annum.

APPOINTMENTS.

Church Stretton Union.—John Robert McLintock, M.D., M.B., and M.C. Aberdeen, to the Fourth District.

Cranbrook Union.—Robert S. Newington, M.R.C.S., L.S.A., to the Parish of Goudhurst.

Easthampstead Union.—Augustin B. Fry, M.R.C.S. Eng., L.S.A., to the Sandhurst District.

Launceston Union.—George Wilson, L.R.C.S. Edin., L.R.C.P. Edin., to the Second District.

Lewes Union.—Richard Turner, M.R.C.S. Eng., L.S.A., to the Workhouse.

Sleaford Union.—Frederick McNair, M.R.C.S., L.S.A., to the Osbournby District.

Wakefield Union.—Wm. S. Mackenzie, L.R.C.P. Edin., L.R.C.S. Edin., to the Sharlstone and Warmfield and Newland Districts.

THE COUNCIL OF THE COLLEGE OF SURGEONS.—We are informed that at a meeting of the Council of the Royal College of Surgeons, held on Thursday, the 15th inst., a motion which had been proposed by Mr. Hancock, that a report of the proceedings of the Council should henceforth be suspended in the hall of the College for public perusal, was carried. The attendance of councillors at the meeting was a large one. Our readers may perhaps remember that a proposition to admit reporters at the meetings of the Council was unsuccessfully advocated some years ago by the present President of the College, Mr. Quain. We hear that some other important measures of reform are likely soon to be brought under discussion in the Council.

UNIVERSITY OF CAMBRIDGE.—Mr. C. E. Adams has been elected to the Scholarship for Natural Science in Sidney College. The examination for one or two of these scholarships, of the value of £40 per annum, takes place, annually, early in October. It is open to all students who have not begun to reside in the University. Information respecting it may be obtained from the Tutor of the College.

ELECTIONS AT THE ROYAL COLLEGE OF SURGEONS.—At a special meeting of the Council of the Royal College of Surgeons on Thursday last, Mr. George Busk, F.R.S., was elected a member of the Court of Examiners in the vacancy occasioned by the resignation of that office by Mr. John Flint South, to which he was elected so long ago as 1849, and Mr. John Hilton, F.R.S., the late President of the College, was appointed his successor as a Member of the Dental Board. At the same meeting of the Council, the following Members of the College, having been elected *Fellows* at previous meetings of that body, were admitted as such—viz, Messrs. William Harding, of Percy-street, Bedford-square, diploma of Membership dated February 1, 1833; and William M'Cheane, of Shaw-street, Everton, Liverpool, Surgeon to the Lock Hospital, May 19, 1843.

GLASGOW FACULTY OF MEDICINE.—The annual meeting was held on Friday, October 2, when the following gentlemen were elected office-bearers for the ensuing year:—*President:* Mr. J. M'Innes. *Vice-President:* Dr. H. Thomson. *Treasurer:* Dr. T. Lapraik. *Secretary:* Mr. John Mathie. *Librarian:* Dr. J. Bankier. *Seal-Keeper:* Dr. R. Cowan. *Vaccinator:* Mr. G. McEwan. *Directors:* Mr. A. M'Farlane, Mr. A. Morton, Mr. J. Dougan, Dr. J. H. Menzies, Mr. D. Tindal, Mr. J. McCarron. *Factor:* Mr. James Donald. *Officer:* John Mitchell.

ILLEGAL PRACTICE.—At the Hales Owen Petty Sessions on Tuesday, Thomas Holland, an unqualified Medical practitioner, residing in Oldbury, was charged with holding the appointment of Surgeon to a friendly society, he not being duly qualified. It was given in evidence that the defendant attended members of the society, and professed to be a Medical man. It was also found that the defendant had been, nominally at least, assistant to Dr. Dempsey, who was the official Medical man of the society. The bench held that the charge and another of a similar character had been made out, and ordered defendant to pay fines amounting in all to £20, with costs. He had been previously convicted. Peter Norman Webster, of Blackheath, was then charged with holding the appointment of Surgeon to a society called the "Loving Brothers," held at Causeway-green, Oldbury, he not being a qualified Medical practitioner. The case was similar to the foregoing, and the bench, after hearing all the evidence, inflicted a fine of £5 and costs, as this was the first case against him.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—The annual meeting was held in the Newcastle Infirmary on September 24, when the following officers were elected for the ensuing year:—*President:* C. Gibson, M.D. *Vice-Presidents:* Drs. Gibb, Mackintosh, Wilson, and Mr. Leonard Armstrong. *Committee:* Drs. Burnup, Nesham, Peart, Yeld, Philipson, and Messrs. Pyle, Luke Armstrong, Ellis, and Denham. *Hon. Secretary:* Dr. Arnison. The first monthly meeting was held on October 8. The pathological tray contained an aortic aneurism perforating the sternum; the portion of the sac in front of the sternum had been treated by the insertion into it of thirty-three needles; death on the eleventh day. The extra-thoracic portion of the aneurism was found partly filled with a clot interlaced with bands of fibrine. Drs. Gibb and Arnison read notes of four fatal cases of traumatic tetanus, occurring within a few days of each other amongst their patients in the Newcastle Infirmary. An animated discussion followed.

POOR-LAW MEDICAL SERVICE. — *Clerkenwell.* — The Poor-law Board decline to pay the salary of Mr. Dyer, one of the Medical officers of Clerkenwell, out of the Metropolitan Common Poor Fund, of which they are the custodians, inasmuch as Mr. Dyer's appointment has never been sanctioned by them. This sanction was withheld by the Poor-law Board because Mr. Goddard, the former Medical officer, disputes the validity of Mr. Dyer's appointment, and maintains that he (Mr. Goddard) still holds that office in virtue of his original agreement with the guardians. The guardians will have to pay Mr. Dyer out of their own funds. *St. Luke's.*—The guardians have made a temporary appointment for three months, by which a gentleman connected with the board is to discharge the duties of Inspector of Vaccination for a small honorarium, in order to test whether the duties of the office will be sufficient to warrant their appointing a permanent officer. Dr. Rogers was unanimously elected Medical Officer for the Middlesex District. *Islington.*—The Poor-law Board approve of the new arrangements for the administration of outdoor Medical relief, and wish to know whether the Medical officers are satisfied with them. The clerk has been directed to answer that the guardians did not think it necessary to consult them; but no complaints have been received, except from Dr. Simpson, who is not satisfied at the office of Public Vaccinator having been taken from him. *St. Pancras.*—The mortuary which is being erected by the guardians is stated to be progressing.

THE following corrections will henceforth appear as a slip in each copy of the British Pharmacopœia of 1867 issued to the public:—

Corrections.

BRITISH PHARMACOPŒIA, 1867.

At page 20, line 6 from bottom, *for* 10·14 *read* 11·14
" 130, " 17 " " 57 " 37
" 150, " 9 " " 8 " 28
" 193, " 4 from top. *for* $PbC_2H_3O_2$ *read* $Pb_2C_4H_6O_5$
" 400, bottom line, *for* Tart. Dil. *read* Tart.
" 27, between lines 8 and 9 from bottom *insert* Emplastrum Cantharidis.
" 51, between lines 5 and 6 from bottom *insert* Tinctura Cinchonæ composita
" " between lines 6 and 7 from bottom *insert* Spiritus Armoraciæ compositus
" 114 beneath bottom line *insert* Unguentum Belladonnæ
" 171, after line 11 from top *insert* Oleum Lini.

MONTHLY RETURN OF THE DEATHS REGISTERED IN THE EIGHT PRINCIPAL TOWNS OF SCOTLAND.—The deaths of 2065 persons were registered during the month in the eight towns, of whom 996 were males and 1069 females. The mortality, therefore, like that of the three previous months, has greatly exceeded the average, seeing that the deaths are 206 above the September mean of the ten previous years, allowance being made for increase of population. The zymotic (epidemic and contagious) class of diseases proved fatal to 630 persons, thus constituting 30 per cent. of the mortality of the eight towns. This rate was exceeded in Glasgow, Paisley, Greenock, and Leith, from the prevalence of scarlatina, which was the most fatal of the epidemics, having caused 185 deaths, or 8·9 per cent. of the mortality. 21·6 per cent. of the deaths in Paisley, and 25·3 per cent. of those in Leith, were from scarlet fever. Diarrhœa was the next most fatal epidemic, and caused 131 deaths, or 6·3 per cent. of the mortality. In Edinburgh 10·7 per cent. of the deaths were from this disease.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPTEMBER, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·33	0·082	0·068	0·002	12·0	3·0
West Middlesex	18·16	0·068	0·057	0·002	12·0	3·0
Southwark & Vauxhall	21·83	0·136	0·093	0·005	14·0	3·5
Chelsea	18·98	0·072	0·060	0·004	13·0	3·5
Lambeth	18·90	0·086	0·075	0·004	13·0	3·5
Other Companies.						
Kent	27·81	0·022	0·321	..	18·5	7·5
New River	17·33	0·045	0·175	..	11·5	2·5
East London	16·20	0·043	0·082	0·002	11·0	2·5

All the samples were clear when drawn from the mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

UNIVERSITY REFORM IN ITALY.—The *Gazetta Medica Italiana* observes, that it is stated that there is about to take place a great reduction in the numbers of the Italian Universities. It joins ardently with those who are urging the Minister to act with promptitude and energy in the matter. With only twenty-five million inhabitants there are twenty universities, which reduces the matter to mere burlesque, for the names of many of them are unknown to most people—the number of professors, in fact, in these exceeding that of the students!

IODIDED OPODELDOC.—Take of iod. pot. ʒviij. and of alcohol (Baumé 30°) two pints, and thoroughly mix; next dissolve in a flask over a sandbath ʒxiv. of animal soap, finely shaved, in two pints of alcohol. Mix the two, and add oil of lavender ʒij. Wide-mouthed phials should be filled with this

opodeldoc while it is warm and fluid. When cold it forms a translucent mass, which as an external application possesses advantages over the ointment of the iodide of potassium.—*Boston Journal*, August 27.

History of Syphilis.—M. Chereau publishes an interesting document bearing date March 25, 1493, containing a police *ordonnance* ordering all those affected with venereal disease (*maladies contagieuses et immondices*) to immediately leave Paris, on pain, in event of their capture afterwards, of being thrown into the Seine. The document is of importance in the history of the disease, proving that it was known in Paris prior to 1493, and therefore could not have been imported from Naples by the armies of Charles VIII. in 1496 or 1497. —*Union Méd.*, September 3.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

We have to thank Mr. C. Lawrence Bradley for his account of the case of fatal hæmatemesis at Pentonville, which we have much pleasure in publishing. Our remarks were really not intended to impute any neglect of the patient to Mr. Bradley.

Mr. Williams, Llandudno.—The registration at the College closed on Thursday last. Under the peculiar circumstances mentioned, you will no doubt be allowed to register on Monday.

"*M.P.*"—Messrs. Vanderbyl, M.P., and Mitchell Henry, are both Members of the College. Mr. Vanderbyl is also a Doctor of Medicine of Edinburgh and M.R.C.P. Lond. Both gentlemen formed part of the staff at the Middlesex Hospital.

Stockwell.—Have nothing to do with "baby farms." It was Bolingbroke who said that "folly and knavery have prevailed most where they should be tolerated the least, and presumption has been excused most where diffidence and candour are, on many accounts, the most necessary."

Lithotomist.—James Beaulieu was a lithotomist of great skill, but neglected his patients after the operation, saying, "I have extracted the stone; God will cure the wound." Beaulieu's method was adopted by Cheselden with such unusual success that it was called the English operation.

A Teacher.—In 1859 the number of students pursuing their studies at the London Hospitals amounted to 954, in the following year they had increased to 1228. The number of new entries in the former year was 327, in the latter 483. We are unable to give the other information. Mr. South was the President in 1860.

Faculty of Physicians and Surgeons, Glasgow.—List of Office-bearers.—In the list of office-bearers of this Faculty published by us last week the name of J. G. Fleming, M.D., was inadvertently omitted from the Councillors in the list sent us.

Mr. Lawson Tait.—Chromic acid is no more a test for alcohol than it is for a score of other oxidisable bodies. If a solution of bichromate of potass or a crystal of the same substance be moistened with sulphuric acid, and a drop of any oxidisable body such as we have described be added, the chromic acid becomes reduced to the condition of sesquioxide of chromium, the green colour of which shows the reduction process. Some bodies, however, as morphia and strychnia, by their oxidation give rise to colours which may either combine with the green oxide to produce some other tint, or may overcome it altogether. Hence chromic acid may be said to be a test for alcohol provided no other more oxidisable substance be present, but not otherwise.

The Coroner of Sandwich.—Since writing the article which appears in another column, we have received copies of the correspondence with the Home Office on the case. The Coroner's letter gives an apparently fair version of the matter, and shows the opinion which he entertains of the value of inquests generally. It also points to the necessity of an officer, duly qualified and well paid, to inquire into causes of death. We assume that such officer should be Medical. At present, if no inquest be held, neither Coroner nor Medical witnesses are remunerated properly; hence the public time is wasted, in order that public money may be thrown away in the formalities of inquests whose uselessness exposes them to contempt.

(*Copy.*) Sandwich, October 7.

Sir,—In reply to your letter of the 17th ult., and after reading a copy letter and statement from Mr. R. G. Davey, Surgeon, of Walmer, to the Right Hon. the Secretary of State, I beg to state the death of Robert Chandler was reported to me on Sunday morning by the police-constable, who minutely related the circumstances of the case. Mr. Henry Page, of Walmer Court, the Deputy of the Mayor of Sandwich, also called upon me, and, being present at the time the deceased was in the well, was able to furnish me with full particulars. It then appeared to me that the death was purely accidental (caused by the deceased leaving his cradle), and that there was not the slightest ground of suspicion against any person. The deputy informed me that the body was much swollen, and that it was necessary, from the extreme heat of the weather, that the body should be removed. Under the circumstances I assented, but certainly had no idea of the body being taken from Walmer until I attended there the next morning (Monday). In holding an inquiry instead of an inquest, I followed the course adopted by the Coroner for East Kent some time since in a precisely similar case, which occurred in the parish of Betshanger. I have deferred replying until I had made some inquiry as to the dissatisfaction of the parties at my proceedings (alleged by Mr. Davey), but as yet I have been unable to discover it. There is a very general feeling among the gentlemen of the Medical Profession against inquiries in lieu of inquests, on account of the smallness of the fee, and coroners have equal reason to be dissatisfied. The fee for holding an inquiry is 6s. 8d., and 9d. per mile for travelling one way. In this case, after paying 6s. for chaise hire, my remuneration for two hours and a half was 2s. 2d. I have held seven inquests this year, and, after investigation, I found that the ends of justice in more than one case would have been as well served by holding an inquiry instead of an inquest.

I have, &c.

J. C. Marten, Coroner for Sandwich and its Liberties.

To the Secretary of State, Home Department, Whitehall.

(*Copy.*) Whitehall, October 10.

Sir,—With reference to your letter of the 15th ult., complaining of the conduct of Mr. Marten, Coroner for Sandwich, in permitting a body, on which he was to hold an inquest, to be sent out of his jurisdiction, and then holding an irregular inquiry, I am directed by Mr. Secretary Hardy to transmit to you a copy of Mr. Marten's explanation of the case, and to inform you that the Secretary of State cannot undertake to answer legal questions. I am, &c. M. E. Hicks Beach.

To Mr. R. G. Davey, Walmer, Kent.

Dr. Guisan's letter on the Baths of Davas has been received, and shall have early insertion.

Obstetrician.—The London *Medical Gazette* of October 21, 1842, contains a case in which the placenta was found thickly studded with small points of bone.

A Third Year's Student.—In your particular case the four years must be made up at the Hospital. The registration closed on the 15th inst.

Cuvier.—In the Ashmolean Museum at Oxford, and a portion of the skeleton of the dodo in the museum of the College of Surgeons. The library and museum are both open.

C. H. S.—Candidates for the appointment must also possess the licence of the Society of Apothecaries.

F. Z. S.—The most humane method would be to administer chloroform. See an account of its effects on a rabid tigress in the *Medical Times*, vol. xviii. p. 31.

Archæologist.—Sir Charles Scarborough, who was Physician to Charles II., James II., and William III., read anatomical lectures for sixteen years at Surgeons' Hall.

G. P. R., Plymouth.—It would not be discreet to publish the statement pending the legal inquiry. The celebrated Coleridge, in vol. ii. page 97 of his "Table Talk," says, "There unquestionably ought to be a declaratory act, withdrawing expressly from the St. John Longs and other quacks the protection which the law is inclined to throw around the mistakes or miscarriages of the regularly educated Physician." Consult Percival's "Medical Ethics."

The Epidemic of Scarlatina.

The last return of the Registrar-General shows that a high rate of mortality from scarlatina still prevails in London. Since September 19 the deaths from this epidemic have been at the rate of more than 100 a week; and returns received from the large English towns show that the disease in its epidemic form is not confined to the metropolis. Great as the loss of life by scarlatina has been in London, a still greater loss has been experienced in Manchester, if the element of population be taken into account, the mortality in the metropolis of the manufacturing industries of England being three times as fatal as that of London. Glancing at the number of deaths registered last week in each of the five leading divisions of London, the epidemic appears to have prevailed pretty generally over the whole area; but by comparing the deaths with the respective populations of each group very different results are obtained. Thus, the southern districts on the Surrey side of the river, including St. Saviour's, St. Olave, Bermondsey, Lambeth, Wandsworth, Greenwich, etc., had a death rate of 125 per 100,000 of population per annum. The eastern districts, comprising Shoreditch, Bethnal-green, Whitechapel, etc., suffered from an annual rate of mortality by scarlatina of 126 per 100,000. In the northern group, Marylebone, Hampstead, St. Pancras, Islington, and Hackney, the annual rate was rather higher, being 184 per 100,000. In the western division, which includes Kensington, Chelsea, St. George's, Hanover-square, Westminster, etc., the death rate from scarlatina was as high as 266 per 100,000 of population per annum; while the deaths in the central group of districts, which includes St. Giles, Strand, Holborn, Clerkenwell, St. Luke, East and West London, and City, were at the annual rate of 296 per 100,000 of population. There are some epidemics which visit the country at intervals, but fever, in one or other of its hideous forms, appears to be always more or less prevalent; so that the question may fairly be put whether large towns are always to be ravaged by such formidable maladies to childhood. With reference to the metropolis, with its 47 Health officers, it is to be hoped that the suggestion recently thrown out by the Registrar-General, to the effect that the sanitary state of the poorer localities of each district should be carefully attended to, will be acted upon. The returns for London in the seven years, 1861-7, show that scarlatina cut off the lives of nearly 20,000 persons —viz., 2358 in 1861, 3457 in 1862, 5075 in 1863, 3242 in 1864, 2181 in 1865, 1885 in 1866, and 1438 in 1867. In each of the four quarters of 1867 the deaths were 339, 248, 361, and 490 respectively; in each of the first three quarters of the present year the deaths were 368, 352, and 738 respectively. Taking the whole of England and Wales, the deaths from scarlatina in the six years, 1861-6, were 113,471—viz, 9077 in 1861, 14,834 in 1862, 30,475 in 1863, 29,700 in 1864, 17,700 in 1865, and 11,685 in 1866. To 1,000,000 of population in each of the years 1861-6 the deaths were 456, 738, 1498, 1443, 852, and 556 respectively.

Peroxide of Hydrogen in Diabetes.

To the Editor of the Medical Times and Gazette.

Sir,—A gentleman, aged 46, engaged in commerce, of steady habits, and a moderate liver, suffered from diabetes for a year and a half, and had

been the whole time under treatment of some of the best Practitioners in London, and, receiving no benefit, lost both faith and patience, and applied to me. After hearing his statement and examining his prescriptions I felt I could not give even feeble hopes of benefit; but it occurred to me that Dr. Day, of Geelong, some time since published in the *Lancet* the result of the successful treatment of a case under unfavourable circumstances by the use of the ethereal essence of the peroxide of hydrogen in drachm doses three times a day in distilled water. I was determined to try the effect of the remedy upon my patient. I began with half-drachm doses, and gradually increased to the drachm. I also materially relaxed the rigidness of his diet, and discontinued much that was disagreeable and objectionable for one more consonant to his taste and appetite. I have much pleasure in announcing after about ten weeks' steady perseverance, with occasional fluctuations, he quite recovered, and has kept well for several weeks. He is now in the country for the benefit of change of air, he is gaining both strength and flesh, and he writes home in a strain both hopeful and thankful. I have not troubled you with daily details, for they would be uninteresting and tedious.

I am, &c. SAM. J. BAYFIELD.

16, St. Thomas's-street, S.E., Oct. 13.

EFFECTS OF CARBOLIC ACID.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—So many and diverse have been the opinions expressed about carbolic acid, so wonderful its effects in the hands of some, and so disappointing has been its employment in the hands of others, that I think it worth while to mention my conclusions regarding it after a trial extending over nearly two years. During that time I have directed the employment of nearly a hundred ounces of the acid, and with the following results:—In wounds of all descriptions and scores in number I have not been able to discover the slightest benefit from its use, and do not believe that its mixture with oil is a whit better than any other of the greasy compounds which, in my student days, used to be vehemently condemned. During the last two years I have employed it in many compound fractures where there existed no chance of union by first intention, and can discover no advantage which I have gained in these cases over the various means employed by me in others. In twelve cases of compound fracture, where there existed a probability of union without suppuration, the only cases where suppuration did occur were two in which I employed the acid paste exactly as recommended by Mr. Lister, and in one of them the suppuration persisted for six weeks until I discontinued the paste, the wound healing in four days after this was done; while, on the other hand, some of the cases which healed by first intention were very bad, two necessitating the removal of fragments.

As a disinfectant I will not use it, because I have a strong objection personally to its intolerable smell, and this I find a not uncommon objection among patients. Besides, I have found Condy's fluid, more especially his permanganate of lime solution, infinitely preferable in every respect.

Lastly, I have just seen its application to a wound of some extent followed by a result which was as nearly fatal as could be; the patient became pulseless and cold (the axillary temperature fell to 88°), and was saved with some difficulty. For these reasons I shall give up its use entirely.

I am, &c.

Wakefield, October 6. LAWSON TAIT.

COMMUNICATIONS have been received from—

Mr. ALEXANDER DUNCAN; Dr. GUISAN; Dr. BUSS; Mr. RICHARD LEWIS; Dr. EDWARD L. FENN; Dr. HITCHMAN; Dr. WILLIAM M'CREA; Dr. MACLEAN; Messrs. HARVEY and REYNOLDS; Dr. ARNISON; Dr. A. M. GARRINGTON; Dr. FRANK-SMITH; Dr. BURDER; Dr. BLAKE; Mr. R. G. DAVEY; Dr. ANDREW WOOD; Mr. C. L. BRADLEY; Dr. JOHN WHITMORE; Mr. S. J. BAYFIELD; Mr. CALLENDER; Dr. MAPOTHER; Mrs. BAINES; Dr. ROGERS; Mr. COUPER; A. B. C.; A SURGEON; Dr. LORY MARSH; Dr. J. HUGHLINGS-JACKSON; Dr. BARNES; Dr. B. W. RICHARDSON; Dr. M. D. MOORE; Mr. A. POLAND; Mr. BALMANNO SQUIRE; Mr. J. CHATTO.

BOOKS RECEIVED—

Caplin on the Electro-Chemical Bath—Crisp on the Anatomy of the Hippopotamus—Dr. Bhau Daji on the Treatment of Leprosy—Pacific Medica and Surgical Journal, No. 16—St. Bartholomew's Hospital Reports, 1868—Erichsen's Introductory Address—M'Call Anderson on Parasitic Affections of the Skin—British Journal of Dental Science, No. 146.

NEWSPAPERS RECEIVED—

Times of India—Freeman's Journal—Salford Weekly News—Medical Press and Circular—Indian Medical Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 10, 1868.

BIRTHS.

Births of Boys, 1198; Girls, 1127; Total, 2325.
Average of 10 corresponding weeks, 1858-67, 1855·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	701	737	1438
Average of the ten years 1858-67	601·7	573·6	1175·3
Average corrected to increased population	..	..	1293
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	2	27	..	2	3	8	1
North ..	618,210	1	11	25	3	2	14	10	..
Central	378,058	1	1	20	4	1	9	3	..
East ..	571,158	1	4	15	1	1	17	11	..
South ..	773,175	2	7	22	2	8	19	17	..
Total ..	2,803,989	6	25	109	10	14	62	49	1

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·577 in.
Mean temperature	51·8
Highest point of thermometer	64·0
Lowest point of thermometer	39·3
Mean dew-point temperature	47·9
General direction of wind	W.S.W. & S.S.W.
Whole amount of rain in the week	0·60

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 10, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Oct. 10.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Oct. 10.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2325	1441	1438	64·0	39·3	51·8	0·60	61
Bristol (City)	167487	35·7	139	75	*70	..	..	..	..	..
Birmingham (Boro')	352296	45·0	211	171	124	62·0	41·0	50·2	0·86	87
Liverpool (Borough)	500676	98·0	350	290	289	60·2	40·8	49·6	0·44	44
Manchester (City)	366835	81·8	231	208	*221	64·0	40·0	49·4	1·07	108
Salford (Borough)	117162	22·7	80	59	93	65·5	40·3	49·6	1·09	110
Sheffield (Borough)	232362	10·2	173	122	112	61·5	40·0	48·3	0·64	65
Bradford (Borough)	108019	16 4	69	55	67	..	..	..	..	..
Leeds (Borough)	236746	11·0	126	120	147	58·0	42·0	49·3	1·35	136
Hull (Borough)	108269	30·4	72	50	65	61·0	38·0	49·2	0·87	88
Newcstl-on-Tyne, do.	127701	23·9	53	68	49	56·0	37·0	48·1	1·08	109
Edinburgh (City)	177039	40·0	123	85	84	57·7	39·0	49·0	0·30	30
Glasgow (City)	449868	88·9	295	262	233	57·1	35·8	47·9	0·83	84
Dublin (City and some suburbs)	319985	32·8	121	157	123	62·6	31·7	50·0	0·19	19
Total of 14 large Towns	6391080	34·7	4368	3163	3115	65·5	31·7	49·4	0·78	79
					Week ending Sept. 26.	Week ending Sept. 26.				
Vienna (City)	560000 (1863)	..	..	..	230	..	..	64·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·877 in. The barometrical reading increased from 29·38 in. at the beginning of the week to 30·05 in. on Thursday, October 8. The general direction of the wind was W.S W. and S.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

October 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH, 7½ p.m. Meeting.

19. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Dr. Richardson, "On Blood-letting as a Point of Scientific Practice."

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

21. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

23. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

CLINICAL SOCIETY, 8½ p.m. Dr. Julius Pollock, "Case of so-called Fibroid Phthisis." Mr. Maunder, "Case of Ligature of Femoral Artery." Dr. Bristowe, "Treatment of Ascites by Tonics."

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Nov. 4th, 1867. Manufactured on principles approved by Dr. Quain, &c. The general characteristics of this Inhaler are:—Simplicity of Arrangement, Cleanliness, Strength, Portability, Extended Surface for Evaporation, Free Ingress of Air, which must pass through the material of inhalation.

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"This Inhaler possesses the advantage of being much more portable than any at present in use. It is of extremely dwarf shape, and provided with an Elastic Air Tube, is the only convenient one for the patient, especially when in a reclining position, as the instrument can be rested on the pillow without danger of upsetting. The objection to the use of cork in other Inhalers being liable to swell and contract, and so make the vessel useless, is obviated in Curtis and Co.'s Inhaler, by the substitution of an India-rubber Ring. This apparatus is especially adapted for the administration of Chloroform, Ether, Creosote, Henbane, Iodine, and other active and volatile substances, as from its construction the exact quantity required may be inhaled."—January 11th, 1868.

The Editor of the "Medical Times and Gazette" writes:—

"A good Inhaler is of the greatest possible service to Practitioner and patient. The Inhaler before us possesses the merit of cleanliness and portability, and of being easily used by the patient in bed, without the risk of being upset. The use of an India-rubber Ring instead of Cork is very ingenious, and a great improvement."—January 18th, 1868.

The Editor of the "Chemist and Druggist" writes:—

"This Inhaler seems to us to exemplify, in a very perfect way, the careful adaptation of means to the end desired. It is strong, portable, and well fitted, may be readily cleaned, and, what is most important, can be conveniently used by a patient when in a reclining position, as its shape permits it to rest on the pillow without danger of upsetting. The objection to the use of Cork—namely, that it is liable to swell or contract—is obviated in this Inhaler by the substitution of an India-rubber Ring, fitted securely round the stopple. The tube is elastic, and is provided with a most convenient Mouth-piece. In the neck there is a perforated porcelain disc for supporting a sponge moistened with any preparation that may be prescribed for inhalation. The apparatus is, therefore, peculiarly well suited for the administration of Chloroform, Ether, Creosote, and other volatile substances. The air to supply the place of the vapour inhaled enters the Inhaler through two channels, and must pass through the liquid."—January 15, 1868.

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PRIZE MEDAL, 1865.

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Paraplegia.

The spinal cord being thus a complex organ, you can well see what a variety of disorders may be referable to changes in its structure, and it is evident that the symptoms will vary as different constituents of the cord are involved. To connect the structural changes of particular parts with their necessary characteristic symptoms is the aim of many modern investigators. Hitherto this has been attended with only partial success, and the phenomena observed from disease have not altogether tallied with those which appear to have been expressed to the physiologist in his experiments. The most marked symptoms attendant on disease of the cord are those referable to altered motion and sensation, and more particularly the former. Thus it was that older writers were content to speak of paralysis of the legs under the name of paraplegia, as the only affection to which disease of the cord could give rise. If, however, the cord is composed of different elements each having its own function, it is highly probable that lesions of certain parts will be found intimately associated with special class of symptoms. It is our business to analyse them as far as possible, and this I have been endeavouring to do. When, however, you have excluded all cases which deserve a special name and have a distinct pathology, there is still a large residuum to which the simple term paralysis must be applied. Since simple loss of power is, as you might expect, the commonest of results of a morbid condition of the cord, so paraplegia is a useful term for including many cases which no doubt will one day submit to a further analysis.

In one case there may be disease of the spine which has secondarily attacked the cord; in another, inflammation of the membranes, which in like manner has involved the medulla; or the latter, in a third, may be primarily affected. These, of course, have all different pathological conditions, although the resultant effect may be much the same in all. Thus also morbid growths, as cancer of the spine or tumour of the cord itself, may lead to its destruction, and during its progress one can scarcely adopt any other term for the symptoms than that of paraplegia.

When disease has commenced some loss of power ensues, which is soon evidenced by the difficulty in walking, and more especially in the ascent or descent of stairs. The inability to raise the legs is seen by the patient's stumbling up a step, or even over a stone in the street. The effort which a paralysed patient makes to move will generally distinguish the weakness of the legs from any rheumatic or other affection, and in a woman from hysterical paralysis. The feet flop down, and the power of pointing them in a given position has gone. Then, again, one of the best evidences of diseased cord is shown in the paralysis of the bladder. First, the want of power in emptying the organ without much straining, and subsequently its becoming fully charged, and running over. Later in the disease there is a paralysis of the rectum. Other organs also sometimes suffer from the deficiency of nervous influence, as, for example, the digestive organs, and thus flatulence and sickness may become attendant symptoms. If the disease progresses, the patient becomes perfectly helpless and bedridden. In such a case death does not result directly from destruction of the cord, except the upper part be affected, when the chest loses its power of mobility, and life cannot hold out long; but death takes place from secondary causes. A bedsore may form, which may be sufficiently extensive to exhaust the patient, or, what is more common, the bladder becomes inflamed, and the irritation there set up is propagated to the kidney, when a suppurative nephritis occurs, and a speedily fatal result.

I might mention that the pupils of the eyes are sometimes affected in spinal disease, being influenced, it is supposed, through the sympathetic nerves in the neck. Thus we often see minutely contracted pupils, or an inequality in size, and in one patient of mine there was an amaurotic condition, which was recovered from during the cure of the paraplegia.

You know in all spinal affections we look to the back in order to discover if there be any disease in the vertebral column, and we generally percuss it. Now, as regards any value to be derived from this method, I think we must set it down as very small. We of course examine the spine, for by so doing we may discover a projection or a growth; but as for informing us of the condition of the medulla within it, percussion seldom does that. Of course, should disease exist between any of the vertebræ, any violent jar on the back would be likely to produce discomfort; but, as a rule, in slowly progressing disease of the cord, as in the majority of cases of paraplegia which we meet with, there would be no pain produced. At the same time, a sensitiveness of the spine is very common, but generally implies a simple functional hyperæsthesia; so that I verily believe that if you tested the value of this method of diagnosis by the rule of averages, you would find pain mostly absent in organic diseases of the cord, and present in those persons who suffered merely from nervous excitability. But each case must be taken on its merits. Thus in an adult man, who showed no evidence of a nervous temperament, a permanent tenderness over one spot when disease was otherwise indicated would be of immense importance in the diagnosis. On the other hand, in the case of a girl who was said to have a spinal affection, owing to the existence of a variety of nervous symptoms, the diagnosis of a purely functional disturbance would be rather corroborated than contradicted by the presence of tenderness over the spine. Moreover, the tenderness on pressure, if indicative of local disease, is referable mostly to a change in the bone; whereas, in the majority of cases of paraplegia, the disease of the cord is quite independent of the vertebral column. I have no means of referring to statistics on this subject, but I am strongly impressed that the combination of disease of the bones and the cord is far less common than disease of each separately. The two affections, I know, are often met with together, but yet, I think, more commonly met with apart. How often do mothers bring their children amongst the out-patients, telling us that they had just discovered their backs growing out, when we find an angular curvature, but attended with no symptoms of a nervous kind. Even if there have been any, they have been due to implication of the nerves, and not of the cord itself. There has been perhaps a fixed pain in the chest for some weeks or months, and then the projection has shown itself. If you look in our museum, you will see angular and lateral curvatures to so great an extent that the spine is bent into a sigmoid form or doubled forward so as to become parallel with itself; and yet the cord has followed all these contortions with impunity. You may see other cases where the purulent and scrofulous matter lines the canal, and yet prevented from touching the cord by means of its sheath. On the other hand, I believe the majority of cases of disease of the medulla have begun in its substance or its membranes. I leave out of the question whether these may not have resulted from an external influence, as a blow; but I intend merely to speak of the direct propagation from diseased bone.

In some cases disease begins in the substance of the cord, and the early symptoms are those of gradual loss of power of motion or sensation. In other cases the disease begins in the membranes, and in these there may be additional convulsive movements. I have told you of the tetanic spasms in cases of acute arachnitis; also of the extreme excitability of the cord in chronic meningitis; also in other cases where the limbs are rigid. In some of these pain in the back existed, showing that, whether arising from implication of the nerve roots as they pass from the cord or arising in the cord itself, uneasy sensations in the back may be present. These, however, you must distinguish from the pain induced by striking the spine. There are, then, included under the name of paraplegia a number of diseases dependent on different causes, and possessing a variety of symptoms.

I have already alluded to a case which may be taken in illustration of one variety, where, from a concussion of the spine, some blood was effused in the grey matter, and the primary symptoms were purely referable to sensation. A slight rupture of a blood-vessel in the grey matter appears to be always attended with serious results, and probably from the disposition of the blood to extend itself. Whether this be due to the peculiar mode of arrangement of the tissues or from the existence of the perivascular canals I cannot say.

There can be no doubt that a violent blow on the back either from direct injury or shock will produce a concussion which, resulting in a temporary paralysis, may be quickly recovered from, whilst, on the other hand, it may set up an acute softening, which shall be rapidly fatal; or thirdly, what is far

from uncommon, produce a chronic change, accompanied by a variety of symptoms which may endure for years, or be in fact permanent. I have more than once seen a man receive a severe injury to the back and be taken up paralysed, but in a few days he has perfectly recovered the use of his limbs; just as in concussion of the brain with consequent loss of consciousness: there was in fact a stunning of the cord. I have also seen such a case fatal, where the cord was found much ecchymosed, and small effusions of blood within it.

These slowly produced consequences are now constantly seen. Every Medical man with a large practice had formerly, no doubt, seen cases where a permanent affection of the spinal cord had resulted from an injury, but it has only been in railway times that we have witnessed so many cases of permanent disease from a shock to or shaking of the cerebro-spinal system. When one considers the velocity of a heavy train, the momentum with which it strikes any obstacle in its way must be immense. If one remembers also that some of the component parts of this mass of material are fragile human beings, composed of flesh and blood, with delicate soft brains and spinal cords, no surprise can be felt in witnessing the terrible results when a train proceeding at the rate of forty miles an hour is brought to a sudden stop. It has often been credibly stated that after an accident persons have been taken up insensible, but without the slightest mark or bruise upon them, and thus I see nothing marvellous in the proposition that the soft cerebral mass striking against the hard skull-case should be thrown into confusion, and insensibility result. In the same way also, just as you see sometimes after a blow on the head, somewhat less violent than to produce concussion, a state of maniacal excitement set up, so persons meeting with such a shock as I have mentioned have often been observed to have jumped out of their carriage and thrown their arms about, and behaved in a manner which they themselves have afterwards designated as acts of madness. Well! our poor brains and spinal cords cannot be thus roughly treated without the necessary consequences, and a variety of symptoms from the day of the accident are set up, which develope into manifold troubles, or even end in a permanent palsy both of body and mind.

It is remarkable that in one or two instances which I have seen, where there was direct injury to the back, and symptoms of paralysis in particular limbs immediately following, the patient eventually got well, whilst in others, where a shake to the centre had been received, but with no apparent ill result, a slowly creeping-on paralysis ensued. These cases have now become so common, and have given rise to so much litigation, that they have become known in the Profession as cases of "railway spine." A man, for example, receives a severe shock from the train having "collided" (to use the American phrase), feels unwell for a day or two, and then believes he has recovered from the shock. He soon, however, begins to feel unwell again, is fatigued, and unable to pursue his business with the same zest as before. In the course of some weeks the change is evident; he cannot walk so well as hitherto, staggers, his hand shakes when he writes, his memory fails him, he forgets names, and blunders in his accounts. If this be a chronic affection of the cord slowly progressing, he becomes at last actually paraplegic, and in mental capacity is verging towards imbecility. A number of special symptoms may result, dependent probably on particular parts involved. In many cases there is tenderness along the course of the spine, and there may be hyperæsthesia in the course of some of the intercostal nerves. In some there may be pain in the back or limbs. The symptoms vary probably as the cord alone is affected, or as the membranes are involved in the chronic inflammatory or degenerative process.

If I now take some of the numerous specimens from the shelves of our museum in order to illustrate my subject, I could show you first those of carcinoma involving the spinal cord, of fibrous tumours growing from the membranes; cases where, as you might suppose, pains and rigidity of limbs would accompany the more common paraplegic symptoms. Then specimens where the cord had become affected secondarily to the bones, and where you would have eventually the same symptoms as before, though probably preceded by the more direct effects of the disease of the vertebræ evinced by special neuralgic pains. Then, again, as a consequence of spine disease, there might result an acute meningitis accompanied by the remarkable tetanoid symptoms before mentioned.

In speaking of inflammation, the same remarks which I made in reference to the brain are more or less true as regards the spinal cord, that the idiopathic meningitis is shown by the effusion occurring beneath the visceral arachnoid, although, as in the cerebral inflammation, this might also arise from an injury. And, on the other hand, as in the cranium so in the spine, a simple arachnitis, or that form of inflammation where the exudation is found in the interarachnoid space, is not idiopathic, but a result of disease or injury to the bone. Then, as a result of injury or as an idiopathic affection, there are cases of chronic inflammation of the membranes. The subarachnoid space may be full of hardened lymph, or the arachnoid surfaces be adherent to one another, or the whole of the membranes may be immensely thickened and firmly attached to the medulla. In some specimens in our museum these thickened adherent membranes, like those met with sometimes in the pericardium, have become ossified, but unlike those the bony plates show true ossification; the earthy matter so often found in connexion with diseased heart and arteries being simply cretaceous. With this state of membranes the cord itself would probably be involved. Those other forms of bony plates on the visceral arachnoid I need scarcely refer to, as they are simply pathological, although more often found on atrophied cords. Then, again, the cord itself may be affected by various inflammatory and softening processes. Whether the latter deserve the name inflammatory, may be a question, but two very different conditions of organ are met with under this name, although they both equally lead to the destruction of the natural tissue and consequent paralysis. In many cases of acute paraplegia, cases which have terminated fatally in a few days or weeks, the spinal cord may become softened and disintegrated from end to end. On removing it, it may scarcely bear its own weight, may be semi-fluid, and, when examined by the microscope, be found to consist of broken-up nerve tissue and numberless granular corpuscles. To a less degree particular portions of the cord may be involved; a softened part may be found, say in dorsal region, while the organ above and below is healthy; or different parts may show spots of softening. Instead of the knife being able to make a clean cut through the cord, it will break up the tissue, leaving a broken surface; thus the back, or the front, or the side of the cord may be found disintegrated. The section through the grey matter may show that it is altered in colour, darker than usual, or containing extravasated blood, one cornu being altogether gone, or the whole form of the grey centre may have become quite changed in shape. Thus a softening destructive process may go on in the cord, involving the organ to various extents.

The other condition which equally destroys the cord is that where a new connective tissue takes the place of the original structure. This is very evident to the naked eye, for it changes the white medullary matter into a grey or pinkish translucent substance, so that the contrast between the two is very striking. I have seen the posterior columns thus changed; I have seen also a complete layer of this translucent substance surrounding the cord, and also, as in this drawing, the central grey matter with a portion of the adjacent medullary substance completely converted into this new material. In this case you will see the original central canal running through it, and this again surrounded by the comparatively unchanged white medullary matter of the cord. It is remarkable how this morbid condition is almost confined to the cord. I have seen it extend upwards as high as the central ganglia, and occasionally found small deposits of this new material in the brain proper; but in my experience this is not common. The spinal cord in this form of inflammation does not at first exhibit evidence of disease, for when removed from its sheath it may possess its proper contour and firmness, and it is not until cut that the change is manifest. It may, in fact, be sometimes somewhat firmer than usual. I ought to have mentioned that the chronic degenerative process is shown in both forms also by the very frequent presence of amylaceous bodies. It is important also to note that the roots of the nerves are frequently involved in the various inflammatory and degenerative changes of the cord and its membranes. They lead me to refer to some most interesting observations which have been made by M. Bouchard on what he styles secondary degeneration of the spinal cord. I have already alluded to the experiment of Waller of excising a nerve, and of the degeneration of the fibrils which follows. Now it would seem that a similar destructive process ensues in the fibres of the cerebro-spinal centres when any portion of them may be injured, and thus we can account for the rapid propagation of disease from one part to another. These facts may explain how an injury to a limb has apparently led to disease of the spine, or an affection of the optic nerve to a softening of the brain, and may

throw light on very many other hitherto obscure phenomena in nervous pathology.

These are some of the commonest pathological changes met with; but clinically our cases of paraplegia cannot yet be made to accurately correspond with them. I will, therefore, now mention a few instances which are of especial interest during lifetime; and, first of all, that most remarkable affection which is sometimes known as acute ascending paralysis. I can scarcely tell you what is the nature of the change which takes place in the cord, for it propagates itself from end to end like wild fire. In seeing such cases, I am reminded of a spark alighting on a piece of touch-paper, and the fire running through its length until the whole is quickly consumed. A patient may feel some numbness or loss of power in the feet, soon followed by utter inability to move the legs; then paralysis of the upper part of the body, including arms and chest, until in three or four days death ends the scene. Whether the change in the cord be due to some rapidly degenerative process in the fibrillæ, due to the causes just mentioned, whether it be inflammatory, or whether the alteration be only that which may be called dynamic, has yet to be determined. I can call to mind three such cases which I have witnessed.

Case.—James D., aged 47, was a blacksmith, and was admitted under my care on December 9. He said that he was in good health until December 4, when, whilst at work, and without any assignable cause, he felt a numbness and weakness in his legs; but he managed to continue his work. On the following day he attempted to work, but was obliged to desist, and return home and go to bed. The weakness increased daily until the day of his admission. He was a small, dark-complexioned man, and as he lay in bed appeared to have nothing the matter with him. On examining him, however, he was found to have paralysis of motion and sensation of the lower limbs. An attempt to move them caused only slight contraction of certain muscles, and there was loss of sensation as high as the thigh.

On December 10, the paralysis was quite complete, and on December 11, on full examination, there was found perfect anæsthesia as high as the umbilicus, and there was not the slightest reaction to any external stimulus. This seemed to show also that the grey matter of the cord was involved. The arms felt somewhat weak and numb, and it was observed that the lower part of the chest did not fully expand. It was thus clear that the disease had already reached the cervical region. The pulse was quick and the tongue slightly furred; but the temperature of the body was not raised—in fact, there were scarcely any febrile symptoms. He was quite rational, though he answered questions slowly.

December 12.—Respiration became more difficult, mucus collected in the bronchial tubes, and death occurred at last rather suddenly.

A post-mortem examination was made, and no disease in the body was found. The spinal cord was examined microscopically; but nothing abnormal could be discovered.

Case.—A tradesman's wife, aged 38, living at Streatham, was seen by me for an acute paraplegia, and I received the following history:—Whilst in her shop on Monday, March 11, she fell down on account of a weakness and numbness in her legs; on the following day she could scarcely walk; on Wednesday she was worse; and on Thursday was completely paralysed in the legs. On Saturday I saw her. She could not move her legs in the slightest degree, and had completely lost sensation as high as the breasts. There was not the slightest response to the stimulation of the feet by tickling or pricking. The respiration was becoming affected; it was quick; and she was already experiencing a suffocating feeling. Just at the line where the sensitive and anæsthetic parts met, she felt a burning or tingling pain. Bladder and rectum paralysed. Pulse 110.

I saw her again on the following day. The arms were paralysed, the chest becoming immovable, and abdomen very tympanitic. She died at night.

I made the most careful inquiries respecting a probable exciting cause for the paralysis. I was told she was a perfectly healthy woman, had no uterine or other trouble, had not been exposed to cold, and had received no injury.

Case.—Within the last few days I have seen another equally remarkable case. A well-grown young lady, in her twentieth year, was brought home from a friend's where she had been visiting, perfectly helpless in her limbs, owing to what had been called rheumatism. A Medical man was then called in, who found her paralysed, and sought my advice. I found her paralysed as regards motion and sensation over the whole body; the chest was being expanded with difficulty, and mucus was collecting in the tubes. This she was vainly endeavouring to expectorate, and said she should be choked. I need not detail the history, but simply say that, without having had any previous spinal symptoms, she was taken six days previously with weakness and numbness in the legs; this was followed by complete paralysis, which rapidly extended upwards, until the neck was reached at the time I saw her. Her brain was unaffected, and she was quite rational; you may therefore imagine the distress of her parents when I declared that she had not long to live. She died in a few hours, and, I am sorry to add, a post-mortem examination was refused me.

In some rapidly fatal cases there may be a history of injury or exposure to cold, and therefore under these circumstances it is probable that, had the patient survived long enough, some well-marked inflammatory changes might have been found. In the following case the patient died of one of the accidents of the disease, and thus sufficient time had not elapsed to develope changes which could be appreciated by the eye. I say this because another explanation is, that no organic change need occur in such cases, but that the function of the cord is temporarily in abeyance, from an altered condition of the blood-vessels, progagated through the nerves from a distance. In the cord of a paraplegic which is apparently healthy there may be two very different conditions; there may be that in which the so-called reflex paralysis occurs, and in which the cord is in no way structurally altered, and may at any time recover its function; whilst there may be another condition to which I refer, and which shows no change, because the effects have not had time to display themselves. In the one case it may be supposed that, owing to a contracted state of the blood-vessels from reflex irritation, a part of the cerebro-spinal centres might lose its function, and paralysis ensue, but this condition might endure for any time, and recovery eventually take place. On the other hand, there is the case where, for example, the carotid having been tied, a hemiplegia has ensued, and if death occurs after some days a softened brain is found, but yet, if examined within a less period, no change would be discovered. But inasmuch as this would assuredly have come about in time, we cannot regard this preliminary condition to softening of the same nature as that which might endure for any length of time.

Case.—A young man walked about in his wet clothes, and afterwards slept in them. On the following day he felt very unwell, with aching pains all over him. On the third day he was obliged to keep his bed, on account of the weakness and numbness in the legs. It was then found that there was complete paraplegia of motion and sensation as high as the pelvis; water obliged to be drawn off. These symptoms increased, and on the tenth day excessively ill with febrile symptoms; abdomen tympanitic; breathing quick and interrupted. There had never been any excito-motor action. On the twelfth day he died. The post-mortem showed acute inflammation of the bladder and kidneys, and to this death was attributed. The spinal cord showed no appreciable disease. The question in such a case is—Was the cord only functionally affected by a reflex action, or was it in the same morbid condition which precedes all cases of softening, but not yet appreciable to the eye?

The following case is an example of what sometimes may be seen in diseases of the brain and cord—a sudden onset of symptoms in connexion with changes which must have been progressing for some time.

Case.—Joseph P., aged 32. He was a railway porter, and whilst engaged in pushing a railway truck along the line, he suddenly came to an ash-pit, when, for fear of falling, he made a jump into it, and ricked his back. He seemed for a moment to be powerless, but soon resumed his work. On the following day he continued also his work as usual. On the third day, whilst walking along the Borough, he suddenly fell in the street, and was unable to rise, owing to the weakness of his legs; this increased during next two days, when he was brought to the Hospital. He was then completely paraplegic, had no power over his bladder, and bed-sores were already appearing. Subsequently the chest became affected, and he died in six weeks after the accident. The spinal cord appeared quite healthy to the naked eye. When examined by the microscope, some fatty granules were found in parts, but the change from the normal appeared very slight.

As in this case the changes were only slightly marked in six weeks, and were not at all apparent in the man who lived

on ten days, so, on the other hand, the evidence of disease is much greater in those who survive many months or years.

Case.—Wm. A., aged 21. He fell on his back more than a year before his death, and then had symptoms referable to concussion of the spine. He gradually recovered, and resumed his work, when subsequently symptoms of paraplegia slowly came on. These gradually increased, so that for about four months before his death, his legs were completely paralysed; then his arms became affected, and subsequently his eyesight. The intellect quite clear. After his death, when the cord was removed, it appeared at first healthy as regards its general look and its firmness. A section, however, showed the presence of disease extending its whole length, and passing through the pons to the corpus striatum. There was no disintegration or softening, but a remarkable change had occurred from the presence of a translucent albuminous material within its substance. This was for the most part situated towards the surface of the cord, so that a section showed its circumference converted into a grey translucent substance. The contrast between the original white medullary matter within and the adventitious substance around it was very great. In some places the latter had penetrated more deeply, so as to involve the grey matter of the cord. The pons Varolii had on its surface two or three patches of the same material, and passing into the substance to the extent of about one-eighth of an inch, and on the corpora striata and thalami optici, especially the former, there were some similar patches of translucent matter on the surface. These did not penetrate deeply, and were not observable in the interior. In this case death was due immediately to suppurative nephritis. I shall defer the subject of treatment until I have described some other forms of paralysis.

Drunkard's or Alcoholic Paraplegia.—I do not know that this is deserving of a distinct name from its possessing any pathological peculiarities, but as arising in connexion with a very well-marked exciting cause, it may deserve your especial attention; and I refer to it the more because, as far as I am aware, authors have generally overlooked it. I have already told you how long-continued habits of intemperance in alcoholic drinks tend to the production of a fibrous or fatty degeneration of the various tissues of the body, and that, as a consequence, the membranes of the brain and spinal cord become thickened, and the organs within wasted. This, of course, would give rise to what might be called a general paralysis of body and mind. But besides these general results, we often meet with more direct effects on the spinal cord, and to these I particularly refer. I have now seen so many cases of persons, especially "ladies," who have entirely given themselves up to the pleasures of brandy-drinking, and have become paraplegic, that I have become pretty familiar with the symptoms. From what we hear of our continental neighbours, it would seem that that diabolical compound styled "absinthe" is productive of exhaustion of nervous power in even a much more marked degree; it would seem that the volatile oils dissolved in the alcohol give additional force to its poisonous effects. Of course drunkards of all descriptions suffer from muscular and nervous weakness, but, as I before said, it is more especially in the legs that the effect is most striking. A loss of power is first observed, accompanied by pains in the limbs, which might indicate a chronic meningitis of the spinal cord, and in some cases there is anæsthesia. There is at the same time necessarily some amount of feebleness of other parts of the body as well as the mind, and thus an approach to general paralysis is produced; but sometimes the symptoms are almost confined to the legs, and resemble in character those of the locomotor ataxy.

I am now seeing a young married woman who for some time past has taken to "drink." She first of all had engorgement of the liver, followed by an all but fatal hæmatemesis. She recovered of this, but, continuing her evil habits, she began to get feeble in mind and tottering in her limbs. She appeared at times almost lost, and spoke thickly. She had a difficulty in rising from her chair, and then, by a great effort, staggered across the room. She now appears gradually recovering.

I occasionally see in this neighbourhood a publican's wife who commenced business two years ago, previous to which time she was temperate and well. Since this, the constant presence of gin before her eyes has been too much for her, and she has drunk the burning liquid in enormous quantities. This could not continue long, and now she has been confined to her bed for six months. She is almost paralysed, having very little power to move her limbs, not being able to raise the heel from the bed, and having no power to grasp with the hand; the muscles are flabby, and she has almost complete anæsthesia. The mind is also somewhat enfeebled.

Such cases I could multiply to almost any extent. Several I have seen end fatally, and in some a partial recovery has taken place. I have given the name paraplegia as a general term for the symptoms, but, as you might suppose in a chronic meningo-myelitis, they would vary, and probably very much, as the posterior cords of the nerves were involved. Thus, in the case just mentioned there was anæsthesia, whilst in the case of a young man lately dead there was hyperæsthesia. In his case also there were severe pains in the limbs. In one young woman the symptoms very much resembled those of locomotor ataxy in the character of the pains, which resembled electric shocks, and also in her mode of progression. I might say that drunkards suffer often from pains in the limbs before there is any sign of paralysis.

A LECTURE INTRODUCTORY TO THE COURSE OF PHYSIOLOGY.

DELIVERED AT

King's College, London.

October 2, 1868.

By Professor LIONEL S. BEALE, M.B., F.R.S.,

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Gentlemen,—From the earliest ages Medicine has been helped forward by the study of those subjects which are included under physiology, and in modern times advance in practical Medicine has invariably followed every advance in physiology. The Medicine of the present day has its only foundation in physiological science, and it is certain that the Medicine of the future will acknowledge in a still greater degree its indebtedness to physiology.

Many of the greatest Surgeons and Physicians have been remarkable for their devotion to this branch of science. Harvey, Hunter, Bell, Astley Cooper, Brodie, Baly, and many more have shown their love for physiological work; the most eminent Medical authors of the present century testify to the very intimate connexion between physiology and practical Medicine; and, among living Physicians and Surgeons, not a few are distinguished as ardent students of physiology. Some of the most remarkable Medical problems with which we have to deal at this time cannot be solved because our physiological knowledge is not sufficiently advanced, and in not a few instances practical legislation is retarded, and the introduction of most useful practical measures postponed, simply because physiological investigation is incomplete, and scientific questions to which the practical statesman requires definite replies can only be answered doubtfully and in part.

Nevertheless, the importance of physiology to Medicine is still, as it appears to me, very much underrated in this country. Although it is obvious that a knowledge of the structure and action of the organs of the healthy body ought to be acquired by every one who desires to study the changes which take place in disease, and, above all, by those who are to spend their lives in relieving suffering, restoring healthy action, and in studying how to prolong life under conditions unfavourable to its preservation, there are, I regret to say, Practitioners of great influence who, so far from being convinced of the importance of physiology to Medical practice and Medical progress, maintain that Medicine and Surgery may be advantageously studied and practised without a preliminary knowledge of physiology. Indeed, but too many distinguished Physicians and Surgeons now living speak and act as if they considered minute physiological and pathological research were far removed from ordinary Professional work. They discourage pupils from qualifying themselves to advance our knowledge on the subject, and tell them that such work takes them from practice, and tends to make them mere scientific men. Some seem to think that science unfits a man for his Professional duties, and that a combination of scientific and practical work is impossible. For this notion, undoubtedly very generally entertained, though much more frequently allowed to influence actions than publicly expressed, there is no reasonable foundation. Such persons, never having themselves experienced the advantages of a prolonged scientific education, and without any natural bent for scientific study, try to persuade themselves that the interests of practical

Medicine are not furthered by it. They would leave minute research to those who are to spend their lives in scientific work and scientific investigation. In short, they would separate, if they could, the study of pure science from the pursuit of practical Medicine. And yet, have we not, year after year, orations in honour of Harvey and Hunter, who were distinguished above all for the combination of the practical and the speculative—the useful and the philosophical? It would indeed be a misfortune for British Medicine if the Physicians and Surgeons of our Hospitals were to give up scientific study—if they were no longer to take part in thorough, earnest, scientific work, but devote all their time to what is called practice.

It is wonderful, considering what has been going on around us, how very little Medical teaching has really changed during the last twenty years. Reforms are indeed required to render Medical teaching and Medical work what they ought to be in this country in these days. It may be almost said that the educational revolution which has struck with dismay so many of those comfortable in the enjoyment of authority, has as yet scarcely touched us, for, although our system is in all conscience faulty enough, it is so highly complex that few can grasp its details, and there are so many conflicting interests that unprejudiced inquirers are baffled. The public knows that Doctors have to pass an examination, and is not disposed to inquire whether the standard required by the examiners is what it ought to be or not. And if any one did inquire, he would be bewildered by the multitude of the examinations, the strange character of the subjects, and the hopeless variance existing between different boards as to the knowledge necessary to enable a man to practise his Profession honestly to the advantage of the public. The differences of the examining boards are participated in by Practitioners, and, if I mistake not, much increase the difficulties of those who are studying Medicine.

Anatomy, chemistry, and physiology are admitted to be subjects with which every one should be acquainted before he commences the study of Medicine and Surgery; indeed, it is obviously impossible that any one can really learn anything at the bedside until he has acquired such preliminary elementary knowledge; and yet those who preside over Medical education not only permit you from the very first hour in which you commence your Medical studies, to visit the Hospital and attend clinical lectures, but compel you to do so. They act as if they believed that you could study disease advantageously before you had learnt anything about the healthy body. Thus a system, which, in its practical working, has the effect of discouraging all students who come really to learn and all teachers who earnestly desire to teach, is enforced by authority. If an effort had been made to produce the greatest possible show of work with the smallest possible results, I do not believe a system more admirably suited to the purpose could have been invented. A student has in all conscience enough to bewilder him in the elementary subjects when he first enters at a Medical school. If the extent of Medical and Surgical work brought under his notice at the Hospital does not utterly appal him, he soon comes to look upon the whole thing as a mere matter of completing so many attendances, registering so many times, and getting signatures to schedules.

It must, I fear, be confessed that those who control Medical education, as well as the examiners, teachers, and students, are divided into two parties—the party of progress and the party which opposes change; or, one might almost say, the party which encourages the study and advance of physiological science in the Profession, and the party which opposes the study of physiology by the student of Medicine. The party of Medical progress comprehends all Medical workers and thinkers, very many of whom are associated with the University of London, and in it are included all those who consider a scientific training necessary for Medical students. The stronghold of the last is the College of Surgeons, where examiners are seldom appointed before they have passed the vigour of life, while several have continued to examine to the very verge of an exceptionally prolonged existence. In the College of Surgeons every change is firmly contested, as if all change were bad. It has too often effectually resisted the influence of firm and long-sustained pressure of Medical opinion; but, cleverly yielding at last in very slight degree, it has managed to receive the compliments of the press, preserve its popularity, and retain its power. The battering-ram of public opinion has, however, at last made a really important breach in the well-guarded ramparts of this ancient stronghold, for two examiners in Medicine have just been firmly established in the citadel, and the principle so long maintained by its defenders, that Practitioners need only be examined in Anatomy and Surgery, has been abandoned for ever. Physiology is still valiantly repelled, and you may yet obtain your diploma without knowing as much physiology as you may gain from a cursory glance over a popular treatise.

This reluctance to encourage modern modes of work, and fixed determination to ignore modern thought, is much to be deplored, for it is doing serious harm to Medicine. What can be worse than old examiners encouraging a low standard of excellence among students, and endeavouring to force teachers belonging to another generation to teach that which is known to be antiquated and useless, while at the same time the examiners refuse to incur the responsibility of teaching themselves, or even of stating publicly exactly what in their opinion ought to be taught? When several persons act together to promote some common cause, to raise some new institution, have we not almost invariably to admire their resolution, their devotion to the cause, their determination to yield to one another, or at the worst to agree to differ, their longing for progress, their disinterested work, their patience, their readiness for suggestions, their consideration for all who work under them, and their respect for the individual, his energy, and his work? But what is but too often the case with regard to the managers of institutions well established in popular favour, and invested with the authority which this confers? Devotion to themselves, a high sense of their own dignity, almost invariably laziness, and often weakness and timidity, always a hatred of change, disbelief in progress, impatience of suggestion, disrespect, if not a manifest contempt, for the individuals they govern, improper delegation of their authority to some one representative and often paid officer, a fixed determination not to inquire or improve, with but one rallying cry, but one feeling in common—an implacable hatred of change, a solemn determination to resist innovation, from whatever quarter it may come.

The determination not to admit that greatest of nature's ordinances, change, the strange fancy that the tree must die because it is ordained that its leaves shall be changed, the notion that renovation leads to revolution—that invigorating change is the first step towards destruction—it is all this which ruins time-honoured institutions, which wounds the hearts of earnest men, and enforces apathy where in vain are offered the most intense zeal and the truest devotion. But in ever-changing Medical work and thought this hatred of change produces widespread evil, which works in many ways to the disadvantage of the public and our country, and to our own detriment. Surely it is very hard upon us that because a few influential persons, members of ancient corporations, have made up their minds that the times are degenerate, and have perchance been sorely troubled of late with dreams about Niagara, and cataclysms, and deluges, that therefore we must not learn more than they were taught, that because they can see no good in modern work and investigation all inquiry is to be stopped and all new work put down. Yet this is really the conclusion to which one must come if one considers the acts of many influential persons in our Profession and the advice they have given. They seem to care nothing for the Medicine of the future, but struggle with all their might to retain the old order of things. They refuse to admit that the Medicine of to-day is no longer the Medicine of fifty years ago.

Now let me beg your attention for a few moments to what is going on outside the Profession with reference to this very question, the study and teaching of physiology. Already physiology is taught in many boys' schools, and there is reason to think that before long it will form an essential part of a liberal education. Hear what Mr. Mill says on the importance of physiology in general education. In his inaugural address delivered to the University of St. Andrews, February 1, 1867, speaking of the scientific subjects which might be advantageously introduced in general education, he observes:—"The first is physiology; the science of the laws of organic and animal life, and especially of the structure and functions of the human body. It would be absurd to pretend that a profound knowledge of this difficult subject can be acquired in youth, or as a part of general education. Yet an acquaintance with its leading truths is one of those requirements which ought not to be the exclusive property of a particular Profession. The value of such knowledge for daily uses has been made familiar to us all by the sanitary discussions of late years. There is hardly one among us who may not, in some position

of authority, be required to form an opinion and take part in public action on sanitary subjects. And the importance of understanding the true conditions of health and disease, of knowing how to acquire and preserve that healthy habit of body which the most tedious and costly Medical treatment so often fails to restore when once lost, should secure a place in general education for the principal maxims of hygiene, and some of those even of practical Medicine. For those who aim at high intellectual cultivation, the study of physiology has still greater recommendations, and is, in the present state of advancement of the higher studies, a real necessity. The practice which it gives in the study of nature is such as no other (?) physical science affords in the same kind, and is the best introduction to the difficult questions of politics and social life. Scientific education, apart from professional objects, is but a preparation for judging rightly of man, and of his requirements and interests. But to this final pursuit, which has been called, *par excellence*, the proper study of mankind, physiology is the most serviceable of the sciences, because it is the nearest. Its subject is already man; the same complex and manifold being, whose properties are not independent of circumstance and immovable from age to age, like those of the ellipse and hyperbola, or of sulphur and phosphorus, but are infinitely various, indefinitely modifiable by art or accident, graduating by the nicest shades into one another, and reacting upon one another in a thousand ways, so that they are seldom capable of being isolated and observed separately. With the difficulties of the study of a being so constituted the physiologist, and he alone among scientific inquirers, is already familiar. Take what view we will of man as a spiritual being, one part of his nature is far more like another than either of them is like anything else. In the organic world we study nature under disadvantages very similar to those which affect the study of moral and political phenomena; our means of making experiments are almost as limited, while the extreme complexity of the facts makes the conclusions of general reasoning unusually precarious on account of the vast number of circumstances that conspire to determine every result. Yet in spite of these obstacles it is found possible in physiology to arrive at a considerable number of well-ascertained and important truths. This, therefore, is an excellent school in which to study the means of overcoming similar difficulties elsewhere. It is in physiology, too, that we are introduced to some of the conceptions which play the greatest part in the moral and social sciences, but which do not occur at all in those of inorganic nature—as, for instance, the idea of predisposition and of predisposing causes, as distinguished from exciting causes. The operation of moral forces is immensely influenced by predisposition; without that element it is impossible to explain the commonest facts of history and social life. Physiology is also the first science in which we recognise the influence of habit—the tendency of something to happen again merely because it has happened before. From physiology, too, we get our clearest notion of what is meant by development or evolution. The growth of a plant or animal from the first germ is the typical specimen of a phenomenon which rules through the whole course of the history of man and society—increase of function, through expansion and differentiation of structure by internal forces. I cannot enter into the subject at greater length; it is enough if I throw out hints which may be germs of further thought in yourselves. Those who aim at high intellectual achievements may be assured that no part of their time will be less wasted than those which they employ in becoming familiar with the methods and with the main conceptions of the science of organisation and life.

"Physiology, at its upper extremity, touches on psychology, or the philosophy of mind, and without raising any disputed questions about the limits between matter and spirit, the nerves and brain are admitted to have so intimate a connexion with the mental operations that the student of the last cannot dispense with a considerable knowledge of the first. The value of psychology itself need hardly be expatiated upon in a Scotch University, for it has always been there studied with brilliant success. Almost everything which has been contributed from these islands towards its advancement since Locke and Berkeley, has, until very lately, and much of it even in the present generation, proceeded from Scottish authors and Scottish professors. Psychology, in truth, is simply the knowledge of the laws of human nature. If there is anything that deserves to be studied by man, it is his own nature and that of his fellow-men; and if it is worth studying at all, it is worth studying scientifically, so as to reach the fundamental laws which underlie and govern all the rest. With regard to the suitableness of this subject for general education, a distinction must be made. There are certain observed laws of our thoughts and of our feelings which rest upon experimental evidence, and, once seized, are a clue to the interpretation of much that we are conscious of in ourselves and observe in one another. Such, for example, are the laws of association. Psychology, so far as it consists of such laws (I speak of the laws themselves, not of their disputed applications), is as positive and certain a science as chemistry, and fit to be taught as such."

Now listen to the following striking passage from a lecture of Mr. Paget's in favour of the study of physiology in the course of general education:—

"I claim for physiology the pre-eminence among all sciences for the clear and full analogies which it displays between truths natural and revealed, and I would teach it everywhere, looking to its help, by these analogies, to prove the concord between knowledge and belief, and to mediate in the ever-pending conflict of intellect and faith."—"On the Importance of the Study of Physiology," a lecture delivered at the Royal Institution, by James Paget, F.R.S.

It is not possible to adduce stronger testimony in favour of the paramount importance of any other branch of human knowledge, but yet, in spite of all that has been urged, physiology still occupies a very subordinate position in Medical education. It is regarded as of far less importance than anatomy, Medicine, and Surgery, although there is not one morbid change, not one form of disease, which can be understood by the student until he has acquired a knowledge of physiology.

Again, how microscopic observation is slurred over in ordinary Medical education, although it would be obviously absurd to attempt to discuss the nature of changes occurring in tissues and organs without a knowledge of their structure. Practical microscopic observation is not regarded as necessary or even desirable by some who preside over us.

No wonder that such views, prominently advocated and acted upon, should have led many who have to regulate the course of instruction and determine the details of teaching in our schools and colleges to underrate most terribly the importance of physiology and minute anatomy, healthy and morbid, comparative anatomy, and physiological chemistry. No wonder that there should be strong opposition to furnishing the requisite means for teaching these subjects practically even in our largest and best schools. Ever since I have had the honour of teaching in this College I have experienced the deepest concern that I have been unable to develope this branch of Professional teaching as I hoped to have done. But how could I expect to succeed in persuading the Council to spend money upon my department when Medical authorities of repute almost ignored the subject, and some examining boards scarcely introduced it in their examination? My respected predecessors for nearly twenty years worked in a dark, damp cellar, into which, on the brightest days, scarcely sufficient light penetrated to enable any one to make a careful dissection; and for the last fifteen years I have worked in these same dismal caverns, which, however, do possess great historical interest, and even excite in one a certain kind of affection, for did not Mayo, and then Todd and Bowman, carry out in them famous anatomical and physiological investigations? But even the argument against improvement which might be based upon these admissions is unsatisfactory, for it was obviously never intended that such a state of things should have been allowed to continue when the College was first founded. It is the amiable and retiring nature of physiological professors which has led them to endure that which was most unsatisfactory rather than complain too loudly; but it would have contributed very greatly to our happiness here if the necessary changes had been carried out years ago. We may, however, feel quite sure that every future Professor of Physiology and future students in this College will enjoy the advantages of new and improved work and lecture rooms.

I think you will now be convinced of the importance of the thorough study of physiology; that it is, as it were, the grammar of Medicine, the Medical primer, the very alphabet, without which you cannot progress in your Medical reading. But it is much more than this. It would be impossible to find a study more suitable than physiology for the mental training of those who are to spend their lives in the prevention of disease, and its discovery and treatment where it exists. It requires great attention. It exercises the judgment, excites thought, and encourages the habit of close reasoning, while it does not blunt the imagination or destroy the inventive power.

ON THE INFLUENCE OF CUSTOMS, HABITS, AND MORALS ON THE HEALTH OF THE COMMUNITY.

AN ADDRESS DELIVERED BEFORE THE ASSOCIATION OF METROPOLITAN MEDICAL OFFICERS OF HEALTH, AT THEIR FIRST EVENING MEETING OF THE SESSION, OCTOBER 17, 1868.

By ROBERT DRUITT,

President of the Association, and late Medical Officer of Health to St. George's, Hanover-square.

GENTLEMEN,—At our first meeting for another session, I have conceived that it might be useful to take some account of prevalent habits, circumstances, and morals, and their influence on health and life, and to consider some of the obstacles which present themselves to the minister of sanitary improvement, whether as an authorised functionary under an Act of Parliament, or as the adviser of the public on matters which no law can touch.

The appointment of Medical officers of health and their duties, and the scope within which they can exercise authority, are marked out by statute law. But it would be a fatal mistake for them to confine their studies and efforts within any such technical limit. The true basis of public health is the intelligence, love of order, love of life, and general welfare of the people. Where these are as they should be, positive laws are unnecessary. Sanitary laws, more than any others, interfere with inveterate habits and prejudices: they protect people from themselves. How impotent must they be compared with the force that might be exerted by the unprompted intelligence and goodwill of a population! You may see a country village, with neglected gardens, heaps of manure tainting the air and water-brooks, filthy streams dribbling along the sides of the road under a hot sun and swarms of flies—what is the need of any *law* here? The population need only take their shovels in their hands, and five minutes' labour every day would make the place sweet and keep it so. Permissive legislation, too! What is the use of these enactments if the people who are to carry them out do not see the need of them, or do not believe that the end desired can be attained by the means proposed? When people can be taught to see the evil, and believe in the remedy, and think their interests involved, there will be little difficulty in putting sanitary laws into force.

Let us, then, take a rapid glance at some of the customs, morals, beliefs, and practices of the community, in order that we may see what openings there are for sanitary counsel. In the cursory manner which such an address as the present permits, we may glance at the subjects of births, marriages, and deaths; the training of children; popular notions and practices respecting food, air, and clothing; the construction of houses and the accommodation yielded by them; clothing, cleanliness, and the disposal of refuse; and epidemics considered as tests of the moral and sanitary state of a population—the connecting thread that runs through my observations on these divers subjects being the popular prejudices or customs which underlie the outward and physical evils which the sanitary teacher desires to put down.

But I will take the liberty of breaking the order of subjects which I have just laid down, and say at starting a few words on clothing, because that shows more clearly than any other the need that sanitary teachers should attend to the ideas which underlie any particular bad custom before they can hope to attack it with effect. Clothing is intended, they say, to preserve the warmth of the body. But it is notorious that clothing is often deliberately chosen which does not answer this purpose. Then benevolent personages write tracts on the necessity of warm clothing, and give dismal histories of coughs, colds, consumption, and death, caught by neglect of it. Nay, if certain "persons" were admitted to the House of Commons, we can imagine bills introduced against tight lacing, naked shoulders, and thin shoes, just as some clamour for similar Acts against wet-nursing and the like. But all the while it is forgotten that warmth is but one function of clothing, that ornament is another, and that there are thousands of people who would suffer any torment from cold rather than sacrifice what they think ornamental. But there is another function of clothing—it must serve the purposes of coquetry; must attract the attention of the other sex. To this purpose warmth and graceful ornament itself must at times be sacrificed; piquant novelty must be sought even in the grotesque and barbarous. Hence the weaker sex, thinking the eye is palled with what is decent and graceful, and adapted to their own exquisite frames, make their hair touzled, fix lumps upon their backs, place their waists under their arms; at one time muffle the head and leave the feet almost bare; at another clothe the feet and leave the head bare. Meanwhile what is the use of tracts on the benefit of warm clothing? Nobody disputes that: only warmth is not the property of clothing that most store is set by.

We will now take the subject of birth, the most important function of the life of women, and demanding scientific appreciation, both as regards the welfare of the patient and that of the community to which she adds a new citizen. With regard to the welfare of the woman, we may point with pride to the efforts made of late years, since the obstetric department has been restored to its due position in scientific Medicine, to assuage the pains of childbirth and avert its dangers. Like other natural functions, there is no circumstance which can affect the health of the individual woman by which it may not be perverted, or even rendered impossible. Accidents during parturition create a great impression upon us, especially when affecting women of social importance; and by the rashest of logic some of us conclude that such sad events are the peculiar bane of civilisation. Poets, bewailing the death of the Princess Charlotte, complained that "peasants could bring forth in safety;" and travellers tell us of the women in savage tribes who are taken with the throes of labour in a march, retire to a stream to wash their infant, and then hurry on with it to join the rest of the tribe. But travellers do not tell us, though they very well know, of the deaths without delivery which occur amongst savage tribes; and we are apt to forget the incidental notices of similar events in even recent times, until the epoch when midwifery was made a part of scientific Medicine. Thus Milton, in his epitaph on the Marchioness of Winchester, tells how this poor lady

> "Called Lucina to her throes;
> But, whether by mischance or blame,
> Atropos for Lucina came,
> And with remorseless cruelty
> Spoil'd at once both fruit and tree:
> The hapless babe before his birth
> Had burial, yet not laid in earth;
> And the languish'd mother's womb
> Was not long a living tomb."

There is nothing that the women of savage tribes do after delivery that is not done weekly in this city by any single woman who wants to conceal an illegitimate birth; whilst it is a significant fact that no class of people in any country ever afforded such examples of the injuries of unassisted parturition as did the slave women in the Southern States of America, who lived in what was called a state of nature, and went through the natural process of parturition without Medical aid. It is amongst such a field for cases that Marion Sims, Bozeman, and the other great American operators on vesico-vaginal fistula have acquired their laurels. Thus we may fairly conclude that every aid which science and experience can afford should be within reach of every woman at this perilous crisis. As to principles of hygienic treatment, they seem deducible from the circumstances of the case. The woman is subjected to an exhausting process; she is liable to great losses of blood; she will soon be called upon to furnish large supplies of nourishment to the creature to which she gives birth; and she is all the while in the condition of a patient with an enormous internal wound, which lays her open to all the chances of blood contamination that may affect any patients with other wounds. Science, as well as experience, demands for patients so circumstanced the free application of cold water, pure air, and nutritious food, and isolation and protection from all causes that may disturb the mind or infect the body.

A glance at the accounts of such events in past generations gives a very different picture, and shows that the women who attended to these matters until they were taken in hand by scientific men were actuated by a system of bigoted and superstitious interference, in which the rule was never to leave anything to nature; hot stimulating drinks, no solid food, the total exclusion of everything cool and refreshing; the patient forced to wear woollen in bed in warm weather, and not allowed to touch even the handle of the knife and fork unless swathed in flannel; cool air, the greatest medicine of any, carefully shut out; and when these evil influences had produced fever, that fever was ascribed to cold, and all the mischievous precautions doubled. Such was the picture. Bad as these influences are when women are isolated, I need not say how they are aggravated by accumulation in lying-in Hospitals, for fortunately these

institutions are now condemned, and can only be conscientiously resorted to for the reception of cases requiring operation, or for which there is absolutely no other refuge.

To sum up what may be said of births in their sanitary and Medico-legal aspects, we must insist on the necessity of quiet, isolation, and the most extreme cleanliness, pure air, cool regimen, and abundant diet, remembering that everything which delays the recovery of the poor man's wife for a single day, or which robs her of her strength, makes her unfit to suckle, and thereby renders herself liable to another conception prematurely, her infant more liable to perish by diarrhœa and bronchitis, whilst she is less fit to manage her household, and more prone to spirit-drinking as a relief from weakness and misery.

As regards the State, we should demand the enrolment of every new citizen in the register; we desire to know the number of still births and the causes, and to place the burial of such bodies under proper supervision. We desire, also, some means which, without holding out an incentive to immorality, should at least enable poor penitent girls to hide their shame, and give their offspring such chance of life as belongs to an illegitimate child born of a poor woman in a crowded population, and in a community where such an occurrence robs a woman of almost all chance of reputable employment.

On the subject of marriage there is much that the sanitary philosopher can teach the community, although there is nothing which he can do besides. Free as our people are, and reckless of the future, it is one of the misfortunes even of commerce and manufacture that they give the young and most reckless the power of gratifying their passions, either by illicit connexion or by early and improvident marriage, and that thus what ought to add to our health and wealth does but add to our poverty and mortality. There is no question whatever but that a system which makes young people of either sex independent of their parents at an early age also does virtually increase immorality and improvidence. In one town that I am acquainted with, where young girls earn large wages, those wages are spent in treating the soldiers from the neighbouring barrack, who are certainly the tempted and not the tempters. Such arrangements, if they lead to offspring, lead to infanticide quick or slow; but the fact is not so generally known as it should be of the unfavourable influence of the marriages of immature and ignorant persons on the health of their offspring. For proof we must turn to the mines of facts constantly accumulating in the Reports of the Registrar-General, and in the writings of such Medical statists as Dr. W. Farr and Dr. Matthews Duncan. From these we learn the great and disproportionate mortality of women prematurely impregnated, and that the mortality of over-young husbands is on as extravagant a scale as that of their wives.(a) As for the offspring of such marriages, "the general law," says the Registrar-General,(b) "evidently is, that in the counties which are the most ignorant they marry in the largest proportions under 21 years of age, and lose the largest numbers of their children. When the counties are thrown into groups, the relation is perceptible."(c)

In matters such as these law seems useless, though regulations, social arrangements, instruction, and an educated public feeling would soon render laws less necessary. The law at present sanctions the marriages of idiots (the so-called Aztecs, to wit), of minors, of near relatives, of persons with hereditary disease, and of those who have not made the smallest provision for the offspring likely to follow. The degree of licence used by unmarried persons requires no comment. So far as teaching is concerned, this has been usually treated only as a branch of morals, which it assuredly is; but it might also be treated as a branch of knowledge of matter of fact and of natural history, the teachings of which are at one with those of morality. Youth might be taught more forcibly the end of sex—*i.e.*, the production of offspring; the cruelty of running the risk of bringing into the world children disgraced and unprovided for; the duty of beginning early to save up for marriage; and the loss of happiness incurred by those who so spend their youth as to debar themselves from marriage and paternity.

Meanwhile, we can but rejoice at those wise regulations which prevent temptations being put in the way of the unwary, and which suppress as far as possible the diseases that punish incontinence. But it is vain to make laws against incontinence so long as pregnancy followed by marriage is looked on as no disgrace, as is the rule amongst the English peasant classes.

I next turn to the subject of *death*, in which the beneficent efforts of modern science are now universally acknowledged. We no longer bury the dead in the midst of towns, where the inevitable products of decomposition poison earth, air, and water. Curious was it in the days of intra-urban burial to hear clergymen, sextons, and undertakers declare that they never experienced any offensiveness from the old burial-grounds. But now clergymen do not fail to tell me of the nauseous effluvia produced in one cemetery by digging the earth to plant trees, even ten years after all burials had been discontinued. The fact is that in retentive soils the process of thorough decomposition is very slow, and nothing makes soil so retentive or decomposition so slow as the loading the ground with animal remains. The smell of putridity was perceptible in examining human remains which must have been buried 2000 years, the corpse having been sewed up in a leathern hide, and then enclosed in the trunk of an oak tree. The offensiveness of the excavations of churchyards after many years of burial, as in the old churchyard in Portugal-street, of St. Andrew's, Holborn, and of the St. Pancras Cemetery, are matters well known; even in churches where there were formerly under the whole floor vaults used for burial, but now filled in with charcoal and sealed in by concrete, poisonous emanations are known to make themselves manifest, especially when the building is artificially heated, and it is clear that some years must elapse before the emanations from some of these old churchyards and vaults shall entirely cease. Meanwhile, it will be well if new materials for mischief are not accumulated in some of the vaults and catacombs of more modern cemeteries—a thing averted, as Mr. Holland tells me, by the worthlessness of so-called leaden coffins, and the gradual and imperceptible transfusion of offensive gas which they permit, so that the dangers of the bursting of the gases long pent up are avoided.

In the matter before us, the teachings of science and of religion are one. Science tells us that the lifeless body ought to be placed where it can be slowly, silently, inoffensively, and surely resolved into its elements, and where all the repulsiveness of decay is charitably shrouded from sight. Nature teaches us that it is a legitimate act of mercy to bury a corpse and hide the humiliating spectacle of decomposition. Religion bids us yield our body to the dust, as our soul to the Deity. But no—there steps in a morbid affection, or the vanity of earthly greatness, which refuses to part with the relics, and to render earth to earth, ashes to ashes, and dust to dust. They will not allow the relics of the dead to moulder into nothingness, but preserve them for the occasional affectionate regard and pious wishes of one generation, but to the neglect and insult and robbery of those who come after. Nothing is so little likely to secure the repose of the dead in this country as a conspicuous sepulchre. As for interment in vaults and brick graves, which really means leaving the coffin in a cellar unburied, it defeats all the objects of burial, to indulge the unreasoning pride of the survivors, and treats the relics in a way which the wiser heathens would have regarded as sacrilegious. Cathedral canons sift the ashes of a king.

But whilst we have abolished intramural burial, the custom of retaining corpses in rooms occupied by the living till the necessary arangements are made for a respectable funeral requires to be corrected by sanitary teaching, and to be set aside, where necessary in the judgment of the Medical officer of health, by a peremptory power of removal to a mortuary. At Munich and some other Continental towns, every corpse is so removed and exposed to public view, in full dress, in apartments of various classes.

The interests of the State demand the verification of the fact and cause of death in all cases where the death is not certified by a registered Medical Practitioner. Many of us in

(a) Farr on "Marriage and Mortality of the French." London: Saville. 1859. Matthews Duncan, "Fecundity," etc., p. 285.

(b) Twentieth Annual Report, 1859, p. vii.

(c) Extract from Table V. *a*, *ibid* p. ix. :—

Registration Counties.	Proportion per cent. of women married under age.		Proportion of women who signed the marriage register with marks to 100 married.		No of children dying under 5 years of age annually in 100 children living of that age.
	1841.	1857.	1841.	1857.	1838-44.
Staffordshire	16·60	26·85	59	55	6·290
Nottinghamshire	15·73	20·16	50	41	6·019
Lancashire	14·26	20·06	67	56	8·855
Durham	13·54	25·83	49	43	6·137
England	13·29	18·10	48·8	39	6·037
Dorsetshire	13·25	12·53	38	33	4·297
Westmoreland	9·07	14·52	34	19	4·041
London	6·85	12·11	24	19	8·027

dispensary or gratuitous practice must have certified, on the evidence of friends, to the death of persons who may have been alive; the State ought to take the expense of verifying the fact, and then might call on us, as *amici civitatis*, to say of what disease the deceased died. It is said that 25 per cent. of the deaths in Salford are not certified by a Medical man. Instances like these demonstrate the need of a registration Medical officer, who might absorb all the functions of the coroner without the useless formalities of inquests. At present twenty persons may come to inspect the body of one person who has died by accident, whilst no one verifies the cause of death from neglect, ignorance, and immorality.

Come we now to the treatment and training of children, and there is no fact more certain than this—viz., the absolute power of the parents over the life of the newly born infant. Amongst the Romans this was an open and formal matter—Here is a child: shall it be reared or "exposed"? No law can hinder a parent now from letting a child perish if she choose. It is quite enough to feed it on bread pap or water gruel, and death comes "from natural causes" after about six weeks of agony. It is in vain that benevolent tracts are written on the rearing of infants; they are of no use to people who don't want to rear them.

Amongst evil influences that overhang the lives of young children not the least is the want of appreciation of the value of life, the gloating over suffering and death, and the confident prognostications of evil displayed by the uneducated women who haunt the chambers of the sick poor. What hearty effort can be made to save the life of a sick child, whilst a young ignorant mother is surrounded by counsellors who harp incessantly on the cruelty of torturing a child by medical appliances, and the hope that the Lord will take it to where it will be better off?

The training of children is a subject too wide for the cursory handling of this address; but there are some points which may be discussed with benefit. One is the unconscionably long time that a newborn child is allowed to lie before it is washed, and the tedious and unskilful method of washing, so that the surface becomes blue, and the child shivers before it is given to the mother's bosom, even if it be so given; for just as likely it is put by itself into a small cradle, ostentatiously ornamented, but too cold.

The art of rearing children is an art neglected amongst us, and even the most affectionate mothers may make fatal mistakes. For instance, no sufficient heed is taken of the ever-restless nature of children, and of the impossibility of their safety out of sight. The simple rule is unknown that in preparing a bath for a child the cold water should be put in first, and the hot afterwards; but no year passes without children scalded to death because their mothers put in the hot water first, which the child tumbles into so soon as she turns her back to fetch the cold water. The accidents by fire, by water, by falls, and other injuries, which young children are liable to, admit of being reckoned and classified, and would be as easy for a girl to learn as the tenses of a verb, or a chronological table of kings and queens.

Regarding food and drink, there is much which the sanitary teacher finds to say. The Physician at the west end of London sees the results of over-feeding—of the three solid meals of animal food, and the copious libations of heavy beer, in which servants indulge—but he is equally aware of the impoverishing effect of a diet nominally wholesome, but virtually destitute of all stimulating properties, such as is given to children in many families, to apprentices, working girls, and inmates of institutions. My friend Mr. Hunt pointed out long ago the necessity of variety, and showed that, by instinct as it were, the London poor mitigate their habitual diet of bread, tea, and gin with shellfish and watercresses. I was assured by a gentleman educated at a very high-priced school, where particular attention was paid to the boys' health, and where the diet was abundant and excellent, but uniform, and excluded all "unwholesome substances," so called, that the boys in their walks, driven by a kind of instinct, used to eat any weed or herb they came across that was eatable—the young shoots of the white thorn, the field sorrel, and young grass in particular. But a knowledge is yet anything but general of the mutual relations of brain work and stomach work, or I should rather say of brain work and the whole nutritive system. Where the brain is quiet, the stomach tolerates any food, and any process of growth and reparation goes on vigorously. Where the brain is overworked, the limited fund of what we may call *vital* force, or of arterial blood, being expended in the brain, leaves the feet cold, and the stomach languid. The corollary is that where much brain work is demanded from growing children, the clothing must be extra warm, the food extra nourishing, digestible, and abundant; otherwise the result will be cleverness without force, big foreheads, crooked legs, pale skins, decayed teeth, great impressionability and nervousness, tendency to intemperance, immorality, phthisis, and madness.

Now I must touch on a subject which the sanitary teacher may well comment on, not in its religious, but in its moral, social, and political aspects, and that is *fasting*. Amongst a population with the propensities of the Anglo-Saxon two things are morally certain. One is the absolute necessity for some discipline which shall inculcate self-denial, self-restraint, and provision for future time (which can only consist in abstinence at time present). The other, that he will reject such discipline. We hear of workmen in the Black Country earning large wages and spending upon luxurious dinners of lamb and peas sums which would keep an agricultural family in the south, and absolutely leaving their families to the mercies of the Poor-law when a season of distress come upon them; and we see the mechanics and journeymen in London, earning large wages, wasting at least one day a week in junketting, and putting by not a farthing. We may well express our belief that a discipline involving some periodical restriction either in the quantity or choice of food, would be productive of the best moral effects. Certainly the moral effect would be prodigious if working men in good health could be trained to go without beer one day in the week. Intemperance is one of our greatest curses; but where is temperance taught? But with an Anglo-Saxon population, the greater the need for such teaching the less likely are they to submit to it. They glory in eating and drinking as national virtues, and would soon find out moral and religious grounds for not fasting, for most assuredly a popular religion must be the reflex of the popular vices as well as its virtues. As for technical fasting, that is satisfying the appetite with sufficient quantity, but excluding food of certain quality, such as flesh meat; it promotes a most interesting branch of cookery in the preparation of *meagre* dishes made savoury by vegetables; and it would be a national boon if this mode of cookery were encouraged. Abstinence from fermented liquors alone would be most effective and desirable. But when fasting consists in the denial to a not overfed body of the *quantities* necessary for work and nutrition, it must, I think, be condemned without hesitation as unfit for this climate, and for persons who must work and not merely indulge in contemplation. I know many excellent religious persons whose forenoons at certain seasons are passed in the greatest discomfort, and I believe that the result is bad for health and temper; whilst all the good of a discipline in self-denial may be obtained with benefit to both.

On the subject of air and ventilation let me say that without warmth the most elaborate arrangements may but conduce to unhealthiness. The common catarrh is no doubt propagated amongst a family by the sneezing, coughing, and breathing of its victims; and the *sine qua non* in ventilation is plenty of food, clothing, and warmth.

I must now say a few words on dwelling houses, and especially on their position, and here would bear testimony to the interesting results obtained by Dr. Buchanan as to the connexion of damp soil and phthisis, which, though heretofore a matter of common observation, had never been measured in a scientific way. It would seem that, whereas their Belgic predecessors, as we learn from Cæsar, had a predilection for hills and woods, where they fortified themselves, the Saxons displayed a preference for the lowest sites by streams, whether it were from obedience to the instincts of Frisian ancestors, or for the sake of fishing, water carriage, or richer soil, or for defence. Most likely it was for the sake of the water supply, which, as at Salisbury, Winchester, Wimborne, and elsewhere, they drew by means of artificial streamlets along the streets in front of every house. In one district in the south-western counties there are four towns a dozen miles apart, each rather under than out of the water in floods or high tide, so that the water used to rise in the crypts and vaults of the churches and cellars of houses. The ground floors of such houses give a most unpleasant feeling of chill, and rheumatism is a common scourge to that part of the poorer population who are spared the ravages of phthisis. But I desire chiefly now to call your attention to such places as explaining Petenkofer's ground-water theory, which assumes a connexion between low-water level and disease, and has appeared to many persons paradoxical and inconsistent with the benefits of drainage.

The elements of the matter are these. A gravelly soil consists mainly of broken flints, which allow a tolerably free passage to any currents of water. The surface of such soil may be compared to that of a bridge or platform over water, supported by an innumerable series of petty piles, through which the water slowly flows at the level of the water bed of the district — higher in floods and tides, and lower during drought and ebbs. Virtually a river flowing through such gravel beds is but the visible portion of huge underneath currents traversing the porous strata; so that a person walking over the surface may be said "incedere per *aquas* suppositas *silici* doloso," just as the path over volcanic ashes is really over fire, and that over the moraine of a glacier over ice. Now, the water may vary from a few inches to six or eight feet below the surface, according to tide and flood. But in such old towns there is little or no artificial drainage. At the back of every house is a cesspool for sewage, and a dead-well, for letting other superfluous water soak away. Now, then, in high water the contents of dead-well and cesspool pass at once into the water which percolates the gravel, where they are carried on as they would be by a river, and are washed away with little nuisance. At low water, however, the foul soakage is dispersed through the gravel, and may infect the whole stratum under the house; whereas, if the water in the gravel had been high, it would have been quickly washed away. This is the explanation I venture to offer of Petenkofer's theory. One thing is certain —that the smell of cesspools in the garden may be perceived in the front parlour of a house situated twenty yards or so in front on a porous soil.

The condition of waterlogged low-lying places can only be amended by pulling down water-mills, and so giving freer vent to the outflow and scour of the river, whilst reservoirs are constructed on higher ground to absorb flood-water and counteract drought, and by putting a concrete flooring to the houses. But the residents put their sewage into one well and draw their drinking water from another, and see no harm.

I may next say a few words on the accommodation afforded by houses, and first on the score of morality. On this point, so far as single families are concerned, I have never been able to obtain a particle of evidence of acts of immorality between what may be called the natural members of a family—father, mother, and children. In fact, if one looks over the world, one sees that one room or hut is the normal condition for the occupation of one family in all the Aryan races. Moreover, in districts which modern civilised ideas have not reached, as in the Highlands of Scotland and backwoods of Canada, just as in England in the Middle Ages, persons of all ages and sexes indiscriminately sleep in one cabin or loft with no separation. Missionary bishops and clergymen have been compelled to sleep in Nova Scotia in the common sleeping-room of farmhouses, where each bed was occupied by a different member of the family of either sex. We have most of us read Chaucer, and know what mishaps arose from similar arrangements in mediæval England. In London I have heard of mischief from the strange want of delicacy which induces young married people occupying one room to take in a lodger of either sex to occupy one corner; so that the moral effects must depend upon circumstances. We may, therefore, claim space for decent seclusion for each family, without thereby implying that we believe all the insinuations current amongst sensational philanthropists. Nay, if we were to follow the requirements demanded by Miss Sewell and other over-refined people, we ought not to bring up the youngest children of opposite sexes in the same nursery, lest their "delicacy" should be ruined by the sight of the nude. Luckily, this sort of precaution is as unnatural as it is unnecessary. Young children know no sin, and when they know it, their thoughts do not go back to nursery scenes.

One sufficient argument for living space and separation of the sexes is, besides that for morality, that without it personal ablution as it should be conducted is impossible.

The next point I shall touch upon is the removal of excreta, a matter which has been unwholesomely influenced by ignorance and by false delicacy, and, as Dr. Rumsey well observes, rash and hasty legislation now. There are two modes, by cartage and by water, and it is a matter of doubt which of these may be better in certain cases. For some refuse, cartage is indispensable; as, for instance, cinders, trade rubbish, dust, blood, fish and poultry offal, horse and cow-dung. On the other hand, all refuse in which water predominates might naturally be carried away by pipes. I think we may fairly grant that for thinly populated places, where there is abundance of land, the only necessity is for a good subsoil drainage, and that everything else ought to be disposed of on cultivated land, the solid excreta in a solid form, and the liquid slops by some method of surface irrigation. With regard to London and many other large towns, the question is settled in favour of water carriage, and it were useless to discuss it on its merits. For places where the water-closet system is not established, my own recommendation would be pipes for waste water, but all solid excreta to be removed daily with earth, ashes, etc., in the dry state, and none to be allowed to enter the sewers. Unfortunately, a sort of spurious orthodoxy has been set up on these questions, and whenever any one who desires to arrive at the true end is opposed to the favourite official means, he is denounced as an infidel to the true sanitary faith. This only gives one specimen of the growth of an orthodox opinion, but need not deter us from freely handling it. On the side of cartage, or removal in a dry state, we say that a certain amount of carting is inevitable, as for house refuse; that this is performed in a most inefficient and disgraceful manner at present, and that any change which would enforce greater regularity and efficiency would be a boon. But we assert that no poor houses are kept free from fæcal contamination without external help, even though they have water-closets, and that no water-closet is safe in any house, without constant care. It does not even need that the closet be brought into communication with an immense ramification of sewers; for the tubes of a single house generate much gas, which, in certain states of wind and weather, find their way into the house. In any circumstances, more air is tainted by water-closets than by the dry way; and as regards delicacy, we cannot admit that a well-constructed closet in a lady's chamber is an instrument of delicacy, if it merely transmits the offensive matter to the neighbouring stream. During frost the water-closet system is a failure and nuisance on the largest scale. The ordinary mode of orthodox argumentation is to say all that can be said of well-constructed and managed water-closets, and to contrast this with all that can be said against the other system, ill-kept and mismanaged. But the gigantic nuisances and enormous expenses created by the water-closet system are now beginning to open the public eye, and to cause the question to be argued from experience.

In the last place, let me offer a very few words on epidemics considered as tests of our sanitary condition. Just as the prevalence of good health in temperate seasons is no motive for us to be content with fair-weather clothing and dwellings, but leaves it still incumbent on us to make dwellings, clothing, diet, and customs such as shall enable us to withstand the extreme of heat and cold, in like manner a community ought not to be content with the state of health enjoyed during ordinary seasons, when epidemics are not present, but ought to consider every epidemic a test of something vulnerable in our ways of life, and ought to act on the faith that whatever saves us from epidemics will render us healthier at times when no epidemic prevails. Typhus fever, regarded in this light, is a test of destitution and crowding; typhoid of fæcal contamination of air and water; cholera, in my belief, the same; of small-pox and scarlet fever there is no mode of propagation so sure as that which propagates typhoid; of others the history is almost blank. Influenza, which is carried about by stinking fogs, we may be forced to confess that we are helpless against until the earth shall have been brought far more fully under the domination of man. We sadly want knowledge of the habitat and history of diseases, and the facts existing want to be tabulated and condensed. Why, for instance, should small-pox be so liable to break out amongst seamen on a voyage? Years ago, in a lecture at the Royal Institution, I compared these diseases to the parasitic organisms that infect houses and persons, and showed that what would extirpate parasites would be the most likely means to destroy the lurking germs of the exanthemata. A Highlander who helps you across a ditch, with a hand bristling with itch vesicles and hair alive with vermin, seems quite unconscious that there is anything about him to be complained of. We perhaps may be surrounded with media for the growth and preservation of parasitic diseases, which we require further enlightenment to appreciate. But so long as living organisms can flourish as they do in skin follicles, in the hair, in the dermis, and in the secretions of the mouth, and the clothes-moth and larvæ of the house fly can be reared in abundance, there we may suppose may be the lurking-place of other parasites. Thus we can but fall back on the general principles of cleanliness, and endeavour to cleanse our persons,

and so to arrange our dwellings as to make them, to use Mr. Chadwick's words, feverproof, dampproof, and fireproof.

I must now, gentlemen, bring these desultory observations to a close, with the remark that my purpose has been to show that it is of little use to declaim against evils till the public understanding be enlightened to consider them such; that even the argument which convinces the reason may be impotent against the passion that "stronger is than death," against the family pride, the unreasoning affection, the adherence to old prejudices which underlie many of the evils we declaim against; and that it is uphill work to get laws put in force by those whose interests and opinions those laws are intended to counteract. In addition to official duties, there is the widest scope for the exercise of the functions of Medical Officers of Health in scientific studies of the history of disease, in which Dr. Ballard has set so good an example. Your studies embrace the whole of human nature—I may say the whole universe, moral and material; they embrace the doctrine of law, of purpose in creation, of human responsibility, of the nature of life, the connexion of forms of life to each other, whether antagonistic or auxiliary; lastly, they are to be carried on in the light of everyday experience and common sense; for if your office may be made contemptible by the torpor and inertia of some, it may be made equally so by the fantastic and impracticable schemes of others. Unaffected and disinterested labour will produce fruits at last. For my own part, although health and occupation have compelled me to abandon the official duties and position of officer of health, yet I feel my connexion with you one of the most gratifying events of my life, and I desire to bear testimony that the honours and rewards due to those who study to prevent disease should be proportionate to the comprehensiveness, and depth, and importance of their labours.

ORIGINAL COMMUNICATIONS.

ON THE RELATIVE VALUE OF DIFFERENT METHODS OF VACCINATION.

By C. B. SUCKLING, M.D.,
District Public Vaccinator, Birmingham.

Dr. Seaton, in his admirable "Handbook on Vaccination," describes five methods of inserting lymph, the essential point of all of them being to bring the lymph into contact with the cutis or with its absorbing surface. The methods are as follows:—(*a*) Puncture, either simple or double; (*b*) tattooing; (*c*) the Northern practice—*i.e.*, first spreading the lymph on the arms of the child, and then ripping up the cuticle with the point of a lancet; (*d*) scarification; (*e*) abrasion. For the past six months I have vaccinated by the plan of double puncture, or what may be termed double valvular puncture, with most satisfactory results, in almost every case the characteristic vesicle being produced. The manner in which I operate is by valvular puncture from above downwards, so that, as Dr. Seaton expresses it, the lymph may gravitate into the wound, and there remain shut in. I make two of these punctures within a line and a half of each other, in four different places, on one of the arms of the child, about three-quarters of an inch apart. The results of this method of procedure have been, so far as I have tried it, very satisfactory, producing almost invariably the typical pock of successful vaccination, which is known by its plumpness—roundness, with a flat surface and a central depression—the whole being surrounded by a circular inflammatory areola measuring from one to two inches and a half in diameter. From the practice which I have now had in this mode of vaccinating, I can produce a vesicle of almost any shape and size, according to the length, the proximity, and the direction of the valvular incisions which I make. Of course, I am always careful to take lymph from thoroughly characteristic vesicles and from perfectly healthy subjects; babies I usually select, as they yield a better and more abundant supply of lymph. Not a single case has been unsuccessful, or has failed to exhibit less than three large vesicles. The following table shows the results of my practice for the last six months:—

Table of Results from 305 Cases.

Kind of vaccination	Arm to arm.
Failure	0
One vesicle	0
Two vesicles	0
Three vesicles	9 large.
Four vesicles	274 large, round, & oval.
Three large, one double	13
Three double, one single	4
Four large double	5

This analysis shows a large predominance of the large, round, and oval vesicle over the other varieties, and as it is considered to be the typical vesicle, it is desirable to produce it, and this, as I have remarked, may be effected by the operator himself, according to the manner in which he introduces the matter and vaccinates. But it should not, however, be supposed that the protective value of vaccination against small-pox is confined to the large single vesicles; the double and compound likewise are in this respect quite as efficacious. But I have observed that the compound vesicles, when scratched or otherwise mechanically irritated, are followed by much more inflammatory disturbance than are the single vesicles when subjected to the like interference. In the single vesicles, also, the constitutional symptoms are not so severe.

All the cases recorded were vaccinated by me at my station, and as I can reckon upon seven or ten cases weekly, I am able to select lymph from perfectly healthy subjects; this no doubt has contributed mainly to the successful results which I have recorded. During the next six months I intend to vaccinate by "tattooing," and I will afterwards give the particulars of that way of operating—and so on with the other methods until I have exhausted the list, and shall then be in a position to state the final results. My investigations, though as methods they are only to be viewed as mere modes of effecting one and the same object—namely, successful transmission of the vaccine virus from body to body, so as to do as little harm as possible while taking the means of protecting the great mass of the public from so terrible and loathsome a disease as small-pox. This is the essential point which must in each instance be attained to a certainty, while yet it is of great, though secondary importance, that all the minor convenience or inconvenience attached to these respective modes of procedure should be settled with practical precision. At the same time, should any other method appear to be unsatisfactory in its progress, I should at once, without loss of time, resort to the original method of double valvular puncture from above downwards, which is shown by the above table to have been so successful; and, in fact, without one case of failure. Nor can I conclude without once more insisting most emphatically upon the vital importance of determining the state of health of the child from whom the lymph is obtained, and, if possible, the general health of the parents, as I quite concur with the opinion of many able Practitioners (although there are those who hold opposite views on the question), that other diseases than the simple production of this protective vesicle are capable of being carried at the same time into the bodies of the recipients; the facts on this subject are so numerous and convincing, especially as regards what are usually known as the secondary symptoms of another complaint, that the inference is irresistible, and commands the greatest caution on the part of all vaccinators. And even if such opinion were doubtful, or even quite erroneous, the vaccinator is still on the safe side by keeping it in view.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 415.)

Unsuitable Age of Recruits sent to India—Representations on the Subject—Unlimited Service—Protracted Service in India.

"I demand," said Napoleon, on a memorable occasion, "levy of 300,000 men. But I must have men; boys only serve to encumber the Hospitals and roadsides."

More than half a century afterwards, the Royal Commission on the sanitary state of the army in India recorded its belief that "many of the men (sent to India) are exposed to laborious duties in a tropical climate at too early an age, and before the constitution is fully formed;" and recommended as the first and most important of the measures deemed necessary to place the health of our troops in that country on a satisfactory footing, "that no recruit be sent to India under 21 years of age, nor until he has completed his drill at home," adding

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"that recruits be sent direct from home to India, so as to land there early in November." The importance and the justice of the principles here laid down cannot be gainsaid. And yet they are principles which are in a measure beyond the control of the army Medical officer on foreign service. We can but protest against immature men, or those who are physically unfit, being sent to perform the duties of soldiers; and such protests we find recorded over and over again in the reports of those in India. A very few examples will here suffice; and first of all, as regards age. "I believe," said Dr. Burke, in 1832, writing of the young soldiers then sent to India, "that the young recruit is more obnoxious to disease in this climate than those more advanced in life; as the soldier recently arrived than he who has been long resident. There is no remark more frequently made than this—'that this disease principally affected the young recruits.'" Nor was this the only suggestion on the subject which was made by this Medical officer. He anticipated the recommendations of the Commission by many years, yet I question if it be too much to assert that not only his Professional labours, but even his very name, have alike long since been forgotten, if indeed they were ever known beyond the narrow sphere of his own department. Were this not believed to be the case, we might suppose that his very words had been without acknowledgment quoted, when, in, alluding to the age of recruits arriving from England, he expressed his opinion that "it should be for the young soldiers coming to India the age of formed manhood and when his habits have become fixed;" and moreover, that "he should have been drilled before coming to this climate."(a)

Nor was he alone in his condemnation of the system which then, as in more recent times, prevailed of sending out, as recruits to India, young and immature lads. The Surgeon of the 49th Regiment thus wrote(b) regarding those who, in 1835, had joined that corps. "Not having arrived at full manhood, they may be considered too young for service in India." In the instance referred to the recruits were young, though it would seem, composed otherwise of good materials; and this circumstance, taken together with the prospect they had of enjoying repose at Hazarabagh, where the 49th were then quartered, and at which station the climate was, moreover, considered to be salubrious, in some measure counterbalanced the mere youth of the drafts. Hazarabagh, I would observe, had then the reputation of being a very healthy station, and from its elevation—namely, about two thousand feet above sea level—was looked upon as particularly eligible for the newly arrived soldier.

In the same year the Surgeon of the 16th Foot reported that "the average age of those who joined the head-quarters of that regiment was from 19 to 20," an age which he considers too young for "service in India." They had, moreover, he observed, soon after their arrival in the country, become confirmed drunkards, and the subjects of attacks of structural disease.(c)

The relative high rates of sickness and mortality among young soldiers as compared with old was, during the first expedition to China, thus commented on by Dr. French. "The mortality," he observed, "fell heavier on a detachment of recruits who arrived from India a short time before the regiment (the 49th) was warned for service on the coast of China than on the other men, confirming," he remarked, "the generally received opinion and well-known fact to military Surgeons that lads and young men, whose frames are not fully formed, are ill calculated to undergo the harassing and fatiguing duties incident to service in the field in any country."(d)

These few short extracts sufficiently indicate the great importance which Medical officers serving in India have ever attached to the age of recruits. But this was not all. We find that, in the second place, our Surgeons there, years ago, reported unfavourably on the quality of the young men sent out. Let us select some examples out of many such representations:—

"I wish not to make any remark calculated to bring censure on any one; but on this subject," says the Surgeon of the 11th Light Dragoons, "I feel myself called on to state that there is some dreadful neglect in passing them into the service, as among those we have got out within the last two or three years are several scrofulous subjects.(e) This was written in 1828; nor is it by any means a solitary representation, although I deem it necessary to give only one more in this place. Some years afterwards, we find that, adverting to this subject, the Acting-Surgeon of the 62nd Regiment, in his Report for 1834, says, "The recruits lately arrived are not such a fine body of men as might have been expected during a time of peace, when a good selection could always be had. The majority are not well adapted for our Indian climate, being under 20 years of age." And he goes on to observe that no recruits should be enlisted for regiments serving in India under 24 years of age, when the body has completely developed itself." (f) Many other illustrations could be here adduced of the protests made against the system, which, it is believed, has always prevailed, of sending to India young and immature lads as recruits. The physical evils of this system have shown themselves in the rates of sickness, death, and invaliding that have prevailed among them. The moral evils, although great, are less easily brought under the cognisance of statistics.

I need scarcely remind the reader that, at the time to which my present remarks refer, soldiers were engaged for unlimited service; and that the period a regiment remained in India was not less than 25 years, except in the instance of regiments coming on from the colonies; and their tour dated from the time they proceeded abroad. Both these subjects were discussed from time to time by the responsible Medical authorities. For example, regarding the first, Dr. McLeod expressed himself thus:—"The system of unlimited service is inhuman. It degrades the man in his own eyes when he comes to reflect, and brings into the ranks men of a worse description than could otherwise be had; and it really adds nothing to the strength of the army. The average life of a soldier may be estimated at twenty years. A small proportion may be fit for duty after serving that period, but they are, in most instances, discontented, and fully as apt to set a bad example to their juniors as to be of use to them.(g) How well grounded and just were his remarks is indicated by the fact that the views he expressed were soon afterwards endorsed by the voice of the public, and the system which he condemned was abrogated.

Nor were his views on the subject of long service in India less correct. "There can," he observed, "be no doubt that the system of keeping soldiers in India for so many years has proved highly injurious in both a physical and moral view. The routine of the same duties becomes irksome, and, in time, severe, from the diminution of their powers. As hopes of moving become distant, they become reckless, and form connexions from which, when time comes, they are loth to be separated; and when their service ends, many, rather than break through these ties, finish their miserable career in one of those sinks of vice and infamy called invalid depots." The system which he thus condemns was also some time afterwards remedied. It is doubtful, however, if, in any of the discussions which took place in regard to either of these important questions, the views of medical writers were ever sought, much less acted upon. But it is a striking confirmation of the importance of such views that a measure which, according to them, was rendered desirable by considerations of health of individuals, should have been recognised as absolutely necessary on account of political considerations. Well indeed may the profession of the Army Surgeon be looked upon as that of State Medicine.

(*To be continued.*)

(a) Page 125 of his Report.
(b) Inspector-General's Report, 1835, page 312.
(c) Inspector-General's Report, 1835.
(d) Report of 49th Regiment for 1840-1.
(e) Inspector-General's Report, 1828, p. 306.

A Fruitless Experiment.—A Surgeon of the Gros-Caillou Military Hospital, the *Institut* states, was, in spite of the dissuasions of several colleagues, inoculated through a single puncture in the arm with the matter of the grey granulations taken from the lungs of a tuberculous corpse. "If M. Lespiant," observes the reporter, "who declares himself to be perfectly well and devoid of all phthisical antecedents, dies in the course of some months of phthisis, he will have rendered a service to science, although the question of the contagion of phthisis will not by the incident be definitively settled. If he continues unaffected by the disease, it will be objected to him that the inoculation made only by means of a single puncture has not taken. Experiments on animals made on a large scale would be far more conclusive."

(f) Inspector-General's Report, 1834, p. 199.
(g) General Report, 1836-7.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ROYAL FREE HOSPITAL.

SURGICAL CASES.

(Under the care of Mr. JOHN D. HILL.)

DURING a visit to this Hospital we remarked the following cases, which possess considerable clinical interest. The following notes of them were furnished to us by Mr. J. D. Hill, the Surgeon in whose practice they occurred.

Large Cyst below the Tongue—Extirpation—Recovery.

A young woman, aged 27, was admitted under Mr. Hill's care with a tumour of considerable size underneath the symphysis of the lower jaw, movable, and apparently unattached to the surrounding tissues. It had been some time growing, and caused her great inconvenience. It had been painted with iodine, and at last suppurated and burst, leaving a troublesome sinus pointing below the chin. A drainage-tube was introduced, and various methods of treatment adopted, such as injecting with tincture of iodine, etc.; but, no improvement taking place, Mr. Hill determined upon excising the mass, which proved to be a sebaceous tumour, the sac of which was very intimately connected with the floor of the mouth, having an enormously thickened cyst-wall, and lying close upon the various structures at the base of the tongue. The operation was performed by making a V-shaped incision below the jaw, and carefully dissecting the cyst away from its connexions. There was very slight hæmorrhage, and the wound healed by first intention. The sinus had been discharging and causing great annoyance for nearly two years.

Large Invaginated Sequestrum from the Femur removed two Years after Amputation of the Thigh.

A strumous man, aged 32, some two years before admission, had undergone an amputation of the thigh for disease of the tibia. It appears that some chronic inflammation of the bone had been set up, followed by sinuses opening externally, and upon cutting down upon the extremity of the femur Mr. Hill found it enormously thickened, and observed two small cloacæ in the deposition of new bone. On introducing a probe a sequestrum was detected. These two cloacæ were joined by a saw-cut, and an attempt made to cut through the sequestrum with forceps (which were broken during the process); this failing, the saw-cut was carried to the extremity of the bone, which was flask-shaped, and three inches and a half in diameter. Mr. Hill managed to break off the cap, as it were, of new bone, and, having done so, was enabled to withdraw the sequestrum, which was nearly five inches in length. The cavity was plugged with lint, and granulated and healed very quickly.

It is worthy of remark that the original disease of the tibia became further developed in the femur after amputation, a circumstance which Mr. Hill has observed in two similar cases. The difficulty in extracting the sequestrum arose from the extraordinary thickness and density of the new bone, and the cavity of the bone being very small the blades of the forceps could not be insinuated between the sequestrum and its bed; hence the necessity for extending the bone section.

Simple Ganglion of the Wrist successfully treated by emptying the Cyst and applying Modified Pressure.

In out-patient practice simple ganglion of the wrist is frequently seen as the result of injury, and, from the frequent re-appearance of patients troubled with this complaint, Mr. Hill was led to perform a series of experiments in the various remedies suggested by Surgical authors. Mr. Hill claims no originality for the principle of the method which he brings forward, but merely publishes a few facts with a view to show that the cyst may be emptied by a simple puncture, and modified pressure can be effectually and conveniently used in the treatment of these cases without danger to the tendon, and with but little inconvenience to the patient. The four following cases, without selection, are taken from his note-book:—

Case 1.—Mary J., aged 42, admitted as an out-patient, May 12, 1865, with a ganglion connected with the extensor secundi internodii pollicis tendon of the right arm, which had troubled her more or less for three years. It came on after a sudden sprain in an altercation with her husband, during which he violently twisted her hand; various remedies had been applied, including rupture, pressure, iodine, etc., but it was now worse than ever, and as large as a marble, and considerably affecting the movements of the tendon. A needle was first introduced into the bursal tumour and its contents squeezed out; a piece of sheet lead was then cut two inches square, perforated by four holes on opposite sides, covered with wash leather, and beaten slightly concave; four pieces of strong ligature silk were passed through the perforations on either side and fixed with a slip knot. This was now adjusted over the bursal sac by means of a crucial piece of strapping. A piece of gutta percha $\frac{1}{8}$ inch thick, four inches long, and two wide, was next moulded to the flexor aspect of the arm, extending nearly as far as the bend of the wrist, having been previously perforated with four holes on opposite sides and covered with wash leather; the silken cords were now passed through the perforations in the gutta percha and tied in a knot on the outside of the latter substance sufficiently tight to produce good pressure without discomfort. Occasionally these were removed and replaced, the patient having the whole time partial use of the hand, and at the end of six weeks (June 24) were removed altogether. I saw her six months afterwards, and there had been no return of the tumour, although she had been using her hands in domestic work.

Case 2.—Elizabeth F., aged 26, was admitted an out-patient under Mr. Hill's care, July 14, 1865, with a large simple ganglion connected with the sheath of the extensor carpi radialis longior et brevior tendons of right hand. States that she has suffered seventeen months with weakness of the hand, which she attributes to the ganglion. It first came on after wringing clothes in washing. It is now as large as a filbert; on two occasions it has been dispersed by sudden pressure, but it returned again in a few weeks. Mr. Hill adopted the same treatment, kept on the apparatus for five weeks, and with a successful result. Accidentally she came under his observation twelve months subsequently (August 1, 1866) with a fracture of the left ulna. Mr. Hill found that she had had no return of the ganglion, and that the weakness of the hand had disappeared.

Case 3.—Mary S., aged 23, admitted under Mr. Hill's care April 3, 1866, with a large ganglion connected with the common extensor tendon; it had troubled her for three years, and came on after a violent twist; various treatment had been applied by Mr. Hill with but temporary relief. The treatment carried out in the other cases was applied in this and kept up for two months (June 2), when it was discontinued.

Seven months afterwards Mr. Hill found that she had had no return, and that the wrist was quite strong.

Case 4.—Elizabeth B., aged 27, admitted under Mr. Hill's care October 4, 1866, with a ganglion as large as a marble connected with the common extensor tendon, which had caused her inconvenience for nine or ten months. Mr. Hill adopted the same course for six weeks.

Ten months afterwards there had been no return.

We also noticed a case of prolapsus recti, of the size of an orange, in a young prostitute, aged 17, on whom Mr. Hill operated by dissecting out three triangular pieces of integument, making the base of the triangle correspond with the margin of the mucous membrane of the anus. The portions of tissue removed were situated one on either side, and one in front between the vagina and anus. Sutures were applied, and the wounds healed most completely and satisfactorily by the first intention.

THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

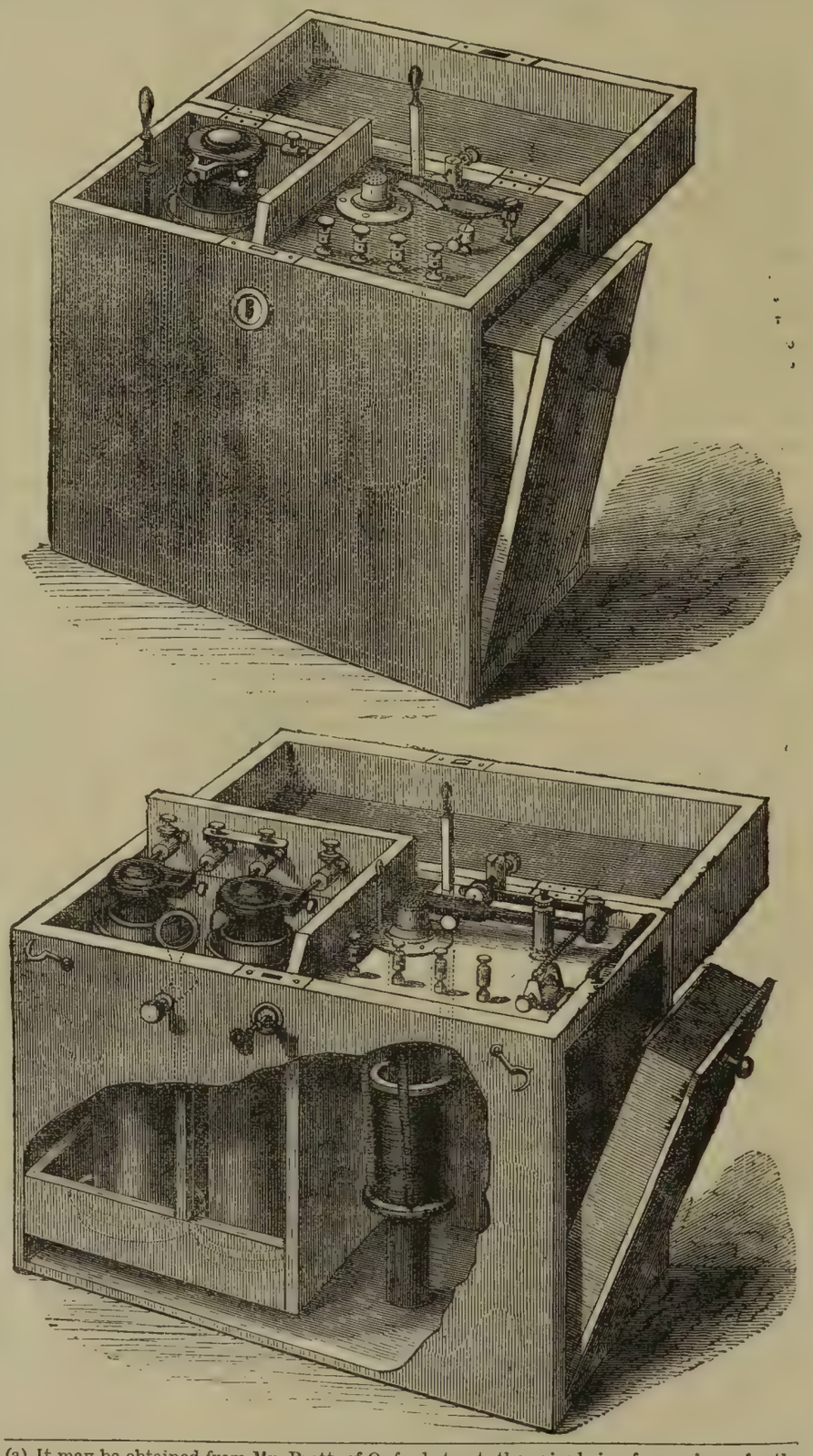
(*Continued from page* 363.)

To continue our description of the Hospital for the Paralysed and Epileptic, we find that the bath-room, owing to want of space, is on the basement level, and for the same reason much is compressed into small compass. The ordinary porcelain baths are those in use here; but besides these, there are several other kinds employed for special purposes. On one side of the room is a bath so arranged that small streams of water may be simultaneously directed on all parts of the body; this, which is called a rain bath, is combined with a shower bath, but the two are seldom used conjointly. They are, however, employed for similar purposes, rather as general nervine tonics than anything else, to be used in pale, flabby individuals when the system wants a sort of fillip

or stimulus to aid other means of treatment. Next this bath, and opposite the entrance, is a small highly heated chamber, which may be used either as a hot-air bath, or, by the introduction of a jet of steam, as a vapour bath; and as there is a small alcove adjoining it, round which the hot-air pipes, by which the whole is warmed, are coiled, and which, by means of curtains, can be so shut off from the main room as to constitute a separate chamber, the two constitute a not inefficient Turkish bath. This is chiefly used when patients under treatment are suffering from renal disease, and is intended to keep the skin fairly open, so as to relieve the kidneys. As most of our readers are aware, the orthodox termination to a Turkish bath is a douche, first hot, then cold. And right opposite the rain bath already described we find the necessary apparatus, conjoined with sitz and shower baths, the douche being either by pipes of various sizes or by a rose. But the use of the douche is not limited to those patients who have been in the Turkish bath: it has a wider and more beneficial applicability, especially when the hot and cold douche are alternated. Brown-Séquard was the first to point out the value of a column of water alternately hot and cold when thrown on the spine in chronic myelitis. This beneficial effect is probably most marked in those cases where there is rigidity of the extremities, when the douche (mostly hot) should be applied to the whole region of the spine for the space of eight or ten minutes. The cold douche by itself is chiefly of value in those convulsive affections complicating hysteria, especially when there are localised spots of tenderness on the spine, pressure on which gives rise to convulsions or similar complications. The cold douche may be also used with great advantage in the treatment of epilepsy in young people, especially when the patients are pale, flabby, and anæmic.

The kinds of electricity employed by Mr. J. N. Radcliffe, who, as superintendent, has charge of the electric room, are three—the static, and the induced and continuous currents, for which he has proposed the names Franklinic, Faradic, and Galvanic forms of electricity. The first of the machines employed in the production of the static or Franklinic electricity is an enormous plate machine, capable of giving rise to very large and long sparks. It has been found of singular efficacy in certain forms of aphonia, much more so than any of the other varieties of electric force. Of the kinds of electricity in ordinary use, the galvanic battery, with or without an induction coil, and the electro-magnetic machine are the chief sources. Since the introduction of the latter especially—that is, the combination of the horse-shoe magnet with a rubber—the use of electricity has become greatly popularised. No disagreeable acids have to be employed; the machine is ready to act as soon as you begin to turn the handle. This is the kind of instrument in general use throughout the wards of this and many other Hospitals, its employment being handed over to the nurses. To secure a direct current of sufficient strength, a combination of a good many cells is requisite; hence the use of this form of electricity can never become very general. At the Hospital in Queen's-square the battery is very large, occupying one side of a room of considerable size, whilst by an arrangement the number of cells connected with the exit-wire may be increased or diminished by turning a handle. One of the most important discoveries connected with the use of this kind of electricity was simultaneously made some time ago in this country by Mr. J. N. Radcliffe, and in America by Dr. Hammond—viz., that when muscles were so atrophied, and when their electro-motility was so far gone that no response could be got to an induced current of such strength that its passage through a sound part would give intense pain, yet a few cells with a direct current would procure an instant response in the affected part. What the value of this fact may prove is not yet known, but the Medical officers of this institution are zealously directing their attention to an elucidation of the question.

Of all the forms of galvanic battery which the Medical man can have at his disposal, that invented by Stöhrer, of Dresden, is probably the best. So extremely simple in its mechanism that it can scarcely go out of order—so lasting in its activity that a renewal of its constituents becomes necessary only after some months of constant use—it can be connected and disconnected, so as to be in a state of activity or repose, in an instant, and, by varying its induction apparatus currents of very various degrees of intensity may be generated. This is the instrument in most common use here, as it deserves to be elsewhere.(a) The ordinary magneto-electric machine cannot be used in cases of localised atrophy, owing to the peculiarity of its handles, so to speak. These are only fitted for being grasped in the hands of the patient; but to



(a) It may be obtained from Mr. Pratt, of Oxford-street, the price being four guineas for the single-celled, and six guineas for the double-celled instrument. For the accompanying illustrations exhibiting Stöhrer's single and double-celled batteries—in the latter instance with the cells and induction apparatus exposed—we are indebted to Mr. J. N. Radcliffe.

render a machine of general use it should be applicable to cases where single muscles or sets of muscles are atrophied. To this end, it should be provided with handles containing hollow cups, into which pieces of sponge soaked in salt water may be fixed in such a way that the electric current passes through them without affecting the hands of the operator. Should it then be necessary to apply the electric current to any set of atrophied muscles, as in lead poisoning, the two poles of the battery situated in the sponges should be so placed that the affected muscle acts as a connecting link between them, and accordingly through the muscle a current passes varying in intensity with the length of wire contained in the induction coil. It is in cases of this kind that localised electricity does most good—as, for instance, in those under the care of Dr. Buzzard—and by the persevering use of it it is wonderful how much may be done. In cases where the response to the electric stimulus is perfect, the current may act as a general tonic, or by its effect on the mind; but otherwise it seems to have no specific action. Its chief efficacy seems to be where the electro-motility of the part is affected. There are many other points of importance to which we might draw attention; but these must in the meantime suffice.

The gymnasium, as the electric-room and bath-room, is here an institution of importance; it is not of course constructed on the model of those establishments filled with the instruments of torture, supposed to be necessary for the production of a finished athlete. It is a modest and unassuming apartment: its apparatus is chiefly of india-rubber, and is intended to enable the patient to exercise continuously any given set of muscles under proper supervision.

We hope at a future period to give some illustrations of the admirable material in the way of cases at the disposal of the other Physicians here. In conclusion, we return our thanks to all connected with the institution, especially to its skilled Superintendent, Mr. J. N. Radcliffe.

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Medical Times and Gazette.

SATURDAY, OCTOBER 24, 1868.

INJUDICIOUS RIDICULE.

It is to be regretted that the *Saturday Review* should try to bring into contempt the efforts which are being made to secure for the inhabitants of London the blessing of a pure and unsuspected supply of water.

The Registrar-General, as we all know, publishes every month returns of the quantity and quality of the water supplied by the several London water companies; these items of public information being supplied, the one by the companies themselves, the other by Professor Frankland, who succeeded the late Dr. Thomson and Dr. Hoffmann in that office. These returns are styled by the *Saturday Review* "irrelevant," because, forsooth, "the connexion between mortality and apparent impurity of water is entirely hypothetical." The absolute indifference thus displayed to the now numerous cases in which that connexion has been established beyond doubt, is astounding. We are next told that inquiry into the causes of the cholera outbreak in East London in 1866 proved that "there was no assignable relation between the purity of water and the health of the consumers." Then it is alleged that "running water, taken for use at some distance below the influx of contaminating matter, is, for the most part, unobjectionable." Nay, more, that "the foulest substances, mixed with a due proportion of water, and conveyed by it for a certain distance, suffer a change into something, if not rich, at least harmless."

It is, we suppose, of no avail to urge that the sort of water contamination which sanitary reformers mainly object to is that wherein the element of defilement is excrementitious; and for the reason that such matter is known to contain, sometimes if not always, the germs or ova of organised beings, capable not only of resisting the oxidising influences of a running stream, but even of maintaining their vitality after exposure to exceptional means for their destruction. Prof. Frankland gives the following illustration of the two kinds of contamination to which water is subject:—"If the shell of an egg were broken, and its contents beaten up with water, and thrown into the Thames at Oxford, the albumen would probably be entirely converted into mineral compounds before it reached Teddington; but no such destruction of the nitrogenous organic matter would ensue if the egg were carried down the stream unbroken for the same distance—the egg would even retain its vitality under circumstances which would break up and destroy dead or unorganised organic matter." In the one case the nature of the contamination would be harmless; in the other, potentially dangerous to health. The *Saturday Review* admits that there are "exceptional cases in which contamination *is* dangerous," but can conceive of such cases only where the water is taken from wells within reach of cesspools or burial-grounds!

The fact that in Glasgow and Manchester, where the water-supply is exceptionally pure, the death-rate is very high, while in London, where the quality of the water is so often called in question, the death-rate is comparatively low, is supposed to prove that there is no connexion between good water and health, or bad water and disease. But what is that proof worth? Are the circumstances of the population of these three cities, for example, equal in all or in most respects? On the contrary, there is the widest difference, and thus the effect which the one element of water-supply might otherwise be expected to produce is masked by the influence of half a dozen others. Sanitary reformers do not claim for pure water that it will alone reduce the death-rate of a town in which, as regards density, occupation, drainage, and atmospheric impurity, the conditions are all unfavourable to life. All that they maintain is that, *cæteris paribus*, a good water-supply will coincide with a low death-rate, but not necessarily otherwise.

The "official crotchets of the Registrar-General," as it appears to us, chiefly tend in the direction of publishing in his returns as much information as he can obtain for the public benefit, and therein he shows himself to be, at all events, "the right man in the right place." And lest anybody should be misled into the belief that he is departing from his proper line in telling us anything more than concerns the records of registration, we may say that he is, in fact, thereby approximating to a very old model. The old bills of mortality contained every week "The assize of bread, set forth by order of the Lord Maior and Court of Aldermen," in which the weight of the penny wheaten loaf was duly prescribed.

In his monthly *Bulletin Municipal*, M. Haussman gives, along with his account of marriages, births, and deaths, very interesting and useful details of the water and food supply of Paris. And perhaps the Registrar-General may—that is,

supposing he reads the *Saturday Review*—be led to think whether he has yet reached the limit of information which it may be in his power to supply; so out of evil good may come.

As regards the use by Professor Frankland—who, and not the Registrar-General, is responsible for it—of the term "previous sewage contamination" in reference to the degree of purity of the London waters—an expression which is obnoxious to the *Saturday Review*—we apprehend that no possible harm can follow from its use at all to be compared with the harm which an attempt to ridicule the value of pure water and the sanitary reformers who advocate its provision is calculated to work.

It may be conceded that what is meant by "previous sewage contamination" is not very generally understood; but that is no fault of Professor Frankland, who has thus set forth the meaning which he attaches to the term:—

"The second category of inorganic substances contained amongst the solid impurities of waters, consists of *the mineral compounds constituting chiefly the sk leton of decomposed sewage or manure.* The putrescible nitrogenous organic matters present in water, or in the soil through which water percolates, undergo gradual oxidation and decomposition, by which their carbon and hydrogen are converted into carbonic acid and water, and their nitrogen into ammonia, nitrous and nitric acids. The last three remain in the water, constituting a record of previous contamination with putrescible nitrogenous organic matter. But rain-water always contains ammonia, and, as Dr. Bence Jones has shown, also nitrous and nitric acids. The nitrogen in these forms in rain water, as it finds its way into rivers and springs, amounts in the aggregate to ·032 part in 100,000 parts of water; therefore this amount must be deducted from that found on analysis, as nitrogen derived from aerial sources. The remainder, if any, represents the nitrogen derived from putrefied nitrogenous organic matters with which the water has been in contact. To express this in terms of some known standard, I employ average filtered London sewage, which contains 10 parts of nitrogen in the form of putrescible organic matter in 100,000 parts. Thus, a water which contained one part of nitrogen in 100,000, as nitrous acid, nitric acid, and ammonia, would contain in 100,000 parts the nitrogenous remains or skeleton of an amount of putrescible organic matter equal to that contained in 10,000 parts of average filtered London sewage. Such a water, therefore, is said to have a previous sewage contamination of 10,000 parts in every 100,000 parts. But it may be asked—Is this a true record of the previous history of the water in this respect? I believe it to be so, as far as it goes. *I believe that this nitrogen as truly represents a quantity of previously existing putrescible organic nitrogenous matter, as that the bones of a megatherium demonstrate the previous existence of an individual of that species;* but as the geological record of previously existing organisms is imperfect, so is the nitrogenous record, just as chemical and mechanical agencies have broken up and dissipated the remains of millions of animals during long geological periods, so does the action of growing plants, and perhaps also of living animals, remove from water, in a few hours or days, some portion of this skeleton of previous putrescible organic matter."

If the *Saturday Review* can satisfactorily disprove either Professor Frankland's premise or his conclusion, by all means let it be done; but mere negative assertion will not suffice for this purpose. Sanitary improvement is much too serious a matter, and lies too nearly at the root of some of the great social evils of our time, to admit of any excuse for its discussion in the sarcastically contemptuous fashion which the *Saturday Review* has permitted in the article under notice.

PEROXIDE OF HYDROGEN IN DIABETES.

There is perhaps no disease for which so many remedies have been tried, and for the most part ineffectually, as diabetes, and until very recently no Medical treatment has had any marked effect in directly checking its most characteristic symptom—the excretion of an abundance of saccharine urine. It seems, however, that at last a remedy has been found which, in the hands of several Medical men, seems to act almost as a specific in the treatment of this disease. The remedy is the ethereal solution of peroxide of hydrogen, given two or three times a day, in doses of from half a drachm to two drachms in a wineglassful of water; and for the discovery of its therapeutic action we are indebted to the untiring zeal and energy of an Australian Physician, Dr. Day, of Geelong, to whom the Profession is also indebted for the guaiacum blood test (which is so sensitive as to give a decided reaction, even when spectrum analysis has failed to give any definite result), and for many important observations on the relations of ozone to disease. Dr. Day's views on the treatment of diabetes were, we believe, originally published in one of the numbers of the *Australian Medical Journal* for last year, and in that paper the case of a lady is reported in full, who, till the commencement of the treatment, was suffering from all the troubles of diabetes, as great thirst, frequent calls to relieve the bladder, and an enormous flow of highly saccharine urine. We are in possession of information that enables us to state that this lady is still in the enjoyment of excellent health, or, at all events, of perfect freedom from all the distressing symptoms of the disease. As a matter of precaution, however, she still takes a nightly dose of twenty minims. Other cases in Dr. Day's hands have been equally successful, and he has received letters from several Medical men, telling him that their patients are deriving great benefit from the remedy.

It is a well-known fact in therapeutics, that a new remedy is specially efficacious in the cases treated by the discoverer. Mr. Bayfield's very interesting letter in the *Medical Times and Gazette* for October 17, shows, however, that Dr. Day has drawn no exaggerated picture of the value of this remedy. If Dr. Day's and Mr. Bayfield's views regarding the value of peroxide of hydrogen are confirmed by other competent observers, we shall feel that the former of these gentlemen has made one of the most important of our recent scientific discoveries; ranking equal, if not superior, to the discovery of the therapeutic action of bromide of potassium. If, on the other hand, it should turn out that theirs are exceptional cases (for none can doubt the honesty and truthfulness with which their cases are recorded), the sooner our illusive hopes are dispelled the better it will be for all parties.

This is exactly a case fitted for the Therapeutical Committee of the Harveian Society to investigate; and, although we are not given to be over-sanguine, we entertain a very strong conviction that if the Committee take up the question, their verdict will be in favour of Dr. Day and peroxide of hydrogen.

THE WEEK.

TOPICS OF THE DAY.

We regret to have to announce the retirement of the Medical candidate from the contest for the representation of the Universities of Edinburgh and St. Andrews. Dr. Richardson's appearance in the field was unfortunately, but necessarily, postponed until the electoral rights of the St. Andrews Medical graduates had been ratified by both Houses of Parliament. The natural consequence of this delay was that, at the time of his coming forward, a large proportion of the Medical electors were already pledged to one or other of the party candidates. During his candidature Dr. Richardson has received a considerable number of promises of support from the Medical graduates, but, as calculation has shown, not enough, when compared with the pledges given to his opponents, to warrant the hope of success. He has therefore, with the concurrence of his committee, retired from the present contest. As Dr. Richardson was brought forward as a candidate on broad Professional grounds, unconnected with party politics, so he retires in favour of neither of his late rivals. It is alike honourable to his supporters and himself that all the expenses incurred during his candidature have been borne by the former. Although thus yielding to fate on the present occasion, Dr. Richardson, we believe, entertains the hope that, in some

future contest, when he shall be free from the disadvantages under which he has now laboured, he may successfully appeal to the Medical constituencies of the two Universities, one of which is certainly under the greatest political obligation to him. Thus, the last chance of returning a Medical candidate for either of the seats which the new Reform Bill had virtually given to the Medical Profession has been lost. In the Universities of Edinburgh and St. Andrews the contest will henceforth, as far at least as the present election is concerned, be a purely political one, and it will lie between the Liberal candidate, Dr. Lyon Playfair, and the Conservative candidate, Mr. Campbell Swinton. There can be no doubt that Dr. Lyon Playfair's scientific reputation, and his connexion with the University of Edinburgh as Professor of Chemistry, must prove no small recommendation, and procure him unanimous support from the different grades of Liberal opinion in a constituency which is, *par excellence*, a scientific one. But, on the other hand, it is not very probable that the Conservatives amongst the Medical graduates will sacrifice their political opinions in order to return a gentleman who, however high he may stand in the world of science, has not the special claim on them which community of profession would give. We accordingly are not surprised to hear that a large number of Medical voters have plighted their troth to Mr. Swinton. We repeat that the contest as a Medical one is over. Henceforth it must be fought on political grounds only.

Out of three Conservative candidates who started for the city of Rochester the only one remaining is Mr. Alfred Smee, F.R.S. To the Rochester Practitioners we venture to repeat the advice we have previously given to the Medical men of other constituencies—not to allow party politics to influence them to the exclusion of the allegiance they owe to their Profession. The number of Medical men in Parliament will certainly not be great, and the Profession cannot afford to throw away any chance of obtaining an additional representative.

The first meeting of the Medical Society of London on Monday night drew, it is said, the largest attendance that has been remembered since the amalgamation of that Society with the old Westminster. The room of the Society was full to overflowing: fortunately it had not only been renovated, but a new system of ventilation had been introduced and was found to be a success. The first incident of the evening was the announcement from the chair, that Mr. J. F. Clarke, of Gerrard-street, had presented to the Society a valuable black letter copy of the works of Hippocrates, of considerable rarity, and the President intimated that the gift was intended as a remembrance and memorial of the long and close connexion, extending over forty years, which Mr. Clarke, as one of the chief contributors to the Medical press, had maintained with the Society. He said that it was not too much to affirm that during one period of its existence the Society had owed, in a great measure, its continuance to the admirable reports of its proceedings which Mr. Clarke's pen had furnished. The thanks of the Society were not only given to Mr. Clarke for the tall folio he presented to the library, but a special vote of thanks to him for his long services to the Society was proposed by Mr. Hancock, of the Charing-cross Hospital, and supported by speeches from several of the senior members. In returning thanks to the meeting, Mr. Clarke mentioned the curious fact that when he commenced reporting the meetings of the Society, so strong was the feeling against the intrusion of the representative of the Medical press, that he was only permitted to occupy a portion of the room railed off from the rest of the members. We were glad to gather from his speech that, although he has retired from the post he has so long and ably filled on the staff of a Medical contemporary, he has not registered a vow against all future use of pen and ink. Mr. Henry Smith then exhibited a case of excised knee-joint. The patient was a young woman whose knee had been removed a twelvemonth ago for strumous disease. She had entirely recovered her health, together with a most useful limb. Mr. Francis Mason also exhibited a patient from whose tibia a large sequestrum had been removed. Then followed the paper of the evening, by the President, "On Bloodletting as a Point of Scientific Practice," wherein the various clinical observations and facts on which the ancients founded the practice of bloodletting were discussed and examined by the light of recent physiology and pathology, and the conclusion was drawn that in the present day, under many specified conditions, especially in cases of shock, overloaded right heart, and uræmic coma, in rejecting bloodletting we neglect a valuable and often the only method of relief. Dr. Richardson's paper was received with every mark of approbation, and, notwithstanding the dread of spoliative treatment which marks our generation, his views obtained a large amount of support in the discussion which followed. Altogether, the meeting marks a red-letter day in the history of the Society.

Tuesday's meeting of the Pathological Society, being the first in the present session, was likewise an unusually large one. The President, Mr. Simon, on opening the meeting showed a thick volume of *Transactions*, which he said was then in the short transitional stage between the embryonic state of existence and the life of the outer world—in other words, it was only awaiting the completion of the index, and in the course of a day or two would be in the members' hands. There were many interesting communications made and preparations exhibited. Amongst others were the suprarenal capsules of a patient who had presented mulatto-like discoloration of the skin, exhibited by Dr. B. Sanderson. In this case the semilunar ganglia and the nerves proceeding from them to the suprarenal capsules were embedded in adenoid tissue. Dr. Murchison exhibited drawings and preparations illustrating a case of vitiligoid disease which had coexisted with diseased liver, and Dr. Hilton Fagge brought before the Society a very interesting case of scleriasis, or almost universal hardness of the skin. These and the other cases communicated to the Society will be fully reported in this journal. Altogether the first meeting augurs an animated and fruitful session.

Dr. Livingstone has again been heard of. Letters from Dr. Kirk, at Zanzibar, dated in the latter end of August, state that despatches had been received from him dated from Marungu and Cazembe, places lying to the S. and S.S.W. of Lake Tanganyika. The last of these was written in December, 1867. Sir Roderick Murchison seems to think that Livingstone will have succeeded in exploring the Lake of Tanganyika, and will have "solved the great problem of the Nilotic watershed of Africa," and he expects him in England by Christmas.

The fact that eczema has resulted from the use of certain coloured socks seems now to be admitted on all hands, and undoubtedly we owe the curious discovery of the connexion between the effect and its cause to Mr. Webber. The question of what may be the deleterious dye has lately been discussed by Mr. William Crookes, F.R.S., in a long letter to the *Times*. Mr. Crookes confirms our statement that the dye does not contain arsenic, and he affirms that its irritating action depends on "a somewhat brilliant and fast orange dye" which is used for admixture with harmless colours. This orange dye seems to be rather a mysterious entity. "Its identification was not easy—it possesses acid properties; is insoluble in water, but soluble in alkalies—its composition and chemical relationships are not yet definitely settled," and Mr. Crookes cannot, therefore, give us "its proper sesquipedalian nomenclature." The mystery surrounding the agent undoubtedly heightens the interest of the position, and ought, we should think, to favour the sale of the socks. Besides, they will act as a test of the healthy condition of the cutaneous functions, for, according to Mr. Crookes, the dye will only produce its irritating effect on

persons whose skins secrete an alkaline perspiration, whilst the normal acid perspiration resists its action. We should like to know whether this statement is based on theory or observation, or whether experiments have been made on the skins of various persons with this peculiar acid, of which a chemist so versed in dyes as Mr. Crookes cannot tell us the name. One of his statements, however, seems debateable: he says that washing with soap and soda will remove the stimulating properties of the dye. All we can say is that experience proves that no ordinary washing has this effect. In our last week's journal a case is reported in which the wearing of the well-washed socks was followed by a return of the eczema.

Biological science is beginning, we hope, to attract a due share of attention in the University of Oxford. The trustees of the Radcliffe Library have invited our distinguished contributor, Professor Lionel Beale, F.R.S., to give a series of lectures on the "Anatomical Element or Cell" in the library of the Museum. The lectures will be illustrated by the aid of those high microscopical powers which Professor Beale has had the merit of rendering subservient to the cultivation of histology. The first lecture will commence on Wednesday, November 4, and be continued on Thursday during term. Mr. Chapman, of Frewen Hall, has also this week commenced a course of lectures on Physiology in Jesus College. These lectures are illustrated by the physiological series in the University Museum, and they are open to members of Jesus, Merton, and Wadham Colleges, and to such other members of the University as have entered to the courses of practical instruction carried on in the Physiological Department of the University Museum.

Dr. Hawksley, who, our readers will recollect, has been the consistent advocate of the dry earth system, has written a triumphant letter to the *Times* on the success of Moule's closets at Wimbledon, and the prospect of their more general adoption in the country and smaller towns. His faith in the applicability of the system to large towns remains unbounded. "To my humble intelligence," he writes, "the impracticability will be found, on trial, like the standing on end of Columbus's egg, or the quiet chuckle over Lardner's *dicta* concerning steam navigation to America." That the general water system in London can be altered we do not believe; but there are corners in London where the earth system would be an immense improvement, and where we should gladly see it introduced.

A curious case of gunshot wound from a stray shot is recorded in the *Rochester and Chatham Times* as having taken place at the Cement Works, Borstal. A woman sitting within the door of her house was suddenly struck in the thigh by a rifle bullet, which passed through her limb, and struck a copper close to her. The flattened bullet was picked up, and it turned out that it was fired by a member of a rifle corps who was practising target firing at the time on Delce Farm, Maidstone-road; in manipulating his rifle it had accidentally exploded in the air. The ball took a curve over Cookham-hill, and, falling at Borstal, a mile and a half distant, struck the woman in her own house.

We notice from a circular issued by the Lord Justice General's Committee, that a majority of the members of the University Court, and of the Professors of the University, are claimed as supporters of Mr. Inglis for the office of Chancellor of the University of Edinburgh. On the other hand, Mr. Gladstone's friends are making great efforts to secure his election, as it is felt that to be rejected by such a body as the Edinburgh graduates would be a rather serious augury at the present juncture. The voting papers will be issued early in November.

SPEAR *v.* DOIDGE.

We are glad to learn that Mr. Doidge's Professional brethren are about to raise a sum of money by subscription, to indemnify him for the heavy expenses which he has been subjected to. Subscriptions will be received at the office of the *Medical Times and Gazette*, and further communications addressed to the Hon. Sec., G. M. Gifford, Esq., Bellevue, Launceston.

ROYAL COLLEGE OF SURGEONS.

The attention of the President of the College having been called to the great inconvenience occasioned both to teachers and students at the various recognised metropolitan and provincial Hospitals by the multiplicity of signatures required by the College to be affixed to the certificates of attendance on lectures, Hospital practice, etc., of candidates for the diploma, and being desirous, if possible, of simplifying the certificates without in any degree vitiating their authenticity and reliable character, he has recently caused a communication to this effect to be sent to all teachers, with the intention of bringing the subject before the Court of Examiners. At a late meeting of this body, the matter was introduced by the President, and the several replies to the circular were considered, when it was found that a large majority of the authorities of the recognised Medical schools were of opinion that the number of signatures could be reduced, and that the duty of signing certificates might be very properly confided to *one*, or, in some cases, to *two* trustworthy officers appointed for the purpose. The Court of Examiners resolved in future to receive certificates so signed from those Medical schools where the necessary officer or officers had been duly appointed, and their names sent to the Secretary of the College. By this plan all that great inconvenience hitherto occasioned both to teachers and students by the multiplicity of signatures is obviated.

GEMS FROM THE BRITISH WINE TRADE.

"Ridley's Monthly Wine Circular" for September contains an account of an amusing piece of roguery practised upon buyers of champagne. A person living in Tooley-street is reported to have sent to Fenning's Wharf an immense number of cases of "champagne," all described as being of English manipulation in corking, wiring, and tinfoiling, in cases of English make, and the contents of the bottles described as a "deleterious beverage, held together by sugar of lead." It is said that these cases used to be sold in detachments at public auction, and that the persons who bought them were induced to hand over to the auctioneer, besides the price, a sum equivalent to the *duty* on this precious compound. It is remarked that if any one should complain of colic after drinking cheap champagne he may guess the reason why. The same "Circular" pokes fun at the credulity of persons who give enormous prices for "Montilla" grown at some *château en Espagne*. The *Wine and Spirit Gazette* tells us "that it is customary in some breweries to use picric acid for hops, to give the beer bitterness and a golden touch;" and it gives a very funny process for detecting it. A correspondent of this *Gazette* complains that some port two years in bottle has made no crust, and sends a sample. The editor replies that the port is an imitation, deficient in tannin and tartaric acid, and advises correspondent to add *q.s.* of cream of tartar and tannin, mix it with the wine, and bottle again, when after a few weeks a thick crust may be expected. The editor does not say whether this is wine to be used in hospitality or for the treatment of the sick. Another correspondent is reproved for making sham brandy, not because it is dishonest, but because real Cognac is as cheap. A correspondent from Cadiz says that the place "is encumbered with rubbish and shams of all kinds." From Oporto we learn that "the dark shade in our prosperity is the increasing dulness of trade, a consequence of the decreasing demands from England." The best market at present for port, we are told, is the Brazils, but there the light wines threaten to displace it—so much so, that it is said that some Portuguese manufacturers in despair actually propose to make pure light wine.

CREATION OF A REGIUS PROFESSORSHIP OF SURGERY IN THE UNIVERSITY OF DUBLIN.

We have great pleasure in announcing that the Board of Trinity College has received a patent creating a Regius Professorship of Surgery in the University of Dublin, and that Dr. Robert Adams is in it nominated the first Professor. This is a well-merited distinction conferred, we believe, for the first time in the United Kingdom, on the Surgical Profession, and the creation of a Regius Professorship is an event of no inconsiderable importance in the history of Surgery, raising, as it does, this branch of the healing art to a distinct University status, such as the sister branch of Medicine has already so long occupied. The writer of the article "Surgery" in Chambers' *Cyclopedia*, 1867, remarks that "it is deserving of record that, within the last few years, nearly all the British Universities have commenced to give Surgical as well as Medical degrees;" but the creation of a Regius Professorship, while it is probably a consequence of the foregoing fact, is also a further and decided step in advance. It is, moreover, a matter of congratulation that the new dignity has fallen upon the present acknowledged and distinguished head of the Surgical Profession in Ireland, and we feel sure that the unanimous voice of that Profession, both at home and abroad, will endorse with its approval the selection which has been made.

DR. BALLARD ON THE HEALTH OF ISLINGTON.

Dr. Ballard, in his report on the health of Islington during September, says:—

"I have especially to note as respects the sickness—first, that small-pox has, during the last two months, undergone a remarkable diminution among us. Secondly, that scarlet fever, which has been increasing a good deal in other parts of London, especially in the western districts, St. Pancras, and Clerkenwell, has not been increasing yet similarly with us, although my tables, carried on for many years now, show that it is in September that our largest number of cases usually occur. Third, that we have this month registered by far the largest number of cases of erysipelas and sore throat (probably erysipelatous) that I have ever noted in September. The cases of erysipelas have been 23, and of sore-throat 135. I have never registered more than eighteen cases of the former, and eighty-eight of the latter disease. Fourth, bronchitic and catarrhal diseases, with pneumonia and pleurisy, have all been unusually frequent.

"Torrens's Act for providing better dwellings for artisans and labourers, which was passed in the recent session of Parliament, throws upon me a new duty—namely, to set the Vestry in motion "for the taking down or improving dwellings occupied by working men and their families which are unfit for human habitation."

Dr. Ballard accordingly has reported on certain premises as being dangerous to health and unfit for human habitation, on the grounds, 1, of original bad construction in the form of a close court; 2, of damp; 3, decay and dilapidation; 4, want of windows; 5, want of light; 6, improper privies; 7, want of proper storage for water. One or more of the Vestry thought that Dr. Ballard had gone beyond his province, and had acted cruelly to the *owner* of these houses. Not a word was said of cruelty to the inhabitants.

FROM ABROAD.—SANITARY STATE OF THE FRENCH LYCÉES—LA MALADIE DU SOMMEIL—HYPERTROPHY OF THE BREASTS.

In March, 1867, M. Duruy, the enlightened French Minister of Public Instruction, commissioned M. Vernois to institute a thorough investigation into the hygienic condition of the lycées, and his elaborate report appears in the October number of the *Annales d'Hygiène*. These lycées are schools for the middle classes, under the management of the University of France, in which an excellent education is given at a trifling cost, but which have long been deemed defective in matters relating to the hygienic and recreative condition of the pupils. After the revolution of 1848 M. Carnot, the then Minister, instituted a commission for inquiring into their condition, of which MM. Rayer, Serres, and Bouillaud were members, and to which M. Latour was appointed secretary. During several months that this commission officiated it effected many reforms relating to dress, food, gymnastic exercises, and diminution in the hours of study, and increase of those devoted to recreation and sleep. Political events soon put an end to their activity, and it was M. Duruy's object, in instituting a searching investigation, to ascertain the reforms that still remain to be put into force. That M. Vernois' investigation has been a searching one, his report proves, and the sincerity that actuated both him and his employer may be judged of by his introductory letter addressed to the Minister:—

"If," he says, "the consequences I have arrived at seem to you sometimes severe, do not attribute to me all their responsibility. My judgment has been dictated by an authority superior to yours or mine—that of hygiene, which has its absolute laws, and which frequently can admit of no tolerance."

There are altogether in France 78 lycées, having more than 30,000 pupils, 17,722 of these living in the establishments. The number of *employés* accommodated within their walls is 3196. The number of the pupils in each establishment varies from 755 in the lycée of Vanves, near Paris, to 61 in Napoléonville. Twenty-five of the lycées are situated in the centres of towns, 15 at the outskirts, and 37 are disseminated over different points; 48 of the lycées are isolated from all injurious or inconvenient establishments; 17 are placed on the banks of a river or other watercourse, 11 near a Hospital, 12 near barracks, 3 near great manufactories, and 14 under especially insalubrious conditions, such as sewers, cesspools, and cemeteries. With regard to the important question of overcrowding, M. Vernois declares that this exists in so large a number as 33, and insists that the establishments should at once be enlarged, or the admission of new pupils restrained. The infirmaries attached to the lycées are very differently supplied with air, some having the excessive quantity of 75 cubic metres per bed, and others the utterly insufficient one of 12 metres. In 53 lycées nuns perform the services of nursing, and in 23 lay nurses are employed; and M. Vernois believes that in the majority of cases those in which the sisters officiate are best managed. In the majority of lycées the health of the pupils was excellent, and, on the day of inspection, in 46 lycées there were no patients in the infirmaries. As to epidemic diseases, apart from measles, scarlatina, and mumps, which are inherent, so to say, to the age of the pupils, none of the great visitations of cholera, miliary sweat, variola, cerebro-spinal meningitis, croup, or typhoid, which have committed so much desolation in towns, have spread to the lycées. As the same immunity has not attended the non-university scholastic establishments, this is naturally attributed to the discipline and watchful care that have at such periods surrounded the inhabitants of the lycées.

M. Vernois passes in review the provisions made at each lycée with respect to baths, gymnastics and games, warming, lighting, ventilation, the supply of water, food, refectories, supply of linen, washing, privies, and the physical and chemical laboratories—giving his advice as to the modes of remedying any defects he has observed. He has paid especial attention to the ventilation of the schoolrooms, studies, and sleeping-places, the greatest discrepancy at present existing, so that while some of the lycées have 46 cubic metres of air, others try to do with 1½ metre. In the primary communal schools 16 metres per pupil are insisted upon. In twenty-six lycées at present there is insufficient ventilation of the classrooms, and in twelve of the bedrooms. After summing up the number of lycées in which reforms are indicated, and specifying what these should be, M. Vernois furnishes what he terms his

"*Ultimate and Logical Consequences.*—1. Prepare for an approaching future, and, before it is demanded by public opinion, supply a general system of inspection of the lycées.

2. Direct the Physicians attached to the lycées to send in every January a report as to the condition of their establishments under the different headings now treated of. 3. Let these reports be analysed and summed up by a hygienist Physician, so that an annual report may be published on the sanitary condition of the lycées. 4. Seeing the importance of their office, these Physicians should have seats in the administrative councils of the lycées. 5. Furnish the director of each lycée with a list of the corrections reported to be required after inspection, and keep an exact account of such of these as are executed. 6. Reserve some of the University rewards for the Physicians of the lycées who have become distinguished by long or remarkable services."

M. Dumoutier, who has served on the West Coast of Africa and at Martinique as a Government Commissioner for the negro emigration, communicates to the *Gazette des Hôpitaux* (October 13) an account of the affection vulgarly termed the sleep disease (*maladie du sommeil*), on which he says little has been written. It affects only the negroes of the West Coast, and chiefly those of the territories of the Gaboon and the Congo, becoming more and more rare as we advance towards the north. The first observable circumstance in these patients is an irresistible tendency to sleep, the torpidity being unaccompanied by any suffering. There is also a weakness of the limbs, so that their walking becomes vacillating, and the tactile sensibility seems perverted, as they are hardly able to lay hold of any object to assist them. During this sleep the urine and fæces escape involuntarily. The intellect continues clear, the respiration is normal, and the digestion regular. It would seem that the disease is rarely met with except among the slaves or captives brought from the interior. We are aware of the cruelty of the sufferings they there have to endure at the hands of those into whose power they have fallen; and excessive labour, insufficient food, cruel usage, and moral suffering and despair may serve to lead to this description of slow progressive paralysis and fatal sleep, which almost always end in death. In one of the cases that came under M. Dumoutier's care, he exhibited strychnine and tonics, endeavouring at the same time to dissipate the disposition to nostalgia by amusements and diversion of thought. For two or three days a slight improvement ensued, but the patient then relapsed into the same state and died. In another case electricity was tried with no better result. At the autopsy neither the brain nor spinal marrow nor their membranes exhibited anything abnormal.

A girl, 16 years of age, consulted M. Marjolin last June on account of her breasts, which had been enlarging since April. He found them both hypertrophied so that the nipples were effaced, but did not discharge any fluid. The general health was little interfered with. The enlargement had taken place rapidly, and unaccompanied by pain. M. Marjolin prescribed iodide of potassium and moderate compression, and soon afterwards two small ulcerations appeared on the right breast (which was the largest), and continued to increase in size, giving issue to a fungous excrescence. The breast, which in its greatest breadth measured 53 metres in circumference, tended to pediculate at its attachment to the trunk, and on October 6 was amputated, weighing after removal 1 kilo. 510 grammes (3 lb. 5 oz. av.). Examined under the microscope it was found to consist of simple hypertrophied tissue, and there were no enlarged glands in the axilla. The left breast has for some months exhibited a disposition to decrease in size.

In the University of Cambridge Mr. Main, of St. John's, and Mr. Bradbury, of Downing College, have been appointed examiners for the first examination for the degree of M.B.; Dr. R. Liveing, of Christ's, and Mr. Ransome, of Caius College, for the second examination; and Dr. Ormerod and Dr. Barclay, of Caius College, for the third examination for the same degree. Dr. Burd, of Caius, and Mr. Brooke, of St. John's College, have been appointed examiners for the degree of M.C.; and Dr. Latham, of Downing, assessor to the Regius Professor of Physic.

HELIGOLAND AS A HEALTH RESORT.

(*From a Correspondent.*)

Heligoland is a British possession in the North Sea, lying under the 54th degree of latitude and the 7th degree of longitude. The lot of the lighthouse is 54° 11′ 34″ N. longitude, 7° 53′ 13″ E latitude. The island lies nearly 400 miles from London, 25 from the mouth of the Elbe river, about 80 from Hamburg, seven hours by steamer from the latter place, and five from Bremerhaven. It is small, formed almost entirely of red sandstone, rising steeply from the midst of the sea, its greatest height above the sea level being 193 feet. Seen from a distance it affords a most picturesque and original view, with its high lighthouse, quaint church tower, and whitewashed houses. Its length is not more than five-eighths of a mile, and its greatest breadth one-sixth. It contains 600 houses, and its population is 2500. Most of the houses stand on the high land, a smaller number on the low plain, which lies a little above the sea level to the south-east of the island. The only access from the one to the other is by a broad flight of some hundreds of steps. That portion of the island which is not occupied by houses is used for agriculture; some vegetables, potatoes, etc., grow on the island, but there are no trees. Almost the only cattle are sheep and one or two cows. Horses are not kept; carriages do not exist. Some poultry are found; the rabbits introduced by the governor were violently objected to by the inhabitants, on account of the alleged undermining of the island and the landslips caused by it, and became the cause of many interpellations in the parliament of Great Britain, to explain what possible foundation the clamour of the Heligoland men and some German newspapers had. The inhabitants belong to the East Friesian type, with fair hair and blue eyes, speaking low German. Their principal industry is fishing and piloting.

Government.—Before Heligoland became an addition to the British colonies it belonged to Denmark. It also formed a part of the German Empire in common with Denmark up to the year 1806. During the great wars in the beginning of this century the Danes were on the French side, and consequently enemies of this country, and after the bombardment of Copenhagen in 1807 the island was taken possession of, and since that time it is under the nominal government of a governor appointed by Great Britain. His authority must be somewhat limited, and his rights and duties seem not to be clearly defined; he is almost the only Englishman in Heligoland, and lives part of the year on the continent. Recently a custom-house office has been established, and a custom lugger generally lies near the island. The power of Great Britain is represented by eight coastguardsmen and one police "director," an individual who exercises his authority chiefly over the little boys who are in the way of passengers landing. A prison does not exist, but there is a kind of lock-up, in the attic of a building which was used as a theatre. Small police matters are adjudicated in the Town-hall, commercial ones before the Council of Six, who are the highest board. They are elected by the inhabitants, but frequently fill up vacancies themselves. In judicial proceedings the appeal lies to the Queen of Great Britain in Council. Official placards are printed in Ritzebüttel, on the Elbe river, there being no printing office on Heligoland. There is, however, a public crier, who is authorised to announce important events. The expenditure for the island by the British Government is stated to be greater than the revenue raised by ground rent, customs, and some light taxes, which, however, are much grumbled at by the inhabitants.

There are primary schools superintended by the two clergymen who live on the island, both of course Germans. Children who are to receive a superior education are sent to Germany.

For its victuals the island partly depends upon the Continent and the steamers from Hamburg and Bremen. Meat, beer, wine, fruit, and most utensils for cooking, etc., are imported. A sort of small beer is brewed on the island, and taken on an emergency by the inhabitants.

Sanitary matters.—There is no system of drainage on the island. There are open gutters in the streets, boarded over here and there, causing, of course, disagreeable smells during the hot and dry weather. They are, however, occasionally flushed by the inhabitants at night time, and at such times an order is given for each house proprietor to place a pail of water before the house. The flushing by the rain, which sometimes falls in torrents, is more effectual. There are no waterclosets, but privies, which, however, it must be admitted are kept

strictly clean by the inhabitants. The contents of the vessels are emptied into the sea down a steep incline. Most of the streets are unpaved, and refuse is sometimes left before the houses. Most of the houses are built of wood only, a few of stone, and therefore the danger from fire must be great; but fortunately fires can scarcely be remembered. It is likely that more houses of stone will be built in the course of the next years.

Water.—Drinking water is scarce on Heligoland. There are some wells, and the rainwater is stored, but at times there is a great insufficiency of supply, when the weather has been dry for a long period. The water also contains impurities and earthy ingredients, sulphate of magnesia, etc., and does not agree with everybody. It often causes diarrhœa, and should not be taken without admixing claret or brandy.

It is well known that the island is getting smaller by landslips. Places are shown where rents exist which mark the future confines, and the visitor is advised not to tread on ground which may slip under his feet. It will, however, be hundreds of years before the island disappears or becomes uninhabitable.

At a little distance from Heligoland, twenty minutes by rowing to the south east, lie the sands, which are not inhabited in winter.

Accommodation.—There are some decent hotels on Heligoland, and a considerable number of private lodgings. About 1500 visitors may be accommodated. Charges vary of course, and are a little higher during the height of the season, when it is difficult to get rooms. It is better to bespeak them beforehand. Five thousand visitors come during the season, mostly Germans and Belgians, rarely Americans or Englishmen, and the few latter are from continental cities.

Disease.—There is scarcely any prevalent disease excepting perhaps chlorosis, under which many young females labour. They succumb more frequently to phthisis than the male population. There is a sick fund for the poor, out of which the chemist's bill is paid. There is not more than one chemist and two German Physicians.

Climate.—The exposed position of the island has its advantages and disadvantages. The air is bracing, and always cooler in the middle of summer than English inland towns and many English sea-bathing localities, but in winter time the weather is correspondingly inclement, so that those leave the island who can. Storms are very grand; more so than on land, having more a tropical character.

Amusements.—The island is small, still there are walks for exercise; they are round the island. Bath-chairs seem to be absent. One is kept in the institution for warm sea-baths, but not used. Boats are hired, and sailing round and about the island enjoyed—for instance, to the sealcrags, where seals are said to have been seen. Gentlemen amuse themselves by shooting sea birds, especially seagulls, or sail round the island to have a good view of the cliffs and rents. The view of the sea with steamers coming and going, large vessels passing in the distance and small boats rowing near, the sunset in the evening, and at times the natural illuminations by lightning, engage the attention and interest of the visitor. The phosphorescence of the sea, caused by myriads of microscopic insects, may be studied at night. Bands play in the morning and afternoon, and balls take place twice a week, Sunday being one of the days, in the Conversation-house. Special festivities, including fireworks, are arranged by the guests themselves. There are numerous excursions from Hamburg at cheap fares, which have the drawback of bringing undesirable elements into the society. A small theatre was opened some years ago, but no company has played there lately. A reading-room is found at the Conversation-house, but also, the writer regrets to state, playing tables and roulette. A circulating library exists, and some cafés and beerhouses. *Table d'hôte* is kept after the continental fashion in the Conversation-house and some hotels, lasting often more than an hour. In this first-named place ladies and gentlemen sit down to the number of about 300.

Mode of Life.—People live mostly out of doors. The costume is in accordance with the weather; evening dress is not adopted. The cylindrical black hat is nowhere to be seen, or becomes a curiosity. Light dresses and broad-brimmed hatgears are preferred by both sexes, at least during the warm weather. They do not rise so early as in Continental watering-places, and take their baths daily in the morning or forenoon. Smoking is allowed at all times and in all rooms excepting at dinner.

The Sea-bathing.—The visitors take their baths on the sands. For this purpose they are rowed over or sail. Even on this short passage, ladies become sometimes sea-sick. Males and females bathe at different places, and the bathing carriages are shifted from one beach to the other, according to where the waves strike most powerfully. After bathing, many take a little exercise, and have their lunch in the restaurant on the sands. Bathing dresses are not required for the gentlemen. It would be possible to bathe all day long, not only at the hours of high water, but the boatmen do not go across after one or two o'clock. At times they decline to do so altogether, the weather being too rough. In this case many take their bath on the island, where it is less agreeable. It has also happened that visitors could not return from the island, the weather having changed suddenly, and have been retained overnight, sometimes short of provisions. The usual cautions in bathing must be strictly observed in Heligoland. The waves are generally not very powerful on Heligoland sands when persons are allowed to bathe, because when it is rough the boats cannot go across. Many enjoy the sea breeze after the bath, stretched on the beach on their folded shawls; some search diligently for curious shells, stones, etc. The appetite becomes keen, and lunch is enjoyed greatly. During the hottest time of the season a siesta should follow the bath.

The good effects on the constitution of a sojourn of three or four weeks on Heligoland are felt long after, notwithstanding temporary indisposition during the stay. The great point in favour of Heligoland is that there is no land-wind, and one breathes the pure bracing and invigorating sea air. The discomforts of inclement weather are more felt than at other places where amusements abound and facilities of locomotion exist. The season is shorter than elsewhere, lasting from the beginning of July to the middle of September.

Who should bathe on Heligoland?—Respecting all invalids, it must be borne in mind that the local difficulties and the distance of the island from the Continent are serious objections. Some consumptive patients who require a very bracing air might be recommended to go there but for the absence of certain arrangements for their comfort. How could they come to the upper land unless a lift existed? they could not mount the stairs, and even easy chairs for carrying them up are not found. They could not live comfortably on the small slip of land called the lower land. The scarcity of milk would also be a drawback.

Those suffering from indigestion must be greatly benefited. The absence of good drinking water would be a disadvantage to them, but they might take light wine, or soda- and seltzer-water. They would also be able to live in conformity with almost every diet prescribed by their Physician—excluding milk—as the professors of cookery on Heligoland belong to a good school, and a refined or fastidious taste may be satisfied. The sea air is sufficient to stimulate the appetite, especially if combined with bathing, yachting, exercise, etc. Male patients labouring under the ill consequences of dissipation and bad habits may be strongly advised to try Heligoland as a last resort.

The great mass of the visitors are those who seek release from arduous duties and overwork, and combine the recreation of their health with a pleasurable life. They enjoy the advantages of the isolated situation of the island without feeling the drawbacks which must deter confirmed invalids from a visit.

THE PORTSMOUTH MEDICO-CHIRURGICAL SOCIETY.

The Army Medico-Chirurgical Society of Portsmouth held its eighth monthly meeting on Wednesday, the 7th inst. We are gratified to learn that the War Office authorities have sanctioned the use and fitting up of a large room in the General Hospital for the purposes of this Society, which has lately been organised, and is presided over by Dr. C. A. Gordon, C.B., Deputy Inspector-General of Hospitals.

The attendance on Tuesday was large, and included several of the leading civil Practitioners of the neighbourhood, as also Sir David Deas, K.C.B., Inspector-General of Hospitals and Fleets, and a good many other naval Medical officers. We are informed that the presence of so many civil Practitioners was highly gratifying to their military brethren.

Dr. Lamprey, 67th Regiment, read a paper on "Aneurism of the Thoracic and Abdominal Aorta," with reports of cases furnished by Surgeon Porter, of the 97th Regiment, at Aldershot, and by Surgeon-Major Sinclair, 33rd Regiment, at Portsmouth, illustrated by drawings and a recent preparation.

Dr. Gordon, C.B., the President, read a contribution from Dr. Lawson, Inspector-General of Hospitals at Aldershot, on "Yellow Fever," in support of the view of its being non-contagious, and of the liability to repeated attacks. Dr. Lawson admits that the miasma on which yellow fever depends can be carried in a ship from one place to another, and can produce the disease among those submitted to its influence, and is of opinion that local, as distinguished from personal, causes are the most important factors in the etiology of the disease.

Sir David Deas observed that in the West Indies, where yellow fever so frequently prevails, it may be so difficult to distinguish absolutely between local and personal causes that there may appear sound foundation for the doctrine of its non-contagious nature; yet in a country whose climate is favourable to the development of yellow fever when once received on its shores, but in which the disease, from not having prevailed for several generations, may be said to be new among the inhabitants, observation is decidedly in favour of its highly contagious nature. Sir David Deas mentioned as a striking instance in confirmation of his views the epidemic of yellow fever in Brazil in 1848. There had been no cases of the disease for more than eighty years until the arrival of an infected ship, from which period it spread with extreme and fatal rapidity among the crews of the ships in harbour, as also among the shore population. Sir David Deas also doubts the recurrence of yellow fever, except in rare instances, similar to those in which scarlatina, small-pox, etc., have been known to attack the same individual more than once.

Dr. Lawson's paper and the remarks of Sir David Deas referred also to several other points in connexion with yellow fever, and the meeting was altogether of a most interesting character.

The general institution of such societies in all our large garrisons and camps would aid largely in extending Professional knowledge and in introducing the Medical officers of the army to a degree of personal acquaintance and friendship among themselves, as well as with the civilian members of the Profession, from which they have hitherto been to a great extent debarred by the isolation of their position while on duty at home and by their spending so much of their time abroad, and which would certainly confer mutual benefit and tend greatly to the advantage of the Profession at large. We hope to see the example set at Portsmouth followed at other military stations.

REVIEWS.

Injuries and Diseases of the Jaws. The Jacksonian Prize Essay of the Royal College of Surgeons of England, 1867. By Christopher Heath, F.R.C.S., Assistant-Surgeon to University College Hospital. Pp. 416.

Some of the best works in Surgical literature have resulted from the institution of the Jacksonian prize, and the authors of these essays have in a great measure been indebted to this successful competition for their subsequent position in the ranks of Surgery. Such a reflection instinctively arises in the mind when one glances at the present volume, and the impression becomes deeper as the contents of the book are studied.

Mr. Christopher Heath was so well known previous to the publication of this work for his investigations into the pathology and surgery of this very important class of disease that when it was announced that he was the successful competitor for the prize we expected an essay which would be an honour to British Surgical literature as well as to the College which awarded the prize, and we must confess that these expectations have been amply verified. The subject treated of is one of the greatest possible interest and importance, and it has had ample justice done to it by the author, who evinces a thorough knowledge of the literature of the subject, and gives ample proofs of a sound practical acquaintance with the pathology and surgery of the jaws.

When we mention the fact that the work consists of as many as twenty-eight chapters, it will be evident that every point connected with the subject in question has been well considered. The essay consists of two main divisions—viz., the injuries of the jaws and the diseases of the jaws, the latter part, of course, having had the greatest attention devoted to it. In the first four chapters fractures of the upper and lower jaw are considered. Gunshot injuries—of course rarely met with in private practice—form the subject of the fifth chapter, and the next is devoted to the consideration of dislocation of the jaw. Here we cannot forbear quoting Mr. Heath's excellent description of the manner in which dislocation occurs:—

"When the mouth is opened to its fullest extent, each condyle of the jaw leaves the true glenoid cavity and rests against the articular eminence and the interarticular fibro-cartilage, which is drawn forwards by the pterygoideus externus, the same muscle which advances the jaw itself. The articular eminence is covered by articular cartilage, and by the synovial membrane reflected between it and the cartilage, and a second synovial membrane being placed between the cartilage and condyle of the jaw, the necessary freedom of movement is insured. A cavity is thus left immediately behind the condyle, which can be readily felt in the healthy living subject, and which is only exaggerated in cases of dislocation. When the jaw is in this position, but a very slight force is needed to carry the condyle over the articular eminence, and produce a dislocation; and this is brought about either by a force applied to the chin, when, owing to the length of the lever, the result is readily induced, or by a spasmodic contraction of the external pterygoid muscles, which, as has been stated, are already in action."—P. 80.

In the remaining chapters of the work the various diseases and deformities of the jaws are treated of at considerable length, and with much clearness and minuteness. The chapter on the diseases of the antrum is very good, and there are numerous drawings illustrating the normal anatomy of the antrum, which were originally furnished by Mr. Cattlin in his paper on the subject. The diseases of this structure, and the difficulty of sometimes arriving at a correct diagnosis of them, are well described and insisted upon by Mr. Heath. It is well known that in some cases the preliminary incisions have been made for the purpose of extirpating the entire upper jaw, and then it has been discovered that this supposed tumour was merely a chronic abscess of the antrum, with thickening of its walls; and, indeed, the author states:—"A case has occurred within my own knowledge, in which a very able Surgeon removed the upper jaw before discovering the error of his diagnosis."—P. 153.

The chapters on cysts of teeth and on cysts in the lower jaw are very elaborate, and illustrated by many drawings. Epulis also receives a good deal of consideration from the author, and its varieties are well described. His remarks on the treatment of epulis are sound and practical. Mr. Heath strongly insists upon the necessity of removing the alveolar periosteum, and portions even of the alveoli and the neighbouring teeth in certain severe cases. Mr. Heath has devoted a large portion of the work to the consideration of tumours of the upper jaw, their varieties, and their treatment. These chapters are replete with sound pathological and practical views, and many striking illustrations of these tumours are furnished. We are glad to find the author giving the credit he deserves to the late John Lizars for being the first Surgeon to recommend excision of the upper jaw. Mr. Heath also estimates in its proper light the important modification in the operation suggested and carried out by Sir William Fergusson, and which presents so much deformity after these severe operations.

Tumours of the lower jaw are also discussed at some length, and the work is finished by two chapters on the subjects of closure of the jaws and deformities. A copious history of cases which have been under the care of Mr. Heath himself has been appended to the work, and thus is completed an essay which is a most valuable addition to modern Surgical literature, most honourable to the author, and sure to add greatly and deservedly to his Professional fame and success.

Four hundred and thirty-three deaths have been registered from scarlatina during the last four weeks, and the mortality from this disease was greater last week than any previously recorded during the present season. Three deaths from scarlatina were registered last week in the sub-district of St. Mary, Paddington; 3 in the sub-district of St. Peter, Hammersmith; 4 in the sub-district of Chelsea North-east; 6 in the sub-district of Kentish-town; 6 in the sub-district of St. Giles South; 4 in the sub-district of St. Clement Danes; 2 in the sub-district of Haggerstone East; 4 in the sub-district of the Green, Bethnal-green; 3 in the sub-district of Mile-end Old-town West; 3 in the sub-district of Lambeth Church, second part; 4 in the sub-district of Kennington, first part; 2 in the sub-district of Clapham; 3 in the sub-district of St. Paul, Deptford; and 2 in the sub-district of Sydenham.

GENERAL CORRESPONDENCE.

THE CLIMATE OF DAVOS.

LETTER FROM DR. C. GUISAN.

[To the Editor of the Medical Times and Gazette.]

SIR,—Dr. Bayes's very interesting communication on the baths of St. Moritz, chiefly as a place of resort for invalids during the winter, may have created surprise among some of your readers, although his deductions are very striking and true. A similar account may be given of another place in the same canton of Switzerland, the valley of Davos, not very far from St. Moritz. Three hamlets—Davos Frauenkirch, Davos am Platz, and Davos im Dörfli—are known under the collective name of Davos, situated 4740 ft. to 4793 ft. above the level of the sea, in a valley directed from the north-east to the south-west, with a stream, the Davos Landwasser. The very healthy climate of the valley has been known for many years; some twenty years ago scrofulous children were sent there, and Dr. Reed, who was seventeen years there as Physician of the Government, never saw a case of scrofulosis among the natives for which any treatment was necessary. For some years past Davos has become a very valuable winter station for the phthsical. The climate is about the same as that of the Upper Engadine—the winter cold, but dry and sunny.

Dr. Spengler has established a comfortable house for his foreign patients, whose number is increasihg every year. He has observed many remarkable cases of recovery, and I know myself one case of a young man who spent many winters in the south without any benefit to his health, he being phthsical, and recovered in Davos under the influence of the diminished pressure, the cold, but bracing and pure air. You will find a more complete description of the valley of Davos in the work of Dr. Meyer-Anrens ("Die Heitquellen und Kurorte der Schweiz"), and every further explanation and direction will be easily obtained from Dr. Spengler.

As for the baths of St. Moritz, I entirely agree with Dr. Bayes; only let me add that last summer was a very exceptional one, and that it would not be prudent to go there too early. I well recollect having seen snow half an inch thick during two days in July, 1860.

Perhaps these lines will be of some interest to your readers.

Vevey, Oct. 6. I am, &c. C. GUISAN, M.D.

MR. JONATHAN HUTCHINSON'S REMARKS ON CANCER.

[To the Editor of the Medical Times and Gazette.]

SIR,—Trusting to Mr. Jonathan Hutchinson's personal courtesy, and to the knowledge that we all have of him as a worker, I would, with your permission, ask him a few questions, in the hope that his pursuits may, sooner or later, allow him to reply directly or not to them.

Referring to his remarks (Oct. 10), I wish to know if he considers epithelial cancer limited to the lips, and that it does not attack the eyelids or skin of the face. Again, what form of cancer in a rapidly spreading stage is that which is consistent with any attempt to define cancer, yet capable of permitting life for twenty years? If such be the case, then no definition of cancer that I can form admits of any value. Why should the same disease at different times act in totally different manners—nay, opposed manners, under the same conditions? If such phenomena occur, do they not prove that they cannot be due to one and the same disease? If a cancer of the thigh or forearm makes rapid progress, it kills the patient in various ways, but among other things it presents, as an almost essential phenomenon, implication of the lymphatics, even though secondary infection never arrives. How, then, is it that a so-called "rodent cancer" eating into the face, into a region rich in lymphatics, does not affect them?

I confess that I cannot believe in a local cancer of any sort. There are cancerous tumours and cancerous ulcerations, which exist for years unchanged, are well enough known, and their clinical conditions sufficiently explain why they should be so slow in progress; but they are cancers none the less, quite as much as a tiger in a cage is the same as one at home, only his conditions are somewhat different. If Mr. Hutchinson considers that cancer is ever local, in the sense that a fatty tumour is, then I should like to be sure that I have, if such is the case, understood him correctly, and the grounds of his opinion.

It is probable that Mr. Hutchinson defines cancer differently in itself, if not on different grounds from those I or others do. I do not consider epithelioma a true cancer at all.

I rest my definition of cancer on purely anatomical grounds, and have not as yet seen any reason to change that opinion. I commenced its study under Hughes Bennett, with his monograph on it and its allied growths, and had sufficient opportunities in the Edinburgh Hospital, and when attached to its post-mortem theatre, to continue the study, and since then in other fields equally good. If mistakes have been made with the microscope, they are as nothing to those that have happened under unassisted vision, and often enough explicable on the ground that the instrument is asked to do what it cannot. I have no intention to enter on so-called rodent cancer. I have certainly seen cases clinically pronounced such, which assuredly were not. Rodent certainly, cancerous equally not. I do not mean to say that the term is not correct, whether applied to a stage in cancer, or as a sub-specific definition of cancer. If I understand Mr. Hutchinson correctly, then a so-called lupus might be termed a cancer, a varicose ulcer, or that standby of the ladies, an oris uteri epithelial ulceration a cancer too. In a word, to attempt to define cancer clinically alone is either a mistake or an impossibility, false in method, defective in practice. Though perfectly aware of the *mot* that *qui s'excuse s'accuse*, to avoid all risk of misinterpretation (not on Mr. Hutchinson's part, for whom I enclose my card), allow me to remain,

Yours, &c. A. L. M.

REPORTS OF SOCIETIES.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

THE first meeting for the present session was held on Saturday evening, the 17th inst., at the Scottish Corporation Hall, Fleet-street, Dr. Druitt, President, in the Chair.

Mr. LIDDLE brought before the meeting the question of the amount of cubic space to be demanded for cows in town cow-sheds, which appears to vary in different districts from 800 to 1300 cubic feet. Dr. Buchanan, Dr. Ballard, and several other members, urged the importance of a high and uniform standard, Dr. Ballard testifying that the cattle-plague and pneumonia had been less prevalent in sheds where crowding was less. A discussion arose as to the parishes in which Mr. Torrens's Artisans' Dwellings Act had been put in force, which seem to be not many yet.

The PRESIDENT then delivered an address, which will be found at p. 473.

After a discussion, in which Drs. Guy, W. Farr, Gibbon, and many others took part, the meeting adjourned.

NEW INVENTIONS.

CHOCOLATE.

(*From the Compagnie Coloniale*, 44, *Moorgate-street, London, E.C.*)

IT would seem as if the English public had waked upon a sudden to the importance of the seeds of the *Theobroma Cacao* as an article of diet for the healthy, and as a restorative for the sick. The number of preparations now offered is large, and the prices are various, according to the original quality of the cacao, the mode of preparation, and the cheaper ingredients by which it is improved (?) or adulterated. The Medical Practitioner who prescribes any particular form will do so from its adaptation to the special case before him, and will principally consider whether he desire to order it entire, or with its fat abstracted. We need not say that now that the importance of fat to the animal economy is so fully recognised, the cases will be many in which a mildly flavoured and digestible fat, mixed with nitrogenous and other nutritive ingredients in a state of minute division, will be very acceptable. The chocolates of the *Compagnie Coloniale* boast themselves with justice on high quality, careful preparation, no admixture save sugar, and moderate price. One practical word on their use. Chocolate is admirably adapted for the early breakfast of men of business who desire to rush off to their counting-houses, and who cannot at an early hour relish the *œufs à la*

coque, or the rasher of bacon, or slice of cold meat, which form the staple of a suburban breakfast. Persons so circumstanced should breakfast on one tablet of this chocolate, which will cost from 2½d. to 4d., and on a fine roll, without butter, or aught else save a little salt, which, by the bye, improves the flavour of chocolate wonderfully. The only objection to it is that it requires about a quarter of an hour's careful preparation; and that therefore it offers not the facility which the teapot does to persons whose whole art of living consists in finding what shall give least trouble. But the man who has had a cup of chocolate is better prepared to go on to his early dinner without a dram than he who has merely stimulated his stomach with the deceitful tea.

NEW BOOKS, WITH SHORT CRITIQUES.

A Treatise on Physiology and Hygiene, for Schools, Families, and Colleges. By J. C. Dalton, M.D., Professor of Physiology in the College of Physicians and Surgeons, New York. London: Sampson Low, Son, and Marston. Pp. 399.

*** Professor Dalton's larger work on Physiology is well known and highly esteemed on this equally as on the other side of the Atlantic, and this small work now published is as well worth general attention. It is a treatise on anatomy and physiology, in as far as a knowledge of these is necessary in ordinary life, entering into sufficient details to make them interesting without being tedious. To the same end, technical terms are as much as possible avoided, whilst a series of carefully framed questions at the end of each chapter will give point and accuracy to the knowledge it conveys. The illustrations, one of the leading features in the larger work, are in this mostly diagrammatic.

The Philosophy of the Bath; or, Air and Water in Health and Disease. By Durham Dunlop, M.R.I.A. London: Simpkin, Marshall, and Co. Pp. 465.

*** We hardly know how to characterise this book. It contains much information and many unfair statements. To those who have a taste for acquiring the former at the expense of wading through the latter, the book will undoubtedly be useful. The treatise is aimed against those who uphold drug treatment, and drug treatment alone, for the cure of disease. In reply it may be said that such a class of Practitioners now-a-days hardly exists.

On Diseases peculiar to Women, including Displacements of the Uterus. By H. L. Hodge, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the University of Pennsylvania. Second Edition. Philadelphia: Lea. London: Trübner. Pp. 531.

*** The present edition of this work is almost entirely occupied with the discussion of two subjects—the irritable uterus and uterine displacements. To the former Dr. Hodge is inclined to relegate most forms of so-called metritis, whilst from it along with the latter, he thinks, spring most of those ills to which feminine flesh is heir, especially the condition known as hysteria. The last portion deals with sedation of the uterus, otherwise known as amenorrhœa.

Vesico-Vaginal Fistula, from Parturition and other Causes; with Cases of Recto-Vaginal Fistula. By T. A. Emmet, M.D., Surgeon-in-Chief to the New York State Women's Hospital. New York: W. Wood and Co. London: Trübner. Pp. 250.

*** In no department of Medicine or Surgery do we owe so much to American authors as in that relating to the Surgery of the female pelvic organs, and to them we owe much of that success which is now so uniform in dealing with the affections referred to. The present volume is an excellent example of the kind of work likely to do most good—a careful and painstaking record of many cases of vesico-vaginal fistula, arising from all sorts of causes. The operations necessary in each case are clearly described.

The Mechanical Treatment of Deformities of the Mouth, Congenital and Accidental. By Robert Ramsay, Member of the Odontological Society, and James Oakley Coles, Honorary Dentist to the Hospital for Diseases of the Throat, etc. London: John Churchill and Sons. Pp. 95.

*** This beautifully illustrated work deals with a highly practical and interesting subject, it being conceded that many defects of the mouth and palate can be better treated by mechanical than operative means. Messrs. Ramsay and Coles enter fully into their subject; they deal with the development of the parts concerned, as well as with the means employed in remedying defects. They describe the processes of manufacturing gutta-percha apparatus for deficiencies in the roof of the mouth, etc., the various kinds of shields of this kind being carefully figured as well as described.

On Wasting Diseases of Infants and Children. By Eustace Smith, M.D. Lond., M.R.C.P., Physician Extraordinary to His Majesty the King of the Belgians, Physician to the North-West London Free Dispensary for Sick Children, etc. London: James Walton. Pp. 261.

*** Dr. Smith's valuable work deals with the group of diseases whose characteristic is wasting, sometimes treated of under the titles marasmus, tabes, etc., and comprehending such stages as simple atrophy from insufficient nourishment, chronic diarrhœa and vomiting, rickets, congenital syphilis, worms, chronic tuberculosis, chronic pulmonary phthisis, and tuberculisation of glands.

De la Kélotomie sans Réduction: Nouvelle Méthode Opératoire de la Hernie Etranglée. Par le Dr. Marc Gérard, Lauréat et Médaille d'Or de l'Ecole de Médecine de Bordeaux; Interne des Hôpitaux de Bordeaux.

On Kelotomy without Reduction: a New Operative Method in Strangulated Hernia. By Dr. M. Gérard, Laureate and Gold Medallist of the Medical School of Bordeaux; *Interne* of the Hospitals of Bordeaux. Paris: J. B. Baillière and Sons. Pp. 276.

*** Dr. Gérard's work consists of two portions, the former dealing with the ordinary operation of herniotomy. He endeavours to show that the non-success of the ordinary procedure depends on the operation; further, that it does not depend on the cutting portions of this operation; consequently that the subsequent reduction is the fatal mistake. He assumes, therefore, that the intestine ought to be allowed to remain in the wound, and shows that this practice is not dangerous. He illustrates his various positions by a number of cases which, if not convincing, are interesting. We do not think that Dr. Gérard's views will be generally adopted in this country; still, they are worthy of attention.

Du Diagnostic des Maladies des Yeux par la Chromatoscopie Rétinienne. Par X. Galezowski, M.D. Paris, Professeur libre d'Ophthalmologie à l'Ecole Pratique de la Faculté de Paris, etc.

On the Diagnosis of Diseases of the Eye by means of Retinal Chromatoscopy. By Dr. X. Galezowski, Professor of Ophthalmology in the Practical School of the Paris Faculty. Paris: J. B. Baillière and Sons. Pp. 267.

*** By long-continued researches, Dr. Galezowski, whose reputation as an ophthalmologist is well known, has arrived at the conclusion that the condition called colour blindness or Daltonism is not always congenital, but may be acquired in certain states of the optic disc and retina. Further, he has ascertained that the power of distinguishing various shades of colour may be made use of as a test for the condition of the optic nerves. The early part of this treatise is occupied with some information as to the laws of colour founded on the observations of Chevreul, the optical laws of light, and the physiology of vision, especially of the various colours. The most important portion for us is that relating to congenital and acquired colour blindness, a subject which is fully illustrated by cases and drawings. The last part of the work deals with coloured vision and its import. There is a scale of colours in various shades, as well as test types to be used in practice.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Monday, October 19, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Anderson, William, St. Thomas's Hospital.
Barry, James William, Metropolitan Free Hospital, Devonshire-square.
England, George, Handsworth, Birmingham.
Higgens, Charles, Guy's Hospital.
Laking, Francis Henry, St. George's Hospital.
Littlejohn, Saltern George, 2, Dagmar-road, Camberwell.
McClean, Edward Henry, St. Bartholomew's Hospital.
Timmins, John Aaron James, 21, Granville-square, Pentonville.

QUEEN'S UNIVERSITY IN IRELAND.—The annual meeting of the Senate of the Queen's University in Ireland, to confer degrees, diplomas, and certificates, etc., upon the students who passed their examinations during the Academic year 1867-68, was held on Wednesday the 14th inst. in St. Patrick's Hall, Dublin Castle. The degrees were conferred by the Right Hon. Maziere Brady, Vice-Chancellor of the University. The medals and prizes were distributed by his Grace the Lord Lieutenant of Ireland. The following gentlemen received the degree of M.D.:—

Barker, Frederick C., Belfast.
Beamish, James Maybury, M.A., Cork.
Beck, John Fritz, M.A., Belfast.
Brown, John M'Mahon, Cork.
Chambers, John, Belfast.
Chatterton, James, B.A., Cork.
Coghlan, W. Boyle, Cork.
Crowley, Timothy, Cork.
Delmege, Alfred G., Galway.
Donovan, Humphrey J., B.A., Cork.
Donovan, John, Cork.
Dunlop, James, Belfast.
Fleming, Robert Gage, Belfast.
Fox, James Thornley, Cork.
Hadley, G. Percival, Belfast.
Harrington, Denis, Cork.
Hegarty, Andrew, Belfast.
Higgins, Thomas James, Belfast.
Hudson, Robert S., Belfast (First-class).
Hunter, Robert L., Belfast.
Jamieson, R. Alexander, M.A., Cork.
Lloyd, John, Cork.
Longworth, Peter, Galway.
Love, James, B.A., Belfast.
Lumsden, Thomas, Cork.
MacAuliffe, T. Browne, Galway.
M'Carthy, Edward, Cork.
M'Mordie, William K., Belfast.
Madden, Henry Murray, Galway.
Martin, John W., Galway.
Mowll, Richard A., Cork.
Mullen, St. Laurence, Galway.
Murphy, Michael Edward, Galway.
Murphy, Patrick, Cork.
Murray, Charles F. K., Galway.
Newsam, William Forbes, Cork.
O'Brien, Richard Rice, Cork.
O'Malley, Michael, Cork.
Peterson, Richard A., Galway.
Pierce, Frederick Morrish, Belfast.
Price, Gordon, Belfast.
Price, William, Belfast (Third-class).
Ross, James A., Galway.
Sanderson, William Henry, M.A., Galway.
Stevenson, Robert Henry, Belfast.
Stewart, Robert William, Belfast.
Sugars, John Colvan, Galway.
Tate, Davis Dederick, Galway.
Walsh, Patrick Lynch, Cork.

The following gentlemen received the Degree of M.Ch.:—

Beamish, James Maybury, M.A., Cork.
Beck, John Fritz, M.A., Belfast.
Chambers, John, Belfast.
Chatterton, James, B.A., Cork.
Dickson, James Reid, M.D., Belfast.
Donovan, John, Cork.
Hudson, Robert S., Belfast.
Lloyd, John, Cork.
MacAuliffe, T. Browne, Galway.
Martin, John W., Galway.
Mowll, Richard Alfred, Cork.
Mullen, St. Lawrence, Galway.
Murphy, Patrick, M.D., Cork.
O'Brien, Richard Rice, M.D., Cork.
Price, William, Belfast.
Price, Gordon, Belfast.
Purcell, Charles Gore, M.D., Cork.
Robinson, William Newman, M.D., Cork.
Saunderson, William Henry, M.A., Galway.
Sugars, John Colvan, Galway.
Sharpe, William, M.D., Galway and Belfast.
Walsh, Patrick Lynch, Cork.

The following received Certificates of having passed the First University Examination in Medicine:—

Agnew, Samuel, Galway.
Alexander, William, Belfast (First-class).
Armstrong, Thomas M.
Barry, Robert, Cork.
Beamish, James Maybury, M.A., Cork.
Black, Moses, Belfast.
Browne, J. Martin, Galway.
Browne, Samuel Hazlett, Belfast.
Clayton, Nicholas G., Galway.
Colahan, William H. W., Galway.
Coulter, William, Belfast.
Cullinan, Michael, Cork.
Daly, George W., Belfast.
Davis, Richard, Belfast.
Davison, James, Belfast.
Dick, Andrew, Belfast.
Donnelly, Thomas J., Belfast.
Doyle, Patrick, Belfast.
Douglas, William, Belfast.
Enright, J. Francis, Cork.
Exham, Richard, Cork.
Frier, William, Belfast.
Furey, James, Belfast.
Given, George Kilpatrick, Belfast and Galway.
Hastings, William J., Cork.
Hayes, John Roche, Cork.
Hawkes, Samuel, Cork.
Heap, Charles Sidney, Belfast.
Hegarty, George P., Galway.
Heron, Samuel, Belfast.
Holland, James P., Cork.
Irvine, William, Belfast.
Jameson, J. Alexander, M.A., Cork.
Johnson, Samuel, Belfast.
Johnston, William, Belfast (First-class).
Kearney, Michael, Cork.
Lloyd, Christopher, Cork.
Love, James, B.A., Belfast.
M'Carthy, Edward, Cork.
M'Craith, Jeremiah, Cork.
M'Donnell, William, Galway.
Mackenzie, Matthew B., B.A., Belfast.
Martin, Daniel N., Cork.
Maunsell, John, Belfast.
Millar, Alexander P., Belfast.
Moorhead, William R., M.A., Galway and Belfast.
Murray, Charles F. R., Galway.
Murray, William W., Belfast.
Norris, Edward Henry, Galway.
O'Connor, R. Watkins, Cork.
O'Connor, Augustine D., Cork.
O'Neill, John, Cork.
O'Reilly, Walter W. J.
O'Sullivan, Thomas, Galway.
Pierce, Frederick M., Belfast.
Pye, Joseph P., Galway (First-class).
Rea, John Henry, Belfast.
Ritchie, William, Belfast.
Shaw, James, Belfast.
Simms, James, Belfast.
Smith, Samuel J., Belfast.
Smyth, Frederick Henry, Cork.
Smyth, William J., Belfast and Galway.
Spence, James, Beveridge.
Sweetman, J. Long, Cork.
Sweetman, William F., Cork.
Torrens, James, M.A., Belfast and Galway.
Watson, J. Woodrow, Belfast.
Williams, William.
Young, Alexander, Belfast.
Young, Samuel, B.A., Belfast and Cork.

Exhibitions were awarded at the First University Examinations in Medicine to William Alexander, of Queen's College, Belfast, first in the non-professional subjects of examination; two instalments of £20 each. Joseph P. Pye, of Queen's College, Galway, second in the non-professional subjects of examination; two instalments of £15 each.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 15, 1868:—

Leonard, William, Sheffield.
Lewis, William Bevan, Cardigan.
Woods, George Arthur, Southport.

The following gentlemen also, on the same day, passed their First Examination:—

Barnes, Edgar George, St. George's Hospital.
Gillingham, Alfred, Guy's Hospital.
Langford, Phineas P., Middlesex Hospital.
Taylor, Frederic E., King's College Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

PIGG, THOMAS, M.D., M.R.C.P.—A Physician to the Manchester Southern Hospital for Women and Children.

SWINDELL, J. J., M.R.C.S.E.—Junior House-Surgeon to the Middlesex Hospital, *vice* Mr. G. E. Norton.

NAVAL APPOINTMENT.

ADMIRALTY, October 13.—Dr. James Libburne has this day been promoted to the rank of Staff Surgeon in Her Majesty's Fleet, with seniority of October 10, 1868.

BIRTHS.

BARTON.—On October 20, at Hampton Court, the wife of Alfred B. Barton, M.D., of a son.

BRAKE.—On September 7, at Nagpore, Central India, the wife of Surgeon John Brake, Superintendent-General of Vaccination, of a son.

BURRELL.—On October 17, the wife of Lionel Burrell, M.D., of Green Lanes, Stoke Newington, of a daughter.

GOODING.—On October 14, at Bexley-place, Greenwich, the wife of Ralph Gooding, B.A., M.D., A.K.C., of a daughter.

HUGHES.—On October 18, at 2, Adelaide-terrace, Exmouth, the wife of Dr. Richard Hughes, of Brighton, of a son.

MACKENZIE.—On October 20, at 13, Weymouth-street, Portland-place, the wife of Dr. Morell Mackenzie, of a daughter.

MOORE.—On October 19, at 28, Upper Merrion-street, Dublin, the wife of Robert H. Moore, F.R.C.S.I., of a son.

PALATIANO.—On October 17, at Corfu, the wife of Georgia Palatiano, M.D., of a son.

PRICHARD.—On October 10, at Wonastow Court, near Monmouth, the wife of W. G. Prichard, M.D., Inspector-General of Hospitals, late of Indian Army (Madras), of a daughter.

TEALE.—On October 19, at 1, St. Nicholas-parade, Scarborough, the wife of John W. Teale, F.R.C.S., of a daughter.

WATKINS.—On October 14, at 61, Guildford-street, Russell-square, the wife of Edwin T. Watkins, M.D., of a daughter.

WILSON.—On October 15, at 6, Montpelier-terrace, Cheltenham, the wife of E. T. Wilson, M.B. Oxon., of a son.

MARRIAGES.

CARBERY—BERTRAM.—On September 10, at St. Lucia's Cathedral, Cotton-China, Colombo, Joseph Carbery, M.B.C.M., Colonial Assistant-Surgeon, Kandy, son of R. John Carbery, Esq., of Allahabad, East Indies, to Sarah, daughter of the late Moritz Beral Bertram, of Hackney, London. No cards.

FEGAN—PEASE.—On October 14, at St. Stephen's, Guernsey, Richard Fegan, M.D., L.R.C.P., etc., The Fairfield, Old Charlton, London, S.E., to Annie Sarah, elder daughter of Clifford Pease, Esq., Guernsey, and formerly of Beverley, Yorkshire.

HARRISON—HULLAND.—On October 13, at the parish church of St. Mary Magdalene, Lincoln, C. Harrison, M.D., to Kate M. Hulland. No cards.

MACARTNEY—GILMAN.—On October 14, at St. Mary's, West Brompton, the Rev. Sydney Parkyns Macartney, third son of Maxwell Macartney, M.D., of Hurstleigh, Tunbridge Wells, to Amy Amelia, eldest surviving daughter of Ellis James Gilman, Esq., of 14, Boltons.

PULLIN—BAKER.—On October 15, at Grendon Church, Warwickshire, William Henton Pullin, of Leamington, eldest son of John Pullin, of Atherstone, to Mary Jane, youngest daughter of the late Joseph Baker, M.R.C.S. No cards.

ROBERTS—DEW.—On September 16, at the Presbyterian Chapel, Llangefni, Anglesea, John Roberts, M.D., of Manchester, to Mary Elizabeth, only surviving daughter of Samuel Dew, Esq., of Oron. No cards.

STAFFORD—COX.—On September 29, at Heigham Church, Norwich, S. J. F. Stafford, Surgeon, of Great Yarmouth, to Mary Ann Cox, of South Kensington, London.

WARING—DUPONT.—On September 23, at St. Mary's Church, Cavendish, Richard W. Waring, L.R.C.P.E., M.R.C.S.E., of The Greys, Cavendish, son of Thomas Walter Waring, Surgeon, to Louisa, only daughter of Richard Gainsborough Dupont, Esq., of Sudbury. No cards.

WHIPP—GAMON.—On October 14, at Thornton-le-Moors, Chester, Robert Whipp, M.R.C.S., etc., Croft's Bank, Lancashire, to Elizabeth, daughter of the late W. Gamon, Esq., of Manchester.

DEATHS.

BOWE, JOHN, Surgeon, of Richmond, Yorkshire, at the house of his son-in-law, Wm. Hall, Hillary-place, Leeds, on October 14, aged 68.

DASHWOOD, LANCELOT, younger son of Lancelot Dashwood, Surgeon, late of Norwich, on October 12, aged 22.

DAWSON, JOHN ARGENT, youngest son of the late John Dawson, M.R.C.S., late of Tolleshunt D'Arcy, Essex, at Rose-vale, Brentwood, on October 18, aged 22.

MYERS, HENRY, M.R.C.S. Eng., late Surgeon Portuguese Army, at his residence, 33, Milton-street, Dorset-square, after a short illness, on October 14, aged 64.

TRENCH, MARY ELIZABETH, youngest daughter of the late John Power Trench, M.D., Staff Surgeon, at 55, Lansdowne-road, Kensington-park, after a short but severe illness, on October 19, in her 17th year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Alderbury Union.—The Fifth District is vacant; area 5229; population 4466; salary £51 per annum.

Manchester Township.—Dr. Alex. C. Clarke, Assistant Medical Officer at the New Workhouse, has resigned; salary £130 per annum, residence, and £40 for board.

APPOINTMENTS.

Bedford Union.—George N. Swinson, M.R.C.S. Eng., L.R.C.P. Edin., to the Turvey District.

Blackburn Union.—John Grime, M.D. Glas., M.C. Glas., L.S.A., to the Workhouse.

Eton Union.—William S. Wilson, M.R.C.S.E., L.R.C.P., L.S.A., to the Burnham District.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the annual stated meeting of the King and Queen's College of Physicians, Ireland, held on the 19th inst. (St. Luke's day, the day appointed by the Charter, having fallen on Sunday), the following were elected the officers for the ensuing year:—*President:* Dr. Fleetwood Churchill. *Censors:* Dr. Atthill, Dr. Foot, Dr. Freke, and Dr. Little. (The President nominated Dr. Freke as Vice-President.) *Treasurer:* Dr. Dwyer. *Registrar:* Dr. Grattan Guinness. *Honorary Librarian:* Dr. Belcher. *Representative on Medical Council:* Dr. A. Smith. *Professor of Medical Jurisprudence:* Dr. Travers. *Examiners in Midwifery:* Dr. Johnston and Dr. Jennings.

TRINITY COLLEGE, DUBLIN.—The Professorship of Botany in Trinity College, Dublin, is now vacant, and on January 23, 1869, the Provost and Senior Fellows, at the Board-room of Trinity College, will proceed to elect a Professor of Botany. The fixed emoluments of the Professorship consist of £200, paid annually by the College. The winter session, commenced on October 1, will terminate on March 31. Lectures will commence on November 2, as follows:—Practical Anatomy: Dr. Bennett, at 12 o'clock, on Tuesdays, Thurs-

days, and Saturdays. Anatomy: Dr. M'Dowel, at 1 o'clock, on Tuesdays, Thursdays, and Saturdays. Chemistry: Dr. Apjohn, at 2 o'clock, on Thursdays, Fridays, and Saturdays. Surgery: Dr. R. W. Smith, at 2 o'clock, on Mondays, Tuesdays, and Wednesdays. Practice of Medicine: Dr. Moore, at 3 o'clock, on Mondays, Wednesdays, and Fridays. Midwifery: Dr. Sinclair, at 4 o'clock, on Mondays, Wednesdays, and Fridays. Heat, Electricity, and Magnetism: Mr. Galbraith, at 2 o'clock, on the days published at the commencement of each term.

MEDICAL STUDENTS.—The annual registration of those gentlemen pursuing their studies at our eleven recognised metropolitan Hospitals has just been concluded, and the usual return forwarded to Mr. Charles Hawkins, F.R.C.S., the Government Inspector of Anatomical Schools in London. It appears that the total number of students amounts to 1178, including 410 new entries, or first year's men, showing an increase over those of last year, when the gross number amounted to 1125, with only 355 new entries. During the present session Guy's Hospital again takes the lead.

Guy's Hospital	296,	including	88 fresh men.
St. Bartholomew's	221	,,	77 ,,
University College	173	,,	65 ,,
King's College	118	,,	41 ,,
London	83	,,	37 ,,
St. Mary's	65	,,	17 ,,
St. George's	57	,,	23 ,,
Charing-cross	53	,,	20 ,,
St. Thomas's	51	,,	23 ,,
Middlesex	39	,,	14 ,,
Westminster	22	,,	5 ,,

The following table, prepared with some little trouble, will no doubt be read with considerable interest by both metropolitan and provincial teachers:—

Date.	No. of Students.	First year's men, or new entries.
1850	1001	384
1851	1087	408
1852	1093	382
1853	1084	376
1854	1072	369
1855	1093	392
1856	1067	344
1857	1038	353
1858	1021	373
1859	954	327
1860	1228	483
1861	1116	344
1862	1045	302
1863 (a)	1020	354
1864	995	309
1865	1013	321
1866	1027	362
1867	1125	355
1868	1178	410

BEQUEST.—The late Lady Goldie, of Claremont, Millbrook, near Southampton, has bequeathed £100, free of legacy duty, to the Royal South Hants Infirmary.

ANNUAL DINNER OF ARMY MEDICAL OFFICERS.—We are informed that it is proposed, under the sanction of the Director-General of the Army Medical Department, to inaugurate during the ensuing season a series of annual dinners among the officers of the Department on full and half pay, and that a committee is about to be formed for the purpose.

A HOSPITAL FOR INCURABLES is to be founded in Oxford at a probable cost of £50,000. The scheme originated in a gentleman placing, for that purpose, £1000 in the hands of Miss Sandford, of Oxford, and that lady has obtained the co-operation of an influential provisional council in raising the necessary funds. His Grace the Duke of Northumberland has been appointed President, and the Lord Bishop of Oxford Visitor, the latter being also a member of the Council, *ex officio*.

PROFESSOR BILLROTH.—The Vienna Medical journals have been in a terrible fright lest Professor Billroth should be tempted away from their School, where he has become so popular, by the invitations he has received from Breslau and Berlin, treating it almost like a portion of the *Nord-Deutsche* question. However, they are made easy by the Professor, after some delay, consenting to remain, on condition that the clinical service and his wards in the Hospital should be put in a more satisfactory condition. His salary is also to be doubled, and he has been made a Hofrath.

(a) In this year the Grosvenor-place School was finally closed.

A FLAW IN THE VACCINATION ACT.—A parent was summoned before Mr. Dayman, at Wandsworth, for neglect of vaccination. The defence was that the child had been vaccinated within three months of birth by a private Practitioner without success, and that it was not now in a fit state to be vaccinated. Mr. Dayman said that there was no penalty for not giving notice of unsuccessful vaccination; but, as the child was not vaccinated, the defendant must prove that he had taken steps within the proper time to have the operation done. It is said that small-pox is very prevalent at Wimbledon.

NAVAL HYGIENE.—The sailing ship *Clara*, which arrived at Portsmouth on Saturday last from London, and embarked there on Monday a detachment of the 59th Infantry for conveyance to Ceylon, has been compelled to disembark her troops again, owing to the pollution of the air on board by the foul gases rising from her bilge. A survey was held on Tuesday on board, when it was decided by the military authorities, on the recommendation of the officers of the Shipwright Department of the dockyard, to order additional ventilators, etc., to be fitted on board, and should these fail in rendering the air between decks pure, the ship to be then cleared out and thoroughly cleaned before proceeding to sea.

CASE OF MONSTROSITY.—A remarkable case of monstrosity is recorded as having occurred in the practice of Dr. Polidoro, of Rojas, near Buenos Ayres. A girl, aged only fourteen years, produced a six-months' abortion presenting the following striking peculiarities:—It had a single central eye, and the nose was represented by a vertical cleft or fissure, proceeding upwards and dividing each lip. One ear is very small and of abnormal form, while the other is monstrously large; and while one hand has only two fingers the other possesses six. The specimen has been sent to the Faculty of Medicine, and we trust that a scientific committee will be appointed to report on it. In connexion with this remarkable case we may observe that, as a general rule, cyclopia is usually accompanied by a more or less deficient condition of the nasal cavities, but we do not at the moment recollect any case (although such cases may be recorded) in which the nasal fissure extended through the lower lip. Those who wish for information regarding cyclopia and other malformations will find a good summary of our knowledge on this and allied subjects, up to the date of its publication, in Vogel's "Pathological Anatomy." Taking into consideration the complication of malformations presented by this case, it seems to be almost unparalleled in the annals of monstrosity.

NEW NORTH STAFFORDSHIRE INFIRMARY.—A bazaar on a very magnificent scale was held on the 6th, 7th, 8th, 9th, and 10th inst. for the benefit of the above institution, the foundation-stone of which was laid by H.R.H. the Prince of Wales. The estimated cost of the building is £33,000 in round numbers, and, after including the value of the present Infirmary (£4000), which now of course is not available, there remained a deficiency of £4180. At first there was much opposition shown to the bazaar movement—indeed, it would have fallen through had it not been for the ladies speaking out, through Mrs. Herbert Cooper, of Newcastle, who said: "We have met here to-day to consider, not whether the bazaar should be held, but the best means of carrying it to a successful issue." It need scarcely be said that the gentlemen of the opposition were silenced. Other difficulties were overcome by the indefatigable Honorary Secretary, Harry T. Davenport, Esq., the permanent Secretary, R. Hordley, and other friends; and what it was at one time thought would be a miserable failure, turned out to be an almost unparalleled success. The bazaar was held in the new building, and was opened by the Right Hon. C. B. Adderley, M.P., who paid a high compliment to the Medical Profession. The proceeds amounted to the magnificent sum of £3517, not including a gift of £500 from R. Heath, Esq., of Newcastle. During the time of the bazaar £200 a year in addition to present income was promised. The income of the present Infirmary is £4000 a year, which is easily expended; £6000 a year will be required to carry on the new institution.

POOR LAW MEDICAL SERVICE. — *Bermondsey.* — Mr. Steele proposed that the salaries of the Medical officers, Messrs. Dixon and Richmond, should be increased from £100 to £150 per annum. After much discussion the motion was carried by eight votes against three. *St. George the Martyr, Southwark.*—The tender of Mr. A. Pearce for the erection of a mortuary behind the workhouse at a cost of £143 was

accepted. *Bethnal-green.*—The resignation of Mr. Rolph, one of the district vaccinators, was accepted. Mr. Boroughs, Inspector of vaccination cases, reported as the result of his inquiries in one district of the parish, that in many cases where the children had been vaccinated, the certificates had not been signed and sent to the Registrar, and in numerous others vaccination had been altogether neglected. *Islington.*—A claim was sent in by Mr. Turner, one of the Medical officers, for 10s. 6d., under the order for extra Medical services, for setting a dislocated finger. The order set forth that for the cure of any fracture or dislocation of the arm the Medical officer was entitled to £1. The guardians repudiated the claim by a large majority. Mr. Turner likewise claimed £1 for a fracture of the fibula, under the order for fractures of the leg, which order allowed a maximum of £3. Another discussion ensued, when it was felt that the Board had done wrong in disallowing the former claim. The guardians, therefore, rescinded their former resolution, and ordered both charges to be paid.

Preservation of Eggs.—The *Moniteur Méridional* describes the mode that is adopted on a large scale for preserving the eggs required for consumption in Paris. Into a cauldron of boiling water a colander containing a dozen eggs is plunged, and kept in it during a minute. This short immersion coagulates a thin layer of albumen, which, attached to the interior of the shell, constitutes an impermeable lining.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Will *L. A.* kindly repeat his question?

J. A. B.—There is no law to prevent it; but it is a question of discretion.

A. B. C.—We must stick to the maxim "*Crabrones ne irrita.*" A wrong-headed fellow, with more spinal cord than brain, is unarguable, and best let alone.

A Metropolitan Teacher.—The returns from the provincial schools have not been received. From a notice in the *Times*, it appears there is also an increase of students in the Irish schools. From a carefully compiled table in another column, you will see that there is a larger addition to the metropolitan schools this session than has been known since 1860.

Archæologist.—A notice has already appeared on the subject in the *Medical Times and Gazette*, but the following may be of additional interest to you:—"Thursday, February 11, 1731, was held a general Court of the Governors of St. Bartholomew's Hospital, when Mr. Jones, son-in-law to Dr. Bamber, lithotomist to that Hospital, who had been nominated by the accomptiug-house for his assistant, was proposed to the Court to be confirmed, but being rejected, Dr. Bamber resigned his place of lithotomist. The Court then proceeded to a fresh choice, and proposed that for the future that operation should be performed by the Surgeons of the Hospital. On a division there were, for the Surgeons of the Hospital, 70; for Mr. Blagden, Surgeon, 50." You will find much interesting matter on the subject in the early volumes of the *Gentleman's Magazine.*

Dr. Steele and Dr. Johnstone.

To the Editor of the Medical Times and Gazette.

Sir,—The Practitioner who wrote you on behalf of Dr. Johnston does not deny that he twice visited, without my knowledge, a patient whom he knew I was attending. He excuses him, however, on the ground that I had on many previous occasions refused to meet him in consultation.

I have been asked by patients, though always rarely, and, to the best of my recollection, for years past not at all, to meet Dr. Johnston in consultation, and felt called on to refuse. Was I, believing I had good reason, not at liberty to do so? or, because I did so (and this is the point at issue), was Dr. Johnston entitled to visit a patient of mine without my knowledge?

Montrose, Oct. 21. I am, &c. Henry Steele.

*** We publish this note at the urgent request of Dr. Steele, and we have no hesitation in answering his question. A Practitioner *is* fully justified, if he please, in visiting the patient of a man who refuses to meet him in consultation. What is to hinder him? There is no law to hinder him from visiting any one who desires it. The only bar to such a practice is the good feeling arising out of Professional intercourse. But these do not exist in this case, by whose fault we know not. Therefore, if A. refuse to meet B., B. may ignore A., and visit his patients in his absence.—Ed.

Extraction by the Crotchet.

To the Editor of the Medical Times and Gazette.

Sir,—Dr. Barnes, in his lecture published in your last number, when speaking of the manner in which extraction by the crotchet should be performed, omits the very important point of keeping the point of the crotchet protected. He says, "The ends of the fingers are then passed up outside the skull to serve as a guard and support to the sharp point of the crotchet, which is fixed into the bone inside." I would suggest the addition of—"Then, holding the handle of the crotchet in the right hand, grasp with the thumb, fore, and middle fingers of that hand, the wrist of the left, and make traction." By so doing the two hands work together, and however the crotchet may slip, its point is always protected by the two guarding fingers of the left hand. The idea is not my own; I learned it from the late Dr. Ramsbotham, and have verified its utility.

Lindfield, Sussex, October 21. I am, &c. Wm. Elliott Porter.

Carbolic Acid in Africa.

Sierra Leone, West Africa, September 13, 1868.

Sir,—In compliance with your Excellency's wish that I should express my opinion on the merits of carbolic acid from my experience of its use in the large colonial Hospital here under my charge, I have pleasure in stating that I have every reason to speak highly in its favour. I have had it used very extensively—1st, as a disinfectant and deodoriser; 2ndly, as an antiseptic dressing for wounds, and foul, sloughing, and phagedænic ulcers; 3rdly, as a stimulating dressing for weak or unhealthy sores. Its disinfectant and deodorising properties are undoubted. I have it used in the form of liquid and powder, the former for the closets and urinals, etc., and the latter on the floor of the wards, the dead-houses, etc. There is nothing disagreeable to my senses in the odour, particularly in the use of the powder. As an antiseptic dressing for foul ulcers, I have especial opportunities for testing its value in the treatment of the many cases of leprosy that are received into the Hospital, and I have found it far superior to any application I have ever seen used as an antiseptic dressing. Some cases, absolutely unapproachable from the stench, have, on one or two dressings, become free from a repulsive smell. It diminishes the secretion of pus in suppurating wounds, and its solution in oil, in the proportion of 1 to 8 or 10, forms a good dressing for weak granulating ulcers.

I have the honour to remain,

Your Excellency's very faithful servant,

N. W. M'Coy, F.R.C.S., etc., etc.,

Colonial Surgeon, Sierra Leone.

To his Excellency Sir Arthur E. Kennedy, C.B.,

Governor-General at Sierra Leone.

P.S.—The British settlements on the coast of Africa are mostly situated at the estuaries of rivers, where, from the proximity of fresh or brackish water and the great heat of the climate, insect life is most prolific, rendering the existence of Europeans almost unbearable, especially at certain seasons. Carbolic acid is found to be a preventive to the attack of insects, and I have it from the highest authority in the colony that sponging the skin with a weak a solution is an effectual safeguard, and an Englishman may thereby be enabled to repose in comfort without being subjected to that insupportable pest of tropical climates, the attack of the sleepless, ever-voracious mosquito.

On the Hypophosphites in Eczema.

To the Editor of the Medical Times and Gazette.

Sir,—In the *Journal of Cutaneous Medicine*, October, 1868, there is an editorial article on "Phosphorus in Cutaneous Diseases," and also quotations from a paper of Dr. Broadbent's, in which three cases of eczema made satisfactory progress under the use of phosphorus.

The hypophosphites, according to Dr. Churchill, who introduced them, increase the nervous force, and are most powerful hæmatogens, possessing all the therapeutic properties of phosphorus—an opinion, however, in which Dr. Broadbent does not agree. Dr. H. S. Purdon, of Belfast, published in the *Glasgow Medical Journal*, October, 1865, a paper on the hypophosphites of lime, soda, and potash in remittent fever, gastric irritation, etc., of children, and the same gentleman has more recently, in a paper on eczema in the *Medical Mirror*, January, 1867, recommended them in eczema occurring in children suffering from derangement of the digestive organs. Again, Dr. Thorowgood, *Medical Times and Gazette*, vol. i., page 619, for 1868, states that a patient of his was taking the hypophosphite of lime (five grains thrice daily) for phthisis, when he observed that an eruption which he had (psoriasis) began to fade and disappear.

According to Dr. Laycock (*British Medical Journal*, May, 1868), "phosphorus is an important and essential constituent of brain and nerve tissue—it is an equally important and essential constituent of all the tissues of at least all the higher organisms, whether animal or vegetable; consequently, however beneficial the medicinal phospho-compounds may be in certain diseases and defects of the nervous system, they will be equally useful in certain diseases and defects of the tissues in general."

I have merely given the above authorities to show the value of preparations containing phosphorus in various diseases, and can recommend the hypophosphites of soda or lime, or both combined, in eczema, especially of children, when arising from mal-assimilation. I am, &c.

A Surgeon.

Tic Douloureux.

To the Editor of the Medical Times and Gazette.

Sir,—I beg, through the medium of your columns, to acquaint the members of the Profession of a method of curing the above horrible ailment which I accidentally discovered, being myself afflicted with it, and by which method I have had the satisfaction of curing many others. About fifteen years ago, during a very severe winter to which I was exposed in dispensary practice in this city, I was attacked with violent pain in the left side of my head, which at first I thought was of a rheumatic character. By-and-by, however, it changed its character, and, from being diffused, became more concentrated, and, in the course of eight days, occupied a space about the size of a shilling in my left temple; and as the pain continued a certain number of hours, I came to the conclusion that it was a case of "tic."

Having consulted with two of my brethren, they advised me to give up Professional duty, as I had overtaxed my strength, and that I just required rest, tonics, and nourishing diet. Accordingly, I shut myself up, and quinine was administered freely without any benefit, then carbonate of iron, with no better result, all the while getting the most nourishing diet, and occasionally a glass of excellent old port.

This treatment was persevered in for five weeks, and every evening before the pain commenced (which I may now mention began at 7 o'clock and continued till 2 o'clock in the morning) I had anodyne applications used—namely, poultices with laudanum on the surface thereof, and latterly tincture of aconite—but no benefit resulted. I was tortured nightly for seven hours till I was frantic, and when the paroxysm was over, I fell asleep from sheer exhaustion, and partly perhaps from the effects of an anodyne taken on the previous evening half an hour before the pain usually set in. I now suggested to my Medical attendants that as tonics and anodynes had done no good, counter-irritation might be tried, and accordingly, with their concurrence, a cantharides blister was applied to the temple early in the day and removed at 7 o'clock in the evening. That night I was so far relieved that I obtained occasional slumber, and I began to have hope, and wished the tonics and the anodynes had been at Jericho;

but, my constitution being good and wiry, the blister rapidly began to skin over, and the following night I was not so well. Nothing daunted, however, I clapped another blister on the raw surface, which, although sufficiently torturing, was comfort to me when compared with the horrible neuralgic agony. It was now proposed to endeavour to keep the blister open by irritating ointment, and to continue to take the anodyne at night. Some improvement took place, but it was of short duration, for in a few days the agony returned with increased intensity. I now resolved to have recourse to large doses of opium, notwithstanding I knew the sad consequences of such a habit; but relief was at hand, although I did not know of it. One evening, while I was in the act of dressing the blister, and expecting, as usual, a bad night, my eye suddenly rested on a small phial of the tincture of aconite, which I had been in the habit of applying frequently before I had blistered my temple, and the thought struck me that, as it had done no good to the whole skin, it might have a more satisfactory effect if applied to the open sore which the blister had caused. No sooner thought of than executed. The whole contents of the phial (about a drachm and a half) I poured on a bit of rag, and clapping the same on my temple, I tied up my head, and jumped into bed. No one saw the transaction, nor did I for a moment think of, nor care, what the consequences might be, for I was desperate. But, lo and behold! the consequences were soon seen, for when my sympathising and indefatigable nurse—my wife, who had gone for ten minutes into the adjoining room—returned, she found me sound asleep, a state of matters which had not been, at that hour, for seven weeks, so rapidly had the poison been absorbed. For one whole hour she sat, delighted and surprised at the change, but by-and-by she became alarmed from a suspicion that I had taken something wrong; so, having given me a hearty shake, I awoke. All I said was, "Let me alone! the pain is gone," and having drunk a little water, I again laid myself down, and slept till 7 o'clock next morning—that is, twelve hours. The evening came, and the pain did not return, and never did, a period now of fifteen years. Well, the result was that I have treated ever since all neuralgic cases in the way described, and in no instance have I found the treatment fail, and, what is more, the cure has been permanent even in cases of several years' standing.

But now as to the quantity of the tincture made use of. I have seldom used at a time more than fifteen drops, and that at intervals of twelve hours, and I have generally found three repetitions sufficient—that is, forty-five drops—but I have frequently found thirty drops sufficient to effect a cure, and in one instance fifteen, and that a case of five weeks' continuance.

I have always applied the remedy myself, the patient being laid in such a way that drop after drop might fall on the blistered surface and gradually diffuse itself over the same; also beware the patient must be watched, for in the very last case I attended, after applying thirty drops at two intervals, I was sent for, as the patient was, as it was said, "so low"—in fact, she was cold; but she forthwith had administered to her some hot brandy toddy, and after lying quiet for a few hours declared herself cured, after being a martyr to the complaint daily for two years.

I have consulted a good number of publications of the present and earlier periods of this century, and although I find aconite to have been used by not a few both internally and externally, I do not find a single instance where such a remedy has been used on "broken skin."

I am, &c. ROBERT SMITH, M.R.C.S. Eng.

58, Dee-street, Aberdeen, October 3.

COMMUNICATIONS have been received from—

Mr. J. CHATTO; Dr. DAY; Professor LIONEL S. BEALE; Dr. C. B. SUCKLING; Deputy Inspector-General GORDON; Dr. WILKS; Dr. ALTHAUS; Mr. J. A. BALL; Mr. A. L. MACKAY; Dr. HENRY STEELE; Dr. THOMAS PIGG; Dr. GWYNNE HARRIES; A HOSPITAL SURGEON; Mr. JOHN NOBLE; Dr. EDWIN LEE; Mr. GOPAUL CHUNDER ROY; Mr. W. COPNEY; Mr. JOHN WARREN; Dr. CHARLES ORTON; Dr. T. O. DUDFIELD; Mr. G. B. MORGAN; Mr. G. M. GIFFORD; Mr. H. S. WARD; M.R.C.S.; Dr. CRISP; Mr. SERGEANT; Mr. W. E. PORTER.

BOOKS RECEIVED—

Hebra on Diseases of the Skin, vol. ii.—Wood's Notes on the Metals—New York Medical Journal, No. 43—Dobell's Nursing Schedule—Laws of the Poor-law Medical Officers' Association—Dr. Fischer on Wounds of the Heart—Bateman on Aphasia—Elliott on the Increase of Material Prosperity—Dominion Medical Journal, No. 2—Mason's Introductory Address at Westminster Hospital, October, 1868—Bence Jones's Croonian Lectures on Matter and Force.

NEWSPAPERS RECEIVED—

New York Medical Gazette—California Medical Gazette, No. 3—Hackney and Kingsland Gazette—Merionethshire Standard—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 17, 1868.

BIRTHS.

Births of Boys, 1124; Girls, 1063; Total, 2187.
Average of 10 corresponding weeks, 1858-67, 1898·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	691	704	1395
Average of the ten years 1858-67	619·6	579·0	1198·6
Average corrected to increased population..	..	..	1318
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	3	25	..	2	5	6	..
North ..	618,210	..	8	16	5	5	16	5	..
Central	378,058	1	3	19	1	..	7	3	..
East ..	571,158	1	5	26	1	4	14	8	1
South ..	773,175	..	5	38	2	8	12	17	..
Total ..	2,803,989	2	24	124	9	19	54	39	1

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·792 in.
Mean temperature	49·7
Highest point of thermometer	66·6
Lowest point of thermometer	35·4
Mean dew-point temperature	46·1
General direction of wind	Variable.
Whole amount of rain in the week	0·03

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 17, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Oct. 17.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Oct. 17.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of the Mean Daily Values.	Rain-Fall. In Inches.	Rain-Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2187	1441	1295	66·6	35·4	49·7	0·03	3
Bristol (City) . .	167487	35·7	116	75	*52	..	..	..	..	..
Birmingham (Boro')	352296	45·0	248	171	143	60·7	36·5	48·0	0·19	19
Liverpool (Borough)	500676	98·0	337	290	274	58·4	39·0	47·8	0·32	32
Manchester (City) .	366835	81·8	242	208	*237	63·0	34·0	47·5	0·70	71
Salford (Borough) .	117162	22·7	76	59	78	63·5	33·1	47·5	1·14	115
Sheffield (Borough).	232362	10·2	182	122	107	60·2	38·1	47·4	0·22	22
Bradford (Borough)	108019	16·4	73	55	63	..	..	..	..	..
Leeds (Borough) .	236746	11·0	169	120	148	60·0	38·0	49·3	0·34	34
Hull (Borough) .	108269	30·4	75	59	55	59·0	36·0	46·6	0·19	19
Newcstl-on-Tyne, &c.	127701	23·9	73	68	59	58·0	35·0	45·7	0·35	35
Edinburgh (City) .	177039	40·0	149	85	108	58·7	35·6	46·9	0·20	20
Glasgow (City) .	449868	88·9	358	262	279	59·9	34·5	46·3	1·17	118
Dublin (City and some suburbs) .	319985	32·8	155	157	128	64·6	30·8	48·6	0·19	19
Total of 14 large Towns . . .	6391080	34·7	4431	3163	3137	66·6	30·8	49·3	0·42	42
	(1863)				Week ending Oct. 3.	Week ending Oct. 3.				
Vienna (City) . .	560000	..	..	..	222	..	..	65·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·792 in. The barometrical reading decreased from 30·1 in. on Wednesday, October 14, to 29·43 in. on Friday, October 16.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

October 21. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.

26. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Dr. Andrew Clark and Mr. Peter Marshall, "On a Case of Hæmorrhagic Phthisis, with Remarks."

27. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free Hospital, 9 a.m.

28. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

HUNTERIAN SOCIETY, 8 p.m. Mr. Maunder, "A Case of Colotomy in Vesico-Intestinal Fistula," and "A Case of Fracture of the Upper Third of the Thigh Bone." Dr. Peacock, "Some Remarks on the Hospitals of Northern Europe."

29. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

30. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Royal Free, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVIII.—Part II.

CRANIOTOMY CONTINUED: DELIVERY BY THE CRANIOTOMY-FORCEPS — USE AS AN EXTRACTOR; AS A MEANS OF BREAKING UP THE CRANIUM—USE IN EXTREME CASES OF CONTRACTION.

Delivery by the Craniotomy-forceps.—The use of this instrument is twofold:—It will seize and extract the head; it will seize and remove portions of the bones of the cranial vault. The first use is adapted to minor degrees of disproportion.

What part is best to seize? If the head is found to collapse well, and the disproportion is not great, it is enough to seize the forehead, which, being generally directed to the right ilium, is the easiest to do. But if there is any great difficulty, it is better to quit the forehead and seize by the occiput. The head will not come down well, face presenting, unless the vault and occiput are in a condition to be crushed in against the base. In this proceeding compression of the skull is effected by its being drawn through the narrow passage formed by the soft parts supported by the pelvis. The head must, therefore, be ductile enough to admit of the necessary compression and elongation. If the skull be too unyielding, or the passages too small for this process, a totally different principle must guide us. Portions of the vault must be removed, and then we get the most remarkable advantage.

Dr. Osborn contended that by canting the base of the skull, so as to bring it edgewise into the brim, it was quite possible to deliver a full-sized child through a conjugate diameter measuring an inch and a half only. His contention was hotly disputed by Dr. Hull, who, nevertheless, ended by proving satisfactorily that it could be done. Dr. Burns came to the same conclusion, and showed that by removing the calvarium, reducing the skull to its base, and bringing it through as in a face-presentation, nothing was opposed to the conjugate but the distance from orbital plates to chin, which is rarely much more than an inch. Thus an inch and a half to an inch and three-quarters conjugate diameter, with a transverse diameter of three inches, is enough; and degrees of contraction beyond this, requiring the Cæsarian section, are rare indeed. This question has been investigated and illustrated anew by Dr. Braxton Hicks (*Obstetr. Transactions*, vol. vi., 1865). He describes very fully the mechanism of the proceeding. Having removed the calvarium, he grapples the orbit with a small blunt hook, the hook of which is hard, and the stem soft, so as to admit of easier adaptation. The face is then gently drawn down, turning the chin forwards, as occurs in ordinary face-labour. A fresh hold, in the mouth or under the jaw, is then taken for traction. The evidence given by Dr. Hicks of the efficacy of this proceeding is conclusive. I, however, prefer the craniotomy-forceps. The proceeding I practise is as follows:—I pass the inner or small blade into the cavity of the skull as usual, then the outer blade in between the portion of bone to be removed and the scalp. Then a considerable piece of parietal or occipital bone being seized, by a sudden wrench is broken, and then cautiously torn away under the guidance and protection of the left hand in the vagina. If the distortion is not extreme, it may be enough to break away two or three pieces, say an angle of each parietal and of the occipital. This destroys the arch of the calvarium, so that the remains of the walls easily fall in upon the base, forming a flat cake, when the head comes to be compressed in the chink of the brim. When enough has been taken away to admit of this flattening in, the blades of the forceps are made to seize the forehead and face, the screw working at the ends of the handles helping to crush in the frontal bones and to secure an unyielding hold. Then traction is made, carefully backwards at first, in the course of the circle round the false promontory. As the face descends it tends to turn chin forwards, and this turn may be promoted by turning the handles of the instrument. It is not necessary that this turn should take place, for the case differs entirely from that of the normal head. There is no occiput to roll back upon the spine between the shoulders. The head comes through flatwise like a disc by its edge.

Fig. 83.



Fig. 83 shows the bones of the calvarium removed, and the base of the skull, grasped by the craniotomy-forceps, drawn through the contracted brim edgewise, face first.

Fig. 84.

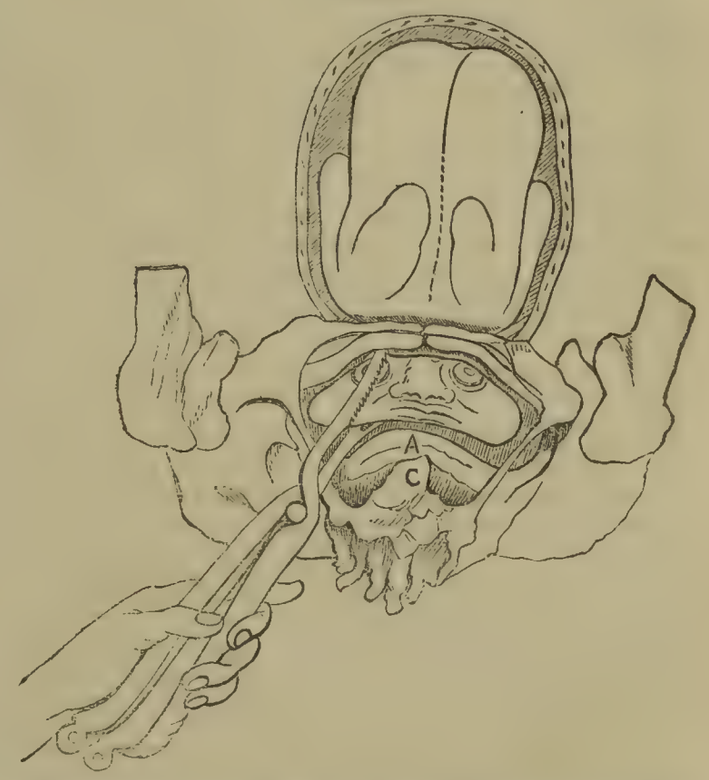


Fig. 84 shows the remains of the skull drawn through the chink of the brim, flattened like a cake. The calvarium being removed, the head resembles that of an anencephalous fœtus. A, projecting promontory of the sacrum; C, coccyx.

If the pelvic deformity be very decided—say to 2·50″ or 2·00″ or under—it will be wise to take away the greater part of the frontal, parietal, squamous, and occipital bones before beginning traction.

By adopting this method I entirely agree with Osborn, Hull, Burns, and Hicks, that a full-sized head may be delivered

with safety to the mother through a pelvis measuring even less than 2·00″ in the conjugate, provided there be 3·00″ in the transverse diameter. I go further, and declare that it is perfectly unjustifiable to neglect this proceeding, and to cast the woman's life upon the slender chance afforded by the Cæsarian section.

The late Professor Davis, relying upon his method of embryotomy, used these words:—"There are few pelves with superior apertures so small as not to furnish from 1″ to 1½″ in the conjugate diameter, or at least of antero-posterior diameters across some part of the brim. In any such cases it would be the Practitioner's duty to avail himself of the use of the osteotomist, and to undertake delivery by the natural passages. It will have the effect of reducing almost to zero the necessity of having recourse to the Cæsarian section."

ORIGINAL COMMUNICATIONS.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 478.)

Volunteering: its many Evils; Reports regarding them—Rates of Mortality—Invaliding—Disposal of Troops landing in, and about to leave, India.

It has, apparently, been always customary in India that a regiment when about to return to England was permitted to "*volunteer*"—that is, soldiers who from different causes desired to prolong their service in that country were permitted to do so. Of the manner in which this volunteering was conducted, we may take the following account in the 38th Foot, prior to the embarkation of that regiment at the end of 1835:—

"On November 2, 3, and 4, volunteering for other corps in all the Presidencies of India took place; the volunteers, being carefully inspected by the Medical committee, passed on to the magistrate, and, being attested, those of good character received a bounty of 24 rupees. This week was devoted to drunkenness and all its bad effects. (The men) were laid in barracks, in the verandahs, and in the streets by companies, drunk, not able to rise up, and ready to seize upon any person within reach to join in their orgies. The gates were shut for some days, and there they wallowed until they could bear no more. Many lost their money the first night, and depended on their friends for supply. Few laid out their money on necessaries, and fewer saved it for another day, except the non-commissioned officers and some steady good men." (a)

It is tolerably evident that a number of abuses had soon crept into the system by which volunteering was carried on. Of the moral depravity attending the process we have just had an example. Men had in many instances come to make a regular business of thus transferring their services from one regiment to another. However carefully Medical inspection might have been performed, it is unquestionable that soldiers who were physically unfit for the performance of military duty were allowed to "pass." There were also many whose character or inaptitude was such as to induce their officers to get rid of them if possible; and altogether it is apparent that each succeeding reinforcement of volunteers were not looked upon with favour. To illustrate this, let us quote the following. Referring to the 16th Foot in 1836, the Inspector-General observes:—"The last volunteers received did not add to the quality of the regiment as soldiers. They had been for the most part transferred from several regiments as they were going home, and were not only unfit for the active duties of soldiers, but subject to chronic diseases which, on the least exertion, sent them to Hospital. The injury done to the service by permitting such men to volunteer," he says, "I have already endeavoured to point out, and a better proof of its impolicy could not be adduced than the present condition of the 16th Foot, who, if their services were required in the field on any duty requiring personal exertion, would be found to have one-fourth at least of their numbers on paper unfit to march or to carry their firelocks."(b) Dr. McLeod went on to say: "As the regiment is drawing very near the period of its service in India, and a volunteering from it will of course take place, I would most respectfully submit that the men who offer themselves for other corps should be most strictly examined by a committee named for the purpose, and not, as was done on a late occasion, by the Medical men of the regiments. Dr. McLeod again takes up this subject in reference to volunteers for the 11th Light Dragoons. Adverting to them, we find it stated "that they were inspected with every care, but there can be no question that many escaped notice who ought not to have been permitted to transfer their services, and who, in a very short period, will only be a burden to the regiment. This is a general complaint in this country, and I have good reason to believe in most instances a very just one, and as being highly injurious to the service it ought to be remedied if practicable."

This Medical officer, adverting to the length of time over which the dissipation attendant on volunteering sometimes extended, protested against it. "I am well aware," he observes, "of the difficulty of guarding against imposition on the part of volunteers. If a long period is granted for their turning out, the station is kept in a state of riot and dissipation that proves injurious to themselves, and is highly subversive of discipline; and if, as in the example of the 11th Dragoons, the period is limited to a day or two, improper subjects will be hurried through the ordeal, in spite of any inquiry or inspection that can be instituted. Of the two, however, the short period is the best. The scenes of drunkenness and rioting are avoided, or at least curtailed, and fewer improper men are continued in the service."

He suggested, with a view of remedying some of these objections, that when a regiment is volunteering, in addition to the military superintendent, a Medical committee of men practically acquainted with European soldiers should be appointed, and that one or more of its members should belong to a regiment liable to receive volunteers.(c) Unfortunately, this suggestion was only partially acted upon, and the success by which it was followed was also but partial. Orders were, indeed, issued that men of bad character should not be permitted to volunteer, but we are at the same time informed that the effect of this order was in a great measure nullified, as many men of the description alluded to, as well as others of dissolute habits, had been induced to make an effort to acquire a good character, so as to be enabled to prolong their service in India; others had formed connexions with native women, and were anxious on that account to remain in the country. Such persons naturally were averse to the restrictions here alluded to, and endeavoured, it is believed with considerable success, to defeat them, the true character of the men reappearing so soon as their volunteering had been effected. According to Dr. McLeod, the great majority of those volunteers were not only men of broken health, but of bad conduct, and utterly destitute of moral character—men deeply practised in all the vices of an Indian military life, and whose great delight is to initiate others into the practice of their own vices. "Examples of what I state," he adds, "are constantly before me; and I again assert that the worst regiments in this command, the most dissipated, the least to be depended upon, and the most troublesome to manage, are exactly those that have had most volunteers." No wonder, then, that, as we read,(d) "the depraved condition of the men is attracting more attention." With so many attendant disadvantages as have been enumerated, it may fairly be questioned if, as a whole, the system of volunteering, as carried on at this time, did not seriously impair rather than add to the efficiency of our army in India. It is true that great exertions were making to correct those abuses, and, as Dr. McLeod had reason to believe, with some success; but his comment deserves to be here noted. "So long," he observes, "as volunteering continues, and men of dissipated habits and bad character are encouraged to transfer their service to successive regiments, so long will this great moral evil be propagated in the army in India." It is, therefore, evident that he would have preferred to see the entire system abolished.

The next occasion in which we find this subject alluded to is in 1839; and from the remarks then made, it would seem that little, if any, real improvement had taken place in the system. The writer is still Dr. McLeod, and the following are his remarks on the subject in reference to a regiment that had received, in the course of its Indian service, large accessions of volunteers.

"That there are well-conducted and steady men among so

(a) Inspector-General's Report, 1835, p. 307.
(b) General Report, 1836.
(c) Report, 1836.
(d) *Ibid.*

large a body is of course to be expected, but that the moral tone of the 13th is much below the par of other regiments I firmly believe; and I attribute a great deal of their suffering from disease, and a large portion of their loss of life, to this moral inferiority and its direful consequences. The cause of this deterioration of moral conduct it is difficult to account for. Some portion of it is no doubt owing to the volunteering system, which has filled them with the refuse of many regiments—men in every way depraved, and whose vicious example and evil dispositions must have tended to corrupt the whole body."(e)

The views thus expressed by this eminent Medical officer were, it is true, in advance of his time; and twenty more years had to elapse before their correctness was confirmed by the authoritative voice of a Royal Commission.

But it was not only the system of augmenting regiments remaining in India from those proceeding to England that was condemned by the Medical authorities; that of giving volunteers from those in England to a corps on the eve of sailing for England was considered scarcely less objectionable, especially if the men so transferring their services were not subjected to a strict examination as to their physical condition. As an illustration of the evils of the system here alluded to of "making up" the strength by volunteers of a regiment about to embark, the occurrences in the 10th Foot are given. This corps, prior to proceeding to India in 1842, had received in England 392 volunteers, and at a time when it was so deficient in its Medical staff that sufficient surveillance is stated to have been wanting; consequently, many of those men were permitted to join who ought to have been rejected, and, as a consequence, it is stated that one-half the casualties that occurred in the regiment shortly after its arrival at Calcutta took place among them.(f) Much more might be said in this place on the subject of volunteering were it the object of the present remarks to come down to the operation of existing rules, which, for reasons elsewhere noted, it is not. I may observe, however, without risk of compromising myself, that, if any advantages attend the system of volunteering even as carried out at the present time, they are more political and social than of a military character.

For some time back much discussion has taken place in regard to the ratio of mortality among our troops in India. Perhaps much of this discussion would have been rendered unnecessary had the occurrences in the local European force and in the royal troops stationed in that country been separately considered, for there is much reason to believe that the mortality was much greater among the former than in the latter. According to tables prepared in 1833, the ratios of loss among our troops in the Bengal Presidency, during the seven years extending from 1825 to 1832, were—in the cavalry 2·7 per cent. of deaths, and 2·8 of invaliding; in the infantry, 1·6 and 0·7 respectively.(g) The greater death-rate in the cavalry than the infantry had attracted notice very early; and, in endeavouring to account for the circumstance, the Inspector-General wrote that "much, no doubt, in the difference of habits in the men of the cavalry and infantry arises from the active, varied, and more incessant duties and exposed exercises to be performed by the dragoon, which lead to a high state of excitement and robust and vigorous health, which in this climate is so nearly allied to inflammatory diseases, as is exemplified in recruits newly arrived from England."(h) And he adds—"As prevention is easier than cure, the inquiry is of consequence." But not only was the rate of mortality greater among the cavalry than among the infantry, but so also was that of invaliding—a circumstance referred at the time to the difference of the manner in which these two branches of the service were dressed, and more fully entered into under the head of *clothing*. It is elsewhere stated in the course of these remarks that injury to health arose from the use by cavalry soldiers of their ordinary uniform, instead of thin clothing similar to that used by the infantry; and here we find an illustration of the fact.

In those days it is to be feared that soldiers suffering from disease were not sent to England as invalids in the same proportion as they have more lately been, while it is believed the men sent out from home as "recovered" were such as were often physically unfit for the duties to be performed by them. Medical officers had, so long ago as 1828, and probably prior to that time, recorded their objections to this system. In that year(i) the Surgeon of the 44th Foot, for example, wrote—"As for the policy of returning men who have once been sent home on account of disease," "he doubts the policy, and he believes that, on minute inquiry, it will be found disadvantageous to the service." The views here expressed have, I venture to assert, gained confirmation by further experience. Few soldiers who have been sent to England from India on account of severe disease contracted in the latter country, remain efficient for any considerable length of time if returned to it; and it may be questioned if the efficiency of the army generally would not be best consulted by the discontinuance altogether of the system of sending back to India men whose health had once suffered by climatic disease to such a degree as to render their removal from it necessary.

Another circumstance connected with the system of invaliding soldiers in India had early attracted attention. It was the fact of this taking place only once a year. Men who had broken down in health prior to the month of August were brought before the invaliding boards; but until the succeeding August no soldier, however ill he might be, could get away from his station, save the very few for whom accommodation existed at the solitary hill sanatorium then provided. Regarding this great defect Dr. McLeod raised his voice in the remarks which I transcribe:—"The cold season generally carries off a considerable number of the worn and debilitated members of a regiment, and this being the usual period for selecting the invalids and the sickly men to be sent to England for recovery, the Surgeon has much difficulty in choosing the proper subjects, as it is necessary to select only such as are unlikely to recover in this country, and who will not be rendered worse by the fatigues and privations of a long voyage; and the difficulties are increased by the anxiety of the men to get away. This would appear to be a very easy part of his duty, but few parts of it are more troublesome, and none in which it is so difficult to give satisfaction either to the men or officers, the latter being always anxious to rid the regiment of such as are unable to perform their duty, and the soldier when sick becoming so much dissatisfied if he is not sent to England."(k) Soldiers whose health had begun to fail were naturally anxious to get away, knowing that if they failed in this another hot season must be gone through. The natural consequence was that many of them exaggerated their complaints; others simulated ailments under which they did not labour. In fact, as in all matters where over-stringent and unfair rules are enforced, so as regards invaliding, a *contraband trade* was got up and for many years practised in India. Let us hope that it has now disappeared.

The present seems the most appropriate place to notice some defects with reference to the manner of disposing of recruits immediately after landing in, and of accommodating invalids prior to their departure from, India. These subjects had from time to time been commented on by administrative and executive Medical officers, and, although much improved of late, were alluded to in the evidence taken before a Royal Commission. The remarks which follow clearly indicate that had the representations of Army Medical Officers been permitted to have that weight which was due to their value, abuses in respect to the subject we are now considering would have been remedied much earlier than they were, and improvements carried out more effectually. Let us, however, see what was the nature of the representations made, beginning with the first report Dr. Burke submitted to the Indian authorities—namely, the one for 1826. In that report he expresses himself to the following effect:—

"The numerous detachments of recruits arrived in quick succession, and at the most unseasonable time of the year in Bengal; and from the crowded, insufficient, and unfit state of the Presidency Hospital, and of Fort William, from want of the proportion of proper boats for their conveyance to their stations in the Upper Provinces, and, it might also appear, from some want of due arrangement in the Commissariat and Quartermaster-General's department, a much greater number was at one time thus accumulated for a short period at Chinsurah than it was ever calculated for or intended to hold, in consequence of which, as was to be expected from a crowded state of the barracks and the heat of the season, in new recruits just arrived from England, serious sickness existed among them.(l) Recruits at that time arrived in India between the months of April and September, an arrangement regarding which Dr. Burke observed(m):—"This tendency to disease exists, it is

(e) Report, 1839.
(f) Report, 1843.
(g) Report, 1833.
(h) Special Report, 1833
(i) Report, page 307.
(k) General Report, 1836
(l) Inspector-General's Report, 1826, p. 119.
(m) Report, 1827, page 124.

true, in all seasons in India, in the young and plethoric; but it is in the hot and rainy seasons, and particularly at the commencement and termination of the rains, that endemial diseases are most dangerous and fatal. Yet this was (in 1826) unfortunately the time at which these recruits arrived in Bengal." He therefore adds:—"The season for the soldiers' entrance into India from Europe should be from the end of November to the end of January."

In 1836 we find Dr. McLeod again dwelling upon the faulty nature of the arrangements connected with the arrival of recruits and departure of invalids. "The invalids and recruits," he observed, "are unluckily under very imperfect control while they remain in Fort William, which," he adds, "is one of the very worst places they could possibly be sent to." It is rendered evident by his further remarks that the system had then but recently been introduced of keeping these men in Fort William, and in regard to it he states that "the loss of life among them" since that system came into operation "has been awful, and is more likely to increase than diminish." He goes on further to remark, with reference to them, that "they are, from various circumstances, kept longer in the fort than is desirable, and under circumstances which render it impossible to restrain their irregularities." Among some of those circumstances he describes the bazaars and their numerous temptations. "When they (the men) are permitted to go out," he said, "the extensive and most vicious bazaars of Calcutta are of course open to them;" but there existed also tempations within, for he adds, "even under confinement to the fort, the garrison canteen, the worst conducted establishment I ever saw, is continually before them."(n) We shall have occasion elsewhere to allude to this canteen, which has happily been for some years past abolished. It is only necessary to mention here that during a great part of its existence it was a perfect curse to all in the fort, but more especially to the young soldier and to him who was worn out by sickness and long service. For its continued existence, however, the Army Medical officers were not responsible. They had reported the evils which were occasioned by it. They could do no more.

If the defects reported by Dr. McLeod were not always removed, this circumstance did not prevent him not only from boldly representing them, but also from attributing their continued existence to the responsibility of the officers upon whom it properly rested. As an illustration of this, it is sufficient here to mention that, in adverting in another part of his report to the recent introduction of the system which he condemned, he thus expresses himself:—"The bad effects," such are his words, "of the regulations of the late Governor-General and Commander-in-Chief regarding the invalids are now fully seen, and to a greater extent than was expected, though several officers, acquainted with the locality of Fort William and the character of the invalids, predicted nearly all that has happened." But he goes even further. He asserts that parsimony alone had been the cause of the arrangements which he condemned. "The saving," he said, "which was the only reason for these changes, may have been effected, but at a loss of life which surely did not enter into the contemplation of the great referee." "The deaths," he adds, "among the invalids this year were quite unprecedented. The general Hospital was crowded with sick," and much of this arising from this pitiful saving. That the station of Chinsurah may have been far more expensive than was necessary," he observed, "I have no doubt. But that it might have been reduced in expense with little or no injury to its efficiency as a depôt there is little doubt; and that a vast mass of misery, disease, and death would have been prevented by retaining it or some other place out of Fort William is now, unfortunately, too true."

It seems only necessary to add that, some years afterwards, invalids only were retained in Fort William, recruits being sent to Chinsurah. It is a suggestive circumstance, however, that this change was not known to have occurred by some of the gentlemen who gave evidence before the Royal Commission on the state of the army in India, which sat in 1859. The fact speaks for itself. Thus, some of their recommendations bearing on the provision made for invalids had reference to conditions which had, for some considerable time previous, ceased to exist.

(To be continued.)

(n) Report for 1836.

ON DISEASES OF THE JOINTS, CONNECTED WITH LOCOMOTOR ATAXY.

By BENJAMIN BALL, M.D.,
Professeur-Agrégé at the Paris Faculty of Medicine.

It has long been a recognised fact that disorders of the nervous system occasionally interfere with the nutrition of certain parts of the body, and are apt also to produce a morbid condition of the joints; but these phenomena have, up to the present time, been chiefly observed in connexion with Surgical injuries of the spinal cord,(a) or in cases in which the peripheral nerves were the seat of disease.(b) It is, however, perfectly well known that chronic changes in the nervous centres are sometimes attended with analogous symptoms, though these alterations belong, properly speaking, to the domain of Medicine, and are totally independent of traumatic influence. Several years ago, Professor Mitchell published some cases of arthritis arising from compression of the cord in patients affected with caries of the cervical or lumbar vertebræ.(c) Similar facts have at long intervals been recorded by various authors,(d) but the attention of Medical men has not been hitherto fully directed to this subject. The influence which diseases of the nervous centres exercise on the joints has, however, been fully demonstrated by Dr. Charcot in one of his most recent publications,(e) in which he takes a very clear and comprehensive view of the subject, considered not only in connexion with tabes dorsalis, but also in cerebral affections giving rise to hemiplegia.

It is not our intention at present to deal with this latter part of the question, but a few cases of disorganisation of the joints in connexion with locomotor ataxy, which have lately come under our notice, prove the accuracy of Dr. Charcot's views, as far as his observations have gone, and complete them on points which he has not yet touched on. We shall attempt, therefore, to trace a brief outline of this singular complication found in connexion with a well-known disease—a complication which has not, to our knowledge at least, been noticed by any other Medical author up to the present time.

In fact, it is highly probable that the peculiar phenomena which it is our purpose to describe have almost invariably been mistaken hitherto for the effects of rheumatism. We are prepared, however, to demonstrate that they are due to an entirely different source, and that the symptoms, the progress, and the anatomical characteristics of spinal arthritis,(f) as far as we are acquainted with them, are totally distinct from those attendant on rheumatic affections of the joints. We even hope to place the matter in such a light that the Physician will in future have no difficulty in drawing a clear line of demarcation between these two diseases.

Before entering into a complete analysis of the subject, we must state the facts on which our opinion is grounded. It will, nevertheless, be well to give at once a rapid sketch of some of the leading features of this disease, and so enable the reader to peruse with greater interest the history of the following cases:—

I. The progress of locomotor ataxy usually comprises two distinct periods. In the first stage there are neuralgic pains in the limbs, around the waist and in the loins; the sight becomes weakened, and these symptoms are accompanied by other sensorial disturbances. The second period is characterised by unsteadiness of voluntary movements. Between the two stages the interval varies; in some cases a few months only intervene, while in others it may be as many years. It is during this interval, and more frequently towards the beginning of the second stage, that arthritis makes its appearance. The joint suddenly enlarges, and seems affected with hydrarthrosis, and the entire limb increases in volume, the swelling being hard, and not pitting on pressure as in ordinary œdema. It is seldom we find pain, fever, or symptoms of inflammation present. Spinal arthritis is not necessarily dependent on a

(a) Weir Mitchell, Morehouse and Keen, "On Gunshot Wounds," Philadelphia, 1864. Brown-Séquard, *Journal de Physiologie*, t. vi., 1863, p. 123.

(b) Mougeot, "Recherches sur quelques Troubles de Nutrition consécutifs aux Affections des Nerfs."

(c) *American Journal of the Medical Sciences*, vol. viii. p. 55. 1831.

(d) Dr. Gull (*Guy's Hospital Reports*, 1858, p. 206) published a few years ago a case of tuberculosis of the spinal cord in which the right knee became swollen and diseased.

(e) *Archives de Physiologie*, No. 1, p. 162. Paris, 1868.

(f) We use the word arthritis without any reference to an inflammatory process, which does not appear to exist here. The French expression, *arthropathie*, would be preferable if it had been naturalised in the English language.

local cause, as in most cases we find it occurring spontaneously. Where, however, a predisposition exists, Surgical injuries readily give rise to it. The disease appears not only to involve the ligaments and cartilages; it also attacks the extremities of bones, and, as far as a single post-mortem examination may be relied on, it seems to consist in a rapid destruction of the articular surfaces involving the subjacent osseous tissue. We will now proceed to give, without any further preface, the history of our patients.

Case 1.—*Locomotor Ataxy—Spinal Arthritis affecting successively both Knees.*

J. P., aged 38, a mason, was admitted into Professor Béhier's clinical service at La Pitié, Salle St. Paul, No. 23, on August 22, 1868. This patient, a tall dark-haired man, of robust appearance, has enjoyed perfect health up to the age of 35, and has never been tainted with syphilis. In 1865 he began to experience shooting pains in the lower limbs, which increased whenever the weather was about to change. This state of things continued till the beginning of 1867, when the unsteadiness of his gait compelled him to gave up his trade, which he could no longer follow with safety. It was about this time that symptoms of articular disease first made their appearance. The right knee (which is now perfectly sound) was first attacked; it grew suddenly to an enormous size (eighteen inches round). A few months later, the swelling having subsided, the left knee became affected, and the patient entered Dr. Raynaud's service at the Hôtel-Dieu (July, 1867). During three months he was treated by local electricity applied to the knee, sulphurous baths, and nitrate of silver taken internally. He was discharged on September 15, 1867. The local and general symptoms having almost entirely disappeared, he attempted to return to his work, but was soon compelled to apply again for Medical advice.

In March, 1868, the same joint began to swell again, but without attaining its former size till August 7, when, having fallen upon the bad knee, it was speedily affected with hydrarthrosis. A fortnight after this accident he entered Professor Béhier's clinical wards, which at that moment were placed under our care.

August 22.—We purposely omit all particulars which are not immediately connected with our subject.

Nervous System.—Tactile sensibility remains nearly perfect. Both heat and cold, pain, pressure, and contact are readily felt. There exists, however, a little numbness in the tips of the fingers. Sight and hearing are altogether unimpaired. Muscular force is nearly the same as in the healthy state. The following are the results obtained with Duchenne's dynamometer(g):—

Left leg	20·5°
Right leg	20·5°
Left hand	47·0°
Right hand	34·0°
Both hands together	51·0°

The voluntary movements are very unsteady. The patient cannot walk, nor even stand, with his eyes shut. Reflex motions are considerably exaggerated. The patient suffers from intense shooting pains in the lower limbs, but has no pains round the waist.

State of the Joints.—The right knee is quite sound, and measures fifteen inches round. A small dense and hard tumour is felt in the inner angle of the popliteal space. The left knee is manifestly affected with hydrarthrosis; its circumference measures nineteen inches. The patella, when pressed down with the finger, gives the characteristic rap against the femoral condyles, which is a positive sign of the presence of a liquid effusion in the knee-joint. But the general appearance of the left leg is peculiarly striking. Notwithstanding the state of the knee, this leg is extended, and a sort of hard general swelling, quite distinct from œdema, and not pitting on pressure, extends from the ankle to the groin. The whole limb seems hypertrophied, and about twice as large as the right one. At the same time, the tibia forms an angle with the femur, the apex of which is directed inwardly, the foot being, in consequence, directed outwards. The two legs, therefore, do not lie parallel to each other. Flexion is difficult, though not painful, and the patient cannot bend the left knee as completely as the right one; but, on the other hand, there is considerable looseness of the joint, allowing lateral movements to a certain extent. There exist no symptoms of inflammation, neither pain in the joint, nor redness of the skin, nor fever. Pulse 72.

Treatment.—Phosphorus (dissolved in chloroform) is prescribed internally. The patient takes seven capsules (one-ninth of a grain of solid phosphorus) daily. The swollen knee is blistered five times in succession (August 24, September 2, 10, 22, and 30). Under this treatment the local symptoms are speedily amended, the liquid effusion soon disappears, but the extremities of the bones seem tumefied. The general hypertrophy of the left leg has notably diminished, though it still seems somewhat larger than the right one. The articular surfaces being now brought into close contact by the resorption of the liquid, the hand, resting upon the patella when the patient bends his knee, experiences a rough sensation, like that produced by the friction of uneven surfaces. The patient's appetite is remarkably good, and has never failed during the progress of the disease.

September 25.—A small trocar is plunged into the swollen joint. The operation is repeated the next day. A few drops of yellowish serum, quite similar in appearance to the liquid of ascites in heart disease, are obtained on each occasion. The fluid is not oily or viscid to the touch, and does not resemble synovia. It contains a large proportion of albumen. Viewed under the microscope, it appears to contain no histological elements except a few blood-corpuscles, which have no doubt escaped from the small vessels punctured by the instrument.

28th.—The extremities of the bones still appearing tumefied, the transverse diameter of both knees is measured with the compass in the direction of a line passing though the lower part of the femoral condyles. The following are the results:—

Left knee	4⅘ inches.
Right knee	3 „

29th.—A permanent bandage is applied on the knee, in order to compress it. This apparatus being removed on October 6, the swelling is found to have almost entirely disappeared.

October 9.—The swelling has again returned, quite spontaneously, in the left knee, while a slight degree of hydrarthrosis is visible in the right one.

Electricity (under the continuous form) is now prescribed. A transverse current is directed through the joints, while an ascending one is applied to the spinal cord.

12th.—The right knee has returned to its normal condition, but the swelling increases again on the left side. A sixth blister is applied. A little local inflammation is the consequence; but on the 20th, these symptoms having subsided, compression is again exerted on the swollen knee by means of an india-rubber band.

At the present date (October 25) the patient is much better; the swelling has almost entirely subsided.

This interesting case may be viewed as a pretty good type of the disease we are attempting to describe. According to the rule we laid down, the articular symptoms made their appearance at the commencement of the second stage, when the unsteadiness of voluntary movements had become the leading feature. The singular hypertrophy of the lower limbs, which, after invading the right leg when the right knee was diseased, shifted its quarters to the opposite side when the other knee became affected, is also well worthy of notice. As to the influence of local causes, we find that although, in the first instance, the hydrarthrosis appeared spontaneously, yet, when it had subsided after the first outbreak, it returned as before as soon as the patient fell on his knee. Surgical injuries, therefore, are capable of producing similar accidents where a general predisposition already exists. We know that the same is the case with rheumatism. The symptoms in this case were totally unattended with pain, fever, or local inflammation. It would, however, be erroneous to suppose that these phenomena never occur. The history of the following case (which in other respects closely resembles the first) will prove that there are some exceptions to the general rule:—

Case 2.—*Locomotor Ataxy—Spinal Arthritis affecting the Right Knee.*

Mr. S., aged 39, having inhabited a damp apartment for several years, was affected, in 1864, with circular pains round the waist, which both his Physician and himself mistook for

(g) Dr. Duchenne's dynamometer measures the force of the hands in the act of clenching the fist, and that of the legs in the action of drawing up a weight. The hands in the normal state exhibit a higher degree of force than the lower limbs, the difference being about five degrees. The average strength of the right hand in a muscular young man is about 40°. The effect produced by uniting both hands is not much greater than that obtained by using only one.

rheumatism. Some months later shooting pains appeared in the lower limbs.

In 1865 he sprained his left ankle, and has never been able to walk properly since then. In early life the left leg had been broken and was badly set, and is now considerably shorter and weaker than the other. The sprained ankle was considered at the time as an accident resulting from the weakness of the limb, although it may perhaps have been a primary manifestation of spinal arthritis; but there is no possibility of ascertaining the truth now.

In 1867 the unsteadiness of his gait began to cause him serious uneasiness, and towards April, 1868, the progress of the disease was so rapid as to become quite alarming. For some months he submitted to an anti-syphilitic treatment, having had chancre several years ago, but the results being far from satisfactory, we were requested to attend him on July 25. The patient exhibits the usual symptoms of locomotor ataxy in an advanced stage. The lower limbs alone are affected, the left, or broken, leg being much worse than the right one. In walking, he leans upon a servant's arm, and rests almost exclusively upon the right leg. There evidently exists a slight degree of paraplegia, the weakness of the limbs being far greater than is usual in tabes dorsalis. Nitrate of silver is prescribed internally (one-third of a grain daily), and the patient is advised to have recourse to hydropathy.

After continuing this treatment for twelve days, the patient suddenly complained of pain in the right knee, which is rather swollen (August 7). Our first impression was that he had contracted rheumatism from using the cold douche, especially as there was a high degree of fever (pulse 120) and slight pains in other joints. The cold-water treatment and internal use of nitrate of silver were discontinued, the patient was confined to his bed, and half an ounce of bicarbonate of soda was prescribed daily. Warm fomentations were applied to the right knee.

August 8.—The pain and swelling have increased, and the whole limb is tumefied. The swelling is hard and not œdematous. The fever still persists.

9th.—The general and local symptoms have increased in intensity, and all the symptoms of hydrarthrosis have set in.

10th.—The pain and fever have abated, but the swelling increases.

15th.—The fever has entirely subsided, and no pain is any longer felt; but the knee has grown to an enormous size, and there exists a considerable degree of lateral mobility. The bicarbonate of soda is discontinued, and a blister is applied on the joint.

19th.—The swelling has considerably diminished in the right leg, but not in the knee, which is quite out of joint, and moves from side to side. When left to itself, the foot turns inwardly, and the leg bends in the same direction.

27th.—A second blister is applied to the knee, and the nitrate of silver is resumed.

Without narrating all the particulars of the case, we will only say that the liquid effusion has slowly disappeared, but that the joint is now permanently disorganised. The articular surfaces are rough and uneven, as can easily be ascertained by resting the hand on the knee when the patient moves. The leg, when left to itself, continues to swing round, and bends inwardly; and the patient is now confined to his sofa, being quite unable to walk, both from the state of his knee and on account of the constant progress of the paralytic symptoms. The lower extremity of the femur and upper end of the tibia are both considerably enlarged; and the swelling of the thigh having now entirely disappeared, a hard round tumour, which seems to surround the bone, is felt along the lower third of its shaft, without reaching as far down as the condyles. There is no pain in the joint, and the general health is tolerably good. Besides the presence of pain and fever in the earlier stage of the local disease, this case differs from the first in the extreme rapidity of its progress. After a few days' illness, the knee was entirely disorganised, and will probably remain useless for life.

The following case is highly interesting, since it affords the only post-mortem examination of spinal arthritis which has hitherto been made:—

Case 3.—Locomotor Ataxy—Spinal Arthritis of the Left Shoulder—Death from Cholera—Post-mortem Examination.

F. V. L., aged 49, entered Dr. Charcot's ward at La Salpêtrière on May 1, 1867. This patient had been affected with locomotor ataxy for the last ten years. She became unable to walk without assistance four years ago. She then began to experience shooting pains in the lower limbs. Two years later she was entirely confined to her bed.

In April, 1868, symptoms of unsteadiness began to appear in the upper limbs.

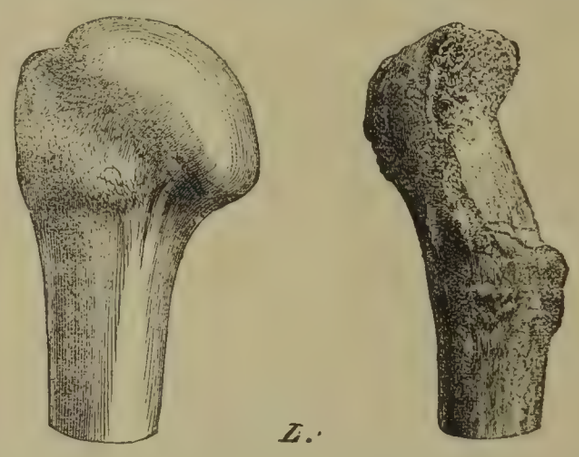
On June 9 she awoke in the morning, and found the right arm considerably swollen from the shoulder down to the wrist. The skin was red, but there was neither pain nor fever. Three days later the swelling had disappeared in the arm, but the shoulder still remained enlarged, and the hand when applied to it feels the roughness of the articular surfaces whenever the joint moves.

June 18.—A tumour, about as large as an orange, occupies the anterior part of the shoulder, and spreads under the outer extremity of the clavicle. It seems to belong to the distended synovial membrane.

July 1.—The shoulder remains in the same condition, and the swelling has a tendency to increase.

August 2nd.—A slight diarrhœa sets in, and lasts a few days, when the symptoms of cholera make their appearance, and the patient dies on the 15th in an advanced state of cyanosis. The swelling had entirely gone down during the last six or seven days.

Post-mortem, August 16.—We omit all particulars not connected with our subject. The size of the right shoulder-joint was natural. The surrounding tissues were of a dark colour. A very large bursa was found under the deltoid muscle; although found empty after death, it had probably contributed during life to the formation of the tumour mentioned above. The synovial capsule, although found empty (or nearly so), had evidently been distended during life. It contained a very small quantity of a yellowish fluid. Its internal surface was of a dirty grey colour; no vascular ramifications were to be seen on its surface; but it was thick and studded with fungosities. A few ossiform concretions were also found, but the joint was free from foreign bodies. The head of the humerus exhibited a most singular appearance; it is faithfully represented in the subjoined figure, which Dr. Charcot has kindly placed at our disposal. The head of a humerus in the normal state has been placed by the side of the diseased one, so as to render the contrast more striking.



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The articular surface is rough and uneven, and the cartilage of incrustation has entirely disappeared. A considerable portion of the bone has been destroyed, and, in its present state, the head of the humerus somewhat resembles the upper extremity of the cubitus. A few osteophytes surround the excavated surface, but there are none of those flat processes which in chronic arthritis (Adams) increase the extent of the articular surface. On the contrary, the head of the humerus has evidently undergone a process of rapid destruction. The glenoid cavity of the scapula exhibits a similar appearance; its surface is equally rough and uneven, and the cartilage of incrustation has entirely vanished. The clavicle and acromion are uninjured. The posterior tracts of the spinal cord are the seat of the well-known greyish induration which characterises tabis dorsalis; the posterior roots are also atrophied. These changes are chiefly marked in the lumbar and dorsal regions, although they also exist in a less degree in the cervical portions of the cord.

The results of this post-mortem examination, as far as a single case may be relied on, point to a morbid process entirely different from acute or chronic rheumatism or any other known disease of the joints. The extremities of the bones seem to have been worn away by mere friction, as if the osseous tissue had been entirely deprived of nutrition. It is strange enough

that so considerable a degree of atrophy should have been produced within the short space of two months; and the energy of the destructive process must be intense indeed.

As to the absence of a serous effusion in the joint, it may be readily explained by the well-known effects of cholera. But the limpid state of the small quantity of liquid found in the joint, and the total absence of anything resembling pus, seem at least to prove that inflammation plays no part whatever in the production of this singular and hitherto unknown form of arthritis.

(To be continued.)

ON BLOOD-SOUNDS;

WITH REMARKS ON DR. RICHARDSON'S VIEWS ON THE SUBJECT.

By ARTHUR LEARED, M.D., M.R.I.A.,
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In a lecture by Dr. Richardson, published in the *Medical Times and Gazette* of October 17, the subject of arterial bruit is discussed with his accustomed ability. But some of his statements are, in my opinion, unsatisfactory, while others are (also in my opinion) quite erroneous. For these reasons, and because there are certain points having more or less bearing on the subjects of Dr. Richardson's lecture which are not sufficiently dwelt upon in a paper recently published by myself,(a) I am induced to offer the following remarks:—

According to my views, supported by experiments which cannot be detailed here, all the sounds incident to the circulation of the blood are produced by the blood itself, and are dependent upon two at least, but in the case of the first sound of the heart upon all, of four conditions, namely:—

1. The state of the blood as regards its viscidity or non-viscidity.
2. The amount of pressure exercised upon the blood in the heart and its vessels—in other words, their relative state of fulness.
3. The force by which it is acted upon by the heart.
4. The occurrence or non-occurrence of obstruction to the onward flow of the blood.

Dr. Richardson says: "It might be assumed that the blood itself, in motion, would originate sound yielding a faint murmur over the whole arterial and venous system. It is now understood that fluids are not only conductors of sounds, but that they produce sounds under certain conditions. . . . If our blood were reduced to the condition of distilled water, and we could live and hear as we do now, we should probably always be conscious not only of the heart-sounds, but of a soft internal musical murmur produced in our own vessels." These subjects are discussed in the paper to which I have already referred.

It is true that if water, instead of blood, circulated in our bodies, murmurs would be produced, and it is probable that we should constantly hear them. But it is not true that we should also hear the heart's sounds—at least, its natural sounds—for this good reason, that there would be no natural first sound. The first sound would then be replaced by a murmur, just as happens in anæmia. This remarkable circumstance has been disregarded because its important bearing on the causation of the first sound has not been taken into account.

Dr. Richardson has made some interesting experiments which prove the great difference in sound-conducting power between water and blood. They go to show that the conduction of water is double that of blood. Now, this difference of conducting power depends upon the same cause as that which produces all the varieties in the sounds of the circulation, from the feeblest venous murmur to the normal sounds of the heart. Water or thin blood moving in a tube under moderate pressure is easily thrown into separate currents, because, even though the initial force of propulsion acts with equal force upon the central and upon the external parts of the column of fluid, its central portions will afterwards move more quickly than its peripheral portions, because the latter are detained by friction against the sides of the tube.(b) The consequence of a certain amount of inequality of motion between different parts of the fluid is that sound is produced, and this sound is invariably a murmur. Friction between the blood and its vessels has been long recognised as a cause of sound, but it has been altogether misinterpreted. No sound is ever caused in this direct way. But, in the case of normal blood, the viscidity which is due to its fibrin and its corpuscles prevents the occurrence of the currents which produce sound, because the mobility of the fluid is so much less than that of water. It is clear, then, that diminished mobility and lessened power of conducting sound in a fluid are due to the same cause, because the propagation of the sonorous wave or vibration, as well as actual currents, are interfered with by the same cause—namely, viscidity.

At particular points in the circulatory system—namely, at the outlets of the ventricles—the bodies of viscid fluid issuing from the ventricles come into forcible contact with the same kind of fluid in the great vessels, which is at the time at rest. A dull, somewhat prolonged noise, known as the first sound of the heart, is the result. But if the blood is thin and watery, the portions of it issuing from the heart penetrate as well as propel those portions lodged at the commencement of the great vessels with sufficient power to cause sonorous friction—that is to say, a murmur instead of a shock or blow sound. Here I take occasion to express my belief that from the variations of the first sound within normal limits—that is to say, from differences in regard to its pitch and duration, to which, apart from murmur, it is more liable than the second sound—it will be hereafter possible to determine some of the physical characters of the blood, just as at present its change into murmur often indicates a watery state of this fluid.

"The principal cause of arterial murmur," says Dr. Richardson, "is resistance to the passage of blood and vibration consequent upon that resistance. . . . Murmur may be induced by direct pressure upon an artery; in this instance the sound will be greatly increased if there be vibration of the substance causing pressure, and if there is good conduction between the artery and the ear."

I must altogether object to this explanation of the cause of murmur. It is not caused by mere vibration of either liquids or solids, and confusion has arisen here between the cause of sound and the mode of its conduction. No doubt the vibrating property in the stethoscope has a relation to the conduction of sound, but in no way increases it. In the case of the double stethoscope, a murmur heard through it is greatly increased in loudness; but this is to be accounted for on principles entirely different. It is equally certain that murmur is not produced, either in whole or in part, by vibration of the tissues forming an obstruction to the flow of blood. I have proved beyond question that murmurs can be produced by the motion of liquid within liquid from mere friction between them, without the intervention of solids. This is, in fact, the cause of murmur in every instance, whether occurring in veins, in arteries, or in the heart. Now, the mechanism of this is not complex, but simple. If some parts of a fluid move with sufficient rapidity through other parts of the same fluid, it matters not whether within a tube or in the ocean itself, murmur will be caused. I have, indeed, no doubt but that a swift undercurrent in the sea, such as is said to exist at a great depth in the Strait of Gibraltar, is accompanied by a loud murmur, which is lost before it can reach the surface. There is no necessity that one portion of the fluid should be at rest while the other is in motion, or that they move in different directions, to effect this. It will be sufficient, as already pointed out, that two portions move with different velocities, even though in the same direction. Now, as has also been said, the production of sound in this way is influenced by this condition—the mobility of the fluid. If anything be held in solution which thickens or renders it viscid, its sound-producing power is lessened in proportion to its state of thickness or of viscidity. If water is caused to flow through a perpendicular tube, although the tube is quite full, and there is no obstruction, a gentle murmur will be heard in its upper part, because, while moving under little pressure, the peripheral parts of the water are retarded by friction against the tube, while the central portions, rushing downwards with greater speed, are sufficient to form a current within a current, and a consequent murmur. But if viscid fluids be successively substituted in the tube for water, it will be found, for the reason already explained, that, in proportion to the viscidity of the fluid, the murmur will be less developed, and that a point may be reached at which it will be altogether wanting. Here, then, we see the whole secret of the venous hum or murmur occurring in unnaturally

(a) "On the Sounds of the Heart in relation to Pathology," *Lancet*, September 26 and October 17, 1868. Read also before the Medical Society of London.

(b) Not only is the flow of a liquid through a tube retarded by friction, but gases are subject to the same law. India-rubber tubes are often fitted inside with a coil of wire to prevent collapse from external pressure when used for conveying coal gas. It is found, however, that this interferes materially with the pressure upon the gas.

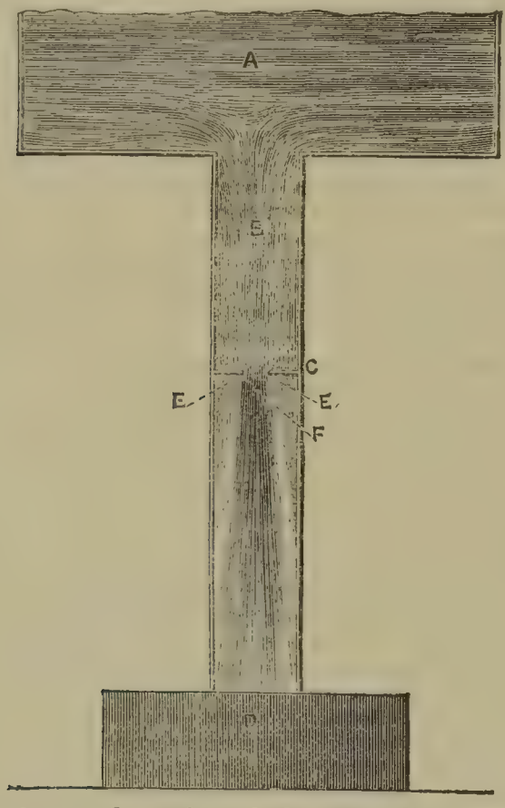
thin blood which has seemed so puzzling. As for the thrill or vibration communicated by the vessel, or, as in the case of the mitral valve insufficiency, by the heart itself, it is simply the motion of the liquid within communicated to the yielding parietes by which it is contained. But this communicated motion is unaccompanied by sound.

Apart from the heart-sounds, then, healthy blood is so constituted physically that, when under its natural pressure, no sounds are emitted from the vessels. Evidence of design may be claimed for this, as well as for the infinite other adaptations and contrivances of nature. But sound is produced not only by diseased blood in unobstructed tubes, but by healthy blood when, from organic disease or functional disturbance, the caliber of a vessel is locally either diminished or enlarged.

Pressure on the blood is the second of the conditions by which I have stated that the formation of blood-sounds is influenced, and it is necessary to remember that pressure exists independently of that supplied by the intermittent action of the heart. Now, whenever, owing to an obstruction, the pressure on the blood in a portion of an artery beyond the obstruction is diminished, other conditions being favourable, a murmur is produced; and when, on the other hand, the total pressure on the blood is greatly reduced by hæmorrhage, the first sound of the heart becomes a murmur, and murmurs are also developed in the larger arteries.

It will be seen, then, from what has been said, that the causes of all murmurs may be narrowed down to two—namely, increased mobility of the blood, and diminished pressure on the blood; and it is of course quite possible that both these causes may be combined.

The woodcut illustrates the production of murmur from diminished pressure. A is a cistern from which a continuous



supply of water flows through the perpendicular tube B seen in section, the other end of which is inserted in a reservoir D, which, being also full of water, prevents noise from the discharge from the tube. C is a diaphragm having a circular opening in its centre.

Now, it is plain that the velocity of the water as it rushes through the aperture in the obstruction placed in the tube will be proportionate to the pressure upon the water—in other words, to the length of the tube. But since the pressure is removed from those portions of the column (E E) which are immediately beyond the obstruction and correspond with it in size, these portions will flow sluggishly compared with the central portions, which will still sustain the pressure of the whole column above the diaphragm. There will now be friction between the currents descending with unequal velocities. The result of this will be the production of a murmur, which will be most intense at the spot where the friction first occurs—namely, immediately below the obstruction at F—for as this point is receded from, the velocity of the two streams becomes equalised, and at length the friction between them, which is the cause of sound, will cease to exist. Hence it happens that although, partly from continuance of the action in the water or the blood by which a murmur is produced, and partly from conduction of sound, it may be heard for some distance beyond an obstruction, its point of maximum intensity is always immediately beyond it.

It is hardly necessary to say that the same principles apply in the case of murmurs arising out of obstruction, no matter what shape the obstruction assumes. It can make no difference whether the obstruction is circular, or whether it encroaches upon one side only of the tube.

Dr. Richardson has touched upon another subject, about which I have a word to say. Speaking of functional arterial murmur, he says:—"The murmur, in my opinion, is due to resistance in certain special points, owing to the arterial tension being reduced; the points are those where a large artery traverses through a fixed and resistent canal or passes close to bone." He proceeds to state that the canal of the diaphragm and the carotid foramen in the skull are special instances of points of this kind. It is true that pressure from without might in this way cause murmur, as pressure of any kind would do it. But it is unlikely that the aorta ever becomes compressed as it passes through the diaphragm, and in the case of the carotid foramen there are good reasons for believing that intracranial murmur is caused by contraction of the arteries, instead of by dilatation. This kind of murmur is frequently produced by the Turkish bath, in which case, as I have proved, there is always less blood than usual circulating in the brain. My belief is that what occurs is this. The necessity for controlling the circulation of the blood through the brain having arisen, the supplying arteries contract in obedience to the power which the sympathetic nervous system exerts. Contraction, if local, is equivalent to obstruction, and murmur is then produced on principles already explained.

The abdominal aorta is not unfrequently affected in a remarkable way by stomach disturbance. It throbs violently, and this throbbing, which is caused by disordered innervation of the artery, shows us that it is a susceptible part, and that it would be liable to local contraction from the same cause.

There are some other points in Dr. Richardson's lecture in which I do not agree with him, that cannot be discussed here. I will briefly mention that the arterial murmur in the heart of a pigeon when under the influence of nitrite of amyl, may be referred to diminished pressure of blood in the heart and main arteries, precisely as may be a murmur caused by hæmorrhage. Speaking of the matter, Dr. Richardson says, "The agent we have used causes peripheral inaction; and as the vessels are relaxed, deprived of force, the ventricles of the left heart, feeling less resistance than they are accustomed to, work under reduced pressure." So far Dr. Richardson may be right, but I think he is wrong when he adds that this causes "murmur in all the canals or vessels in which there is resistance." There is no need of resistance at all to account for murmur in this case; diminished pressure on the blood in the heart and its outlets, on account of accumulation in the small peripheral vessels, is sufficient.

Dr. Richardson says—"Arterial murmur may be induced by resistance in the artery itself. This is the cause of true aneurismal murmur. When an artery is dilated, when the muscular coat has given way, or rather lost its power, and when the column of blood is projected through a dilated motionless tube, every point of the surface is a point of resistance, and a point for the production of sound." By this I understand that he supposes murmur to result from the friction between the blood and the dilated vessels. I must again dissent from this. Aneurismal murmur is produced on precisely the same principle as murmur in an obstructed artery is produced. The rapidly moving blood from the supplying vessel is driven through the sluggishly moving or almost stationary blood in the aneurismal sac. Friction and sound are then produced in the usual manner.

It is admitted by the best observers that, in certain cases of thoracic aneurism, sounds are produced which, instead of being murmurs, are shock sounds, precisely resembling those of the heart. No theory of the heart's sounds, except my own, which attributes them exclusively to the blood, is competent to explain these phenomena. And, conversely, the fact that these sounds are produced without the aid of muscles or valves affords great support to this theory. But space does not permit me to go into details.

What is spoken from conviction may be spoken strongly, and

I therefore take the opportunity to express here what I have expressed elsewhere. Setting aside such facts as the foregoing, derived from the sounds formed in the aneurismal sac, I challenge the supporters of other theories of the heart's sounds to explain as satisfactorily by any of their own theories these two pathological facts.

Why does the first sound of the heart change into a murmur as a result of anæmia, while from the same cause the second sound never undergoes this change?

Why, also, do the same facts hold good in cases of excessive hæmorrhage?

I also ask them to bring forward two facts as difficult to answer in accordance with my theory as the two now submitted to them are difficult in accordance with their theories. If they are successful in the one case or in the other, I must admit a defeat; but if they succeed neither in attack nor in defence, or if they remain passive, the result cannot be regarded as doubtful.

Old Burlington-street.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

NOTES OF SURGICAL PRACTICE.

The Surgical practice of this Hospital has for some months past presented several points of great and special interest from the fact that extensive applications have been made of certain modifications recently advocated in the treatment of Surgical lesions connected with wounds of the integument. The chief of these is the carbolic acid treatment, based upon the antiseptic principle Mr. Lister has laid down. This method of treatment has been carried out with great success in Glasgow and Edinburgh, and favourable reports have already been received from one of our distant colonies. The external use of carbolic acid seems, in University College Hospital, to have quite superseded the old simple and water dressings, and this agent is constantly applied, not only to compound fractures, abscesses, and apertures in the integument over necrosed and carious bone, but also to the clean-cut wounds made in Surgical operations. The acid is applied strictly according to the latest instructions laid down by Mr. Lister, and the greatest care is taken during the healing processes to prevent even a very temporary access of impure air to the surface of the wound.

A second important modification in the treatment of Surgical wounds is the arrest of arterial hæmorrhage by torsion—a method advocated and practised by Velpeau in 1830, and lately resuscitated by Professor Syme. This plan of twisting the arteries has been applied by Mr. Erichsen, Mr. Marshall, and Mr. Berkeley Hill to small and medium-sized vessels with much success, and the free hæmorrhage attending certain severe operations—as, for instance, excision of a cancerous mamma—has been completely and permanently arrested without the use of a single ligature.

As a third point in the treatment of wounds, we have to mention the use of the solution of chloride of zinc, which caustic agent is frequently applied to the raw surfaces formed by the removal of growths of malignant character. In many instances a combined application of the above Surgical innovations is made, and during the performance of an excision of a cancerous mamma performed by Mr. Berkeley Hill on September 30, and also of a similar operation by Mr. Erichsen on the following Wednesday, free use was made of the artery forceps, and of caustic and antiseptic lotions. After the removal of the diseased breast in the usual manner, the larger vessels and every minute bleeding orifice were closed by twisting with the ordinary forceps. After this had been carefully performed, the surface of the wound was washed with a solution of chloride of zinc, and the edges of the skin then brought together and kept in contact by wire sutures. Pieces of linen dipped in carbolic acid and oil were then placed over the line of incision, and the whole carefully covered over by large pads, which were strapped down, so as to prevent exposure of the wounded parts to the air. During the after-treatment of wounds to which carbolic acid is applied in this way, care is taken to keep the granulating surfaces always covered by the first layer of saturated linen, whilst the superjacent layers are renewed from day to day.

The reports of the Surgeons of University College Hospital on the beneficial working of the antiseptic treatment, as regards both the cicatrisation of wounds and the general state of the patient during this process, are not less favourable than those received from the advocates of this system in the North. Pyæmia, formerly an affection of frequent occurrence, has completely disappeared since the commencement of this plan of treatment Large incised wounds have healed rapidly, and foul sloughy sores have been speedily modified under the influence of carbolic acid. It is, however, in bad and almost hopeless cases of compound fracture that the use of this agent seems to have been attended with the most happy results, and to have afforded convincing proofs that we possess in the antiseptic treatment, when regularly applied and steadily overlooked, an important addition to the resources of conservative Surgery.

To Messrs. Rayner and Cheyne we are indebted for the notes of the two following cases which have been lately under the care of Mr. Marshall. The first is of great interest in many respects. The patient, when admitted with symptoms of intestinal obstruction, was found to be affected with double irreducible hernia. Herniotomy performed upon the side of strangulation, though directly successful, was followed by extensive diffuse cellulitis and death. A post-mortem examination revealed a singular condition of acute secondary disease in the omental hernia not operated upon, and also an interesting evidence of the state of a piece of previously strangulated intestine ten days after a successful operation. The second case is one of profuse venous hæmorrhage complicating that frequent Surgical injury, fractured clavicle.

DOUBLE FEMORAL HERNIA—OPERATION—DEATH.

(Under the care of Mr. MARSHALL, F.R.S.)

Hannah M'C., aged 49, admitted Sunday, October 4, 1868, is a widow, and has had eleven children. She has had a right crural hernia for the last five years, and one on the left side for two years; has never worn a truss. Ten months ago the left hernia gave her great pain, and ever since she has been subject to attacks of vomiting. On Friday, October 2, they both became much larger, and since the vomiting has been incessant, and there has been no action of the bowels.

State on Admission.—There is a tumour on both sides below Poupart's ligament, about the size of a lemon, the one on the left side being much more tense than on the right.

1 p.m.—She was put to bed and taxis tried for half an hour, with no success as far as the right hernia was concerned; the one on the left side, however, was almost wholly reduced, and a pad and bandage were applied. The sickness still continued. She, however, passed a liquid motion about 8.30 p.m.

October 5.—The left hernia, having come down again, was reduced this morning. The vomiting still continued. 5.30 p.m.: There has been no action of the bowels since yesterday. Owing to the constant straining, the left hernia has again descended, and is now very tense, and all attempts to reduce it under chloroform having failed, the sac being very tense and without impulse, and the pain and tenderness being confined to the left side of the abdomen, Mr. Marshall determined to operate and relieve the hernia on that side. Hey's ligament was divided, and as soon as some of the outer fibres of the sac were cut through, the contents of the sac were easily returned. About an ounce of bloody serum escaped from a minute puncture in the sac. The wound was brought together with sutures, and water-dressing applied. The right hernia, being quite soft, was not touched. Ordered tinct. opii mxx. every two hours.

6th.—Has passed a tolerably good night; complains of much tenderness in the left side, with tympanitis; pulse 120, full; tongue moist; sickness has not quite ceased, and the bowels have not acted. Ordered pulv. opii gr. j. every eight hours.

7th.—The tenderness having increased, turpentine stupes were ordered. There is a slight blush about the wound. She has been suffering from an attack of bronchitis, which is rather worse to-day.

8th.—Bronchitis worse this morning. Ordered ammoniæ and senega; brandy ℥j. every hour; mustard poultices to chest. The stitches were removed, and a small quantity of pus escaped. There is a marked blush over the surrounding skin, extending upwards over the left side. There was a little sickness last night; bowels still unrelieved; the opium was discontinued. 11 p.m.: Bronchitis much worse, with con-

siderable dyspnœa. Ordered champagne (two bottles) in addition to the brandy; senega to be omitted, as it seemed to nauseate.

9th.—Breathing much better; tympanitis greater; the tenderness is greater, but still limited to the left side; poultices were ordered to the left side.

10th.—The bowels have acted twice during the night, and again five times during the day; she cannot, however, pass her urine of her own accord. There is some induration of the left side. The wound looks healthy.

11th.—Looks better; pulse 120, full; temperature 102°; tongue moist, coated with a thin white fur; wound looks rather sloughy, discharge scanty; distinct fluctuation in the left side over a space the size of a florin. An incision was made, and a small quantity of pus escaped. Poultice continued. The tumour in the right groin is large and very tense. Ice was ordered to it. The sickness has wholly disappeared; the bowels have acted three times; the bladder has still to be relieved.

12th.—Seems rather weaker; pulse 120, small; temperature 101°; tongue dry and brown; hernia wound sloughy; a good deal of pus escaped on pressure; right tumour same as yesterday, very tense; the bowels have acted twice during the day; there has been no sickness.

13th.—She has passed a good night, but remains in much the same state. Tongue moist, clean at edges, furred in the centre. On pressure over the left side a considerable quantity of pus escaped. Passes her urine involuntarily; bowels acted once in the night, and again once to-day; the right tumour still very tense, and so extremely tender as to be a source of great discomfort. Mr. Marshall having decided that no bowel could be in it, and that it must be nearly all due to effusion into the sac, passed a grooved needle into it, when nearly an ounce of dark bloody serum escaped. It was closed with lint and collodion.

14th.—Is much weaker this morning; pulse 132, weak; temperature 100°; urine still passes involuntarily; bowels acted once. Large sloughs of cellular tissue were drawn out of both wounds in left side, and a drainage-tube passed through. She sank during the evening, and died at 9 p.m.

Post-mortem Examination eighteen Hours after Death.—On opening the abdominal cavity, the peritoneum and viscera were found pale and healthy, with the exception of a portion of small intestine, the surface of which, along an extent of about four inches, was dark in colour and slightly roughened by the deposit of minute nodules of lymph; the corresponding portion of mesentery presented a dark patch, which diminished gradually in intensity towards the fixed insertion of the membrane. The calibre of the small intestine at this part was quite free, and the tissues to all appearances perfectly capable of performing their functions. The omentum was bound down on the right side to the front of the pelvis. The hernial sac on the left side was flaccid and empty; its walls were thickened and rough on their surfaces, and adherent in all directions to the soft tissues around; the neck was closely adherent to the margins of internal ring. There was extensive destruction of subcutaneous connective tissue, reaching beyond the crest of the left ilium above, and extending below over the upper third of the front of the thigh; the subcutaneous tissue was converted into pale yellow membranous sloughs, which could be readily detached from the muscular tissues beneath. At the seat of the hernia on the right side was a large fluctuating swelling, which was found to contain about one ounce and a half of dark red fluid, which was thin, and not coagulable. This fluid was enclosed within the sac, which was of the size of a large apple, and the walls of which were thin, and the inner surface smooth and stained a dark red colour, marked here and there by deeper patches of ecchymosis beneath the thin and semitransparent lining membrane. At the bottom of the sac was a piece of omentum of the size of a large walnut. On section, the fatty tissue was found to be firm, condensed, and almost fibrous. At the outer part of this irreducible hernial mass was a small lobulated cavity containing about half a drachm of thick pus. The omental protrusion was closely adherent to the internal ring at its outer side, but admitted the passage of the end of the little finger between it and the neck of the sac at the pubic side. Between the symphysis pubis and the anterior wall of the bladder was a large abscess, reaching about two inches to left side, one inch and a half to right side, and about two inches and a half from above downwards behind the pubes. Another and smaller abscess existed between the uterus and rectum, and several small secondary deposits of purulent matter were scattered over the surfaces of the pelvic viscera. Thorax: Lungs bound by firm adhesions to sides of chest; their surfaces pale. Bronchial tubes much injected, and containing purulent and frothy fluid.

Remarks by Mr. Marshall.—Selection of side for operation: 1. The tumour on left side a more recent hernia. 2. Relief of bowels after this hernia had been reduced. Neither of these absolute guides, because right hernia might, nevertheless, be now the cause of symptoms of strangulation. 3rd reason a better guide—viz., the strict limitation of pain and tenderness to the left sac and side of abdomen. By the operation all hernial symptoms were completely relieved. Cause of death low erysipelatous inflammation of wound, coats of left sac, and cellular tissue, followed by secondary intra-pelvic suppuration. Other interesting points are the condition of bowel after ten days of recovery from constriction; absence of intestine in right sac; simple bloody effusion; abscess in adherent nodule of omentum in this sac.

COMPOUND COMMINUTED FRACTURE OF CLAVICLE—PROFUSE AND ALARMING VENOUS HÆMORRHAGE—RECOVERY.

(Under the care of Mr. MARSHALL, F.R.S.)

Frank H., aged 43, was admitted September 11, 1868, in consequence of a severe injury to right shoulder caused by his falling from the seat of a cart. On admission the man was faint, and his clothes were covered with blood. The right clavicle was found to be fractured at its middle third, and, from the mobility of the fragments, clearly much comminuted. Over the outer part of the middle third of injured clavicle was a small clean-cut wound which resembled one made with a penknife. This, which had evidently been made with a sharp edge of bone, was found, on the introduction of a probe, to take a direction inwards and somewhat downwards for about two and a half inches. There was slight venous hæmorrhage. Pulse the same on both sides. The soft tissues above the injured clavicle were much swollen and distended with effused blood. On pressing the skin near the seat of injury, emphysematous crackling could be felt. The patient was placed in bed, and when the venous hæmorrhage had ceased the wound was covered with carbolic acid dressing, a figure-of-eight bandage was applied from shoulder to shoulder across the back of chest, and the right arm was bound to the side.

At 2·30 a.m., about four hours after admission, sudden and profuse hæmorrhage came on, and venous blood was poured in a continuous stream over the bed-clothes and on the floor of the ward. It was estimated that about two pints of blood were lost in less than three minutes. Mr. Berkeley Hill was sent for, but before his arrival the bleeding had entirely ceased. Ice was applied over the right side of neck, and the patient was kept perfectly quiet, with the arm still bound to the side, but freed from the figure-of-eight bandage, which had been removed.

From the above date to the time of his discharge there was no recurrence of the hæmorrhage. The injured parts were kept at perfect rest, but no attempt was made to extend the fractured bone by means of a figure-of-eight bandage.

On October 9, the date of the discharge, the patient could move his right arm with ease. The fractured clavicle had been firmly united by exuberant callus, which formed a considerable swelling over the middle third of the bone. The shortening of the bone, however, was but slight.

EMETICUM MINUTUM.—Dr. Weigersheim described to the Berlin Medical Society, under this title, his mode of administering ipecacuanha. He rubs up three grains with one or two drachms of sugar, and divides the mass exactly into twelve powders. One of these is given with a spoonful of water every five minutes until vomiting is produced, no drink being taken after each dose. If these rules are exactly followed, retching or even vomiting will ensue after the third or fourth powder, although sometimes seven or eight, or even the whole twelve, have to be given. More powders than are ordered here should be sent, as, if the dose is rejected instantly it is taken, it must be repeated. The advantage of the procedure is that the Physician can regulate the amount of vomiting that shall occur, for after the patient has once vomited he does not do so again until another powder is given, but vomits after each successive dose, if camomile tea or other diluents be abstained from. These may be allowed as soon as sufficient vomiting has been produced.—*Allg. Wien. Med. Zeit.*, Sept. 1.

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Medical Times and Gazette.

SATURDAY, OCTOBER 31, 1868.

INDIAN SANITARY COMMISSIONS.

A memorandum on measures adopted for sanitary improvements in India up to the end of 1867, together with abstracts of the sanitary reports hitherto forwarded from Bengal, Madras, and Bombay, from 1864 till 1866 inclusive, has just been published by order of the Secretary of State for India in Council. Having already noticed these reports at the time of their several publications in this country, it is not our intention now to do more than remind our readers that we deprecated the change which had been made in the constitution of the local Sanitary Councils, from a commission on which the Medical, engineering, and military departments were represented under the presidency of a civilian or military officer of high rank, immediately responsible to Government, to a Commissioner, or chief officer of health, with a secretary, the latter alone to be a Medical officer. The memorandum now published contains a restatement of the reasons for which the change of constitution of the Sanitary Commissions was considered necessary. It was stated by the Government of India that

"The constitution of the Bengal Commission had not worked well, and modification was required on the following grounds:—

"1. That it was unnecessarily expensive.

"2. That the several members who had other duties to perform were practically useless.

"3rd. That there was a constant risk of disagreement between the commissions and the head of the Medical department of British troops, and other heads of departments at army head-quarters, but especially with the former, his own subordinate, the Deputy-Inspector General of the Presidency, being on the Commission."

No immediate action was taken on this subject by the Home Government, but the Government of India, with a true eye to economy, took the opportunity of Mr. J. Steachey's vacating the appointment of President of the Bengal Sanitary Commission to introduce the proposed changes at once, and issued a general order in anticipation of the approval of her Majesty's Government. The Madras Government followed suit, and modified, from May 1, 1866, the constitution of their Sanitary Commission in accordance with the proposed plan, although the Hon. Mr. Ellis, President of the Commission, and now the Commissioner, appears to been of opinion that it would have been advisable to retain the Sanitary Commissions as a consultative body, with a Government Secretary for Public Health as their President. The Government of Bombay, on the other hand, deprecated the proposed change, stating that no collisions of the kind alluded to by the Government of India had arisen under existing arrangements, and that the loss of the services of the engineer member in particular would be productive of great inconvenience; but notwithstanding a similar change has been made in Bombay, and in June, 1867, under orders from the Government of India, the Commission was abolished, and a Sanitary Commissioner, with a Secretary, was appointed. It is noteworthy that at Bombay, where no inconvenience had been experienced from the Commission in its original form, the President had been Dr. Leith, Deputy-Inspector General of Hospitals in the Bombay Service, who, while on sick leave in England, was appointed Commissioner, and Colonel Bell, R.E., a member of the Commission as at first constituted, meanwhile acted for him, and since Dr. Leith's retirement from the service became the Commissioner, with Dr. Gordon Asher as Secretary.

We are now glad to observe that such, however, is not destined to be the ultimate constitution of the sanitary authorities of India, but that Medical officers are likely to occupy their proper position as the trusted and responsible advisers of Government on sanitary matters, under a distinct head of the Health Department, who will be in the position of a deputy-secretary to Government, or in some similar rank which will give due influence to the recommendations which he may consider it necessary to make.

After a long correspondence on the subject between the Governor-General and the several successive Secretaries of State for India, the formation of a sanitary committee and department in the India Office was announced to the Government of India by telegram dated November 29, 1867, and by a despatch dated 30th of the same month. To this department all propositions relating to the public health, civil and military, are to be submitted for consideration. In the same despatch the sanction of the Secretary of State for India was given to the proposal of the Indian Government that four Medical officers specially selected should be appointed health officers for Bengal, the North-western Provinces, the Punjaub, and Central Provinces, on salaries of 1500 rs. per mensem, and three for Oude, Assam, and British Burmah on salaries of 1200 rs. per mensem. Despatches announcing the formation of this department were also addressed to the Governments of Madras and Bombay under date January 16, 1868; the memorandum from which we are quoting does not, however, contain instructions as to the numbers or pay of the health officers for the other two presidencies.

The plan now adopted, when extricated from the various elements which enter into the Indian sanitary question, developes itself into two branches—the military and the civil sanitary service. It is considered that army and civil sanitary administration are quite distinct; they are so in this country, and must be so also in India. The army Medical regulations issued by Lord Herbert in October, 1859, are supposed to make ample provision for all cases affecting the health of the troops which are likely to arise, and the existing establishment of inspectors and deputy inspectors-general "to be not more than sufficient" to enable the work to be satisfactorily accomplished. By this system, the head of the Medical department of British troops in India will occupy the important position of the immediately responsible adviser of Government on all sanitary questions affecting the troops under his supervision, subject, of course, to the Director-General and the newly organised sanitary department of the India Office at home. He will, in fact, be the Sanitary Commissioner for British troops, and will thus escape the risk of disagreement with a commission of which his departmental subordinate might be a member.

Lord Herbert's Army Medical Regulations have not yet been fully adopted in the Indian Army. This, however, is to be done with as little delay as possible, and their provisions made imperative on all officers, subject, of course, to any

modifications rendered necessary by the peculiar circumstances of India, and the head of the Indian Medical Department will be Sanitary Commissioner for Native Troops. It will of course be necessary that arrangements be made for giving effect to the recommendations of the military sanitary authorities, so far as they imply the execution of works or measures either by the Public Works Department or by local civil authorities.

Next comes the Indian Civil Sanitary Service, which divides itself into two distinct and separate branches—the Inspection Service, and the Executive Service—the former to be carried on by subordinate officers as inspectors of nuisances acting in concert with the Medical officers of health. While these inspectors are constantly at work in their districts, the Medical officers of health need only visit the districts occasionally, to see that the inspectors are efficient, and that no epidemic disease is about. In case of an impending epidemic, the officers of health would then have other duties to perform, which are laid down for them under the head of "Precautions against Epidemic Disease."

The sanitary executive service in India, from the extensive nature of the problems which must be dealt with, presents peculiar difficulties. Upon the execution of immense arterial systems of drainage and irrigation which have yet to be effected the public health of large tracts of country will be entirely dependent. Such works can only be carried on by the Central Government, simply because there is no other authority competent to execute them and to find the money. Under existing circumstances, all that can be done to improve the public health must be carried out among groups of population; these, as elsewhere, divide themselves into villages, or rural populations, and towns. To deal with the former, it is considered that merely a humble but active executive would be required, and, in the majority of instances, no costly works would be necessary. The machinery for doing all that is required in villages and rural populations already exists in most parts of India, and instruction is only required in those duties where the ancient village organisation is complete; but in districts in which the village system has fallen into abeyance it must be restored as well as instructed. It appears to have been left for future decision as to who are to be the executive authorities for carrying out the recommendations of the health officers as respects rural populations. As regards towns and cities already provided with municipalities, these would, of course, be the executive, and would appoint their own officers of health, inspectors of nuisances, and engineers. In towns where there are no municipalities a suitable authority must be provided. Local funds would have to bear the expense of all future sanitary works and proceedings, except perhaps when such are rendered necessary by imperial requirements, and involve a greater expenditure than local funds could bear, in which case Government would have to contribute a fair proportion.

It is further observed that in connexion with the sanitary service there must be some central Government authority which shall be responsible for the health of the people being attended to, just as any other matter of police. It is expected that the India Office here can help forward the work, not by interfering with responsibilities, but by calling for reports of work done and laying the results before Parliament, and can likewise procure for the Indian administrations all the most recent experience regarding sanitary works and improvements in Europe. It is suggested that it would amply repay the cost for the Government of India to send a number of engineer officers (as has recently been done with Captain Tulloch, of Madras) to study works of drainage, water supply, and sewage irrigation in England and on the Continent.

From the concluding paragraphs of the memorandum under notice, it is evident that its author has formed a worthy estimate of the importance of the work in hand.

"Practically it would be impossible to introduce into India a complete 'cut-and-dried' system of sanitary administration. Our ultimate success depends on carefully obtained experience. We know everything that requires to be done, but we do not know the best way of doing it over so great a continent. We shall arrive at this only by experience, but the result will be the civilisation of India."

Dr. Goodeve, Deputy Inspector-General of Hospitals Bengal Establishment (retired), has contributed a valuable memorandum on sanitary progress in India previous to the establishment of the Sanitary Commission in 1864. He strongly supports much that we have ourselves advanced, as also does the account of the progress of army sanitation in India which is now appearing from time to time in our columns from the pen of Dr. C. A. Gordon, C.B., Deputy Inspector-General of Army Hospitals. "Should the history of the Royal and Bengal Medical Departments ever be written, it will be shown that for many years past they have steadily advocated and promoted sanitary improvement in India, and that many individual members of the Royal and Bengal Services have been foremost in the good work."

Dr. Goodeve refers to the Report of the Cholera Commission of 1861 as an admirable one, and as having entered into the question of the diffusion of cholera by human intercourse, and having contributed to change the prevalent opinions as to the non-infectiousness of the disease by pointing out the great number of attacks in Hospitals, etc. He does not, however, mention that it was unfortunately considered necessary to suppress, or at least to limit, the publication of the report on account of the amount and bitterness of personal disagreement apparent in it.

It is really amusing to see the quiet manner in which Dr. Goodeve, from his thorough knowledge of the circumstances and sanitary requirements of India, treats the surprise which was expressed in Europe at the absence of sewerage or drains in Indian barracks and Hospitals. He says it would not be difficult to show that the dry system is most suited to the purpose even in England; much more is it suited to India. "The low levels and small fall, the absence of sufficient water to scour out the large mileage of drains in a large Indian cantonment, would render them a constant nuisance and source of ill-health. It is to be hoped that Indian cantonments will long be free from sewers." We need hardly remind our readers how severe were the remarks of a distinguished lady sanitarian on this subject, and how satire lent its pencil to aid her pen in describing the sanitary staff of an Indian barrack or household.

THE DIETARY OF SEAMEN.

The sanitary condition and hygienic requirements of our sailors have, during the past two years, received much public attention, and it is probable that many obvious and glaring deficiencies in the administration of the mercantile marine have in this interval become generally known for the first time. The Merchant Shipping Amendment Act of last session, commonly known as the Duke of Richmond's Act, was the result of many official inquiries and much unofficial correspondence, and those clauses relating to the health of seamen afloat are now in good working order, and are said, moreover, to work well. But two years at least must elapse before the practical benefit of these clauses can be fully and fairly proved, and meanwhile the Board of Trade have set themselves to discover a proper diet for sailors at sea, due regard being had to economy as well as efficiency. With this view, the Medical advisers of the Board have been directed to draw up such a system of rations as would, in their opinion, be all-sufficient for the preservation of health during a long voyage. This scale was submitted by the Board of Trade to all the local marine boards of the United Kingdom, and the members of the latter were requested to state categorically their opinions as to its merits. The correspondence resulting therefrom has recently appeared as a Parliamentary paper, headed "Merchant Ships," and it is curious to see how varied are the verdicts of

the local powers. Some deprecate further interference, others advise that the sanitary results of the Duke of Richmond's Act should be fairly tested, and some cavil at the scale on the score of cost. But water and alcohol are the points as to which nearly all the boards take exception. An increased quantity of water is recommended for drinking, cooking, and washing purposes, and it is proposed that a small ration of rum, beer, or other alcoholic drink should be served out daily to each of the crew. It is as well to remind our readers that the maximum allowance of water per man per day at present allowed in sea-going ships is one gallon, and that, as a rule, no grog is included in the scale of rations appended to ships' articles. The salient arguments against the increased allowance of water are—(1) That rain-water for washing can often be caught; (2) that the change proposed would require increased tonnage space, or a greater supply of coals for the purposes of distilling; and (3) that the additional supply of water recommended would be likely to lead to waste. The addition of alcoholic drinks to the scale is denounced on the ground that it would produce mischief in many ways, and that many men are averse to strong liquors of any kind. The other changes introduced into the scale are important, and consist in the abstraction of a small quantity of the salt meat, half the vinegar usually allowed, and a small proportion of some other articles, and the substitution in lieu thereof of preserved meat, vegetables, and pickles. These latter changes are received with favour by most of the outport authorities, and there can, indeed, be no doubt that their introduction is obvious and necessary. The water and alcohol question resolves itself into two interesting queries—(1) Is a daily allowance of one gallon of water sufficient for drinking, washing, and cooking purposes at sea? (2) Are alcoholic drinks useful and necessary for seamen afloat? These questions are not purely Medical, for useful evidence in connexion therewith may be gleaned from merchant captains and others whose extended nautical experiences entitle them to speak with authority on this subject. Many of our readers are doubtless aware that there is no legislation as to scales of diet for the crews of merchant ships, but that the Board of Trade permit certain scales mutually agreed upon by owner and crew to be printed with the articles as a matter of convenience. Hence the necessity arose for the Act of last session, for it is plain that if good and proper food were at all times provided the want of antiscorbutics or special preventives (as lime- and lemon-juice) would not be felt. It is, indeed, well worthy of consideration whether shipowners would not best consult their own interests and the safety of their vessels by favouring the introduction of such a scale of diet as shall render the use of lime-juice unnecessary. Preserved provisions of all kinds are now prepared at so reasonable a rate, and in so convenient a form for storage, that the additional gross cost would be very small, and would be amply repaid by insuring exemption from scurvy and other ills incident to a seafaring life. And if, in addition, owners and captains would take action under a clause of the new Act that provides for the inspection of seamen before signing articles, a great advance would be made towards the prevention of those casualties afloat that occur so frequently and end so fatally.

The urgent necessity for some provisions such as those indicated in the foregoing remarks is shown by the arrival of three scurvy-laden ships in the port of London during the past week. No less than eleven patients from these vessels are now located in the *Dreadnought*, and a visit to the wards of that Hospital at the present time would prove to our readers that good cause exists for the stringent enforcement of the Duke of Richmond's Act.

Dr. Lane, R.N., of Worthen, Shropshire, is a claimant of the Irish title of Viscount Lanesborough, which has been in abeyance for 200 years.

THE WEEK.

TOPICS OF THE DAY.

The Medical Profession will share the universal regret to which the death of the venerable Archbishop of Canterbury has given rise. Few men have filled a conspicuous place in Church and State with more wisdom, beneficence, and dignity. The cause of Dr. Longley's death was bronchitis, the result of cold caught during a tour in the Tyrol. Early last week his condition had given rise to grave uneasiness in the minds of his Medical advisers. He was attended by Dr. Carpenter, of Croydon, and by his old college friend Dr. James Arthur Wilson.

Public interest is rapidly concentrating on the elections. We may look for an infusion of new blood in the Reformed Parliament. There will undoubtedly be some working-men and an increase of lawyers, but we are obliged to confess that the opportunity of returning a few Medical members who would have done honour to Medicine and have looked after the rights of the Profession has been ignominiously lost. The Medical Profession have never been famous for *esprit de corps*, and at the present juncture they certainly have been true to their antecedents. Whether they will ever be educated to perceive that they require representation, or that the influence of a few of their own body in Parliament might produce some effect on the condition and remuneration of public Medical officers, and might prevent their rights being encroached on by such measures as the Pharmacy Bill of last session, we cannot say. But it seems clear that, unless greater unanimity and energy characterise the Profession in future elections than the present is producing, the case is hopeless.

If in England mere political motives are permitted to outweigh Professional claims, it is scarcely surprising that they are allowed a more decided precedence in Ireland. The project for disestablishing and disendowing the Irish Church has raised the ordinary glow of Irish politics to a white heat, and any other motive for supporting a candidate than a party one immediately undergoes the process of destructive distillation when brought into the fiery furnace. Sir Dominic Corrigan has been requested by the Liberal party to stand for the City of Dublin, and has consented so to do. We believe that at any other juncture the personal and Professional merits of this excellent Physician would have procured him the support of the whole of his Profession; but now we are informed on good authority that he must not count on undivided Medical support. We regret this exceedingly; but certainly, considering the state of political feeling in Ireland, there is far more excuse for it than there has been for the apathy of the Medical constituencies of the five English and Scotch universities who have just obtained representation. What may be Sir Dominic Corrigan's chances of success we cannot say; but of this we are certain, that, if returned, he would do no dishonour to the Profession in which he has earned his laurels. We heartily wish him success, and we feel certain that he must obtain the earnest support of a large proportion—we would that we could say of all his Medical brethren. A single vote on the Irish Church question will have but scanty influence one way or another. But the consistent advocacy of the cause and claims of the Irish Dispensary Doctors by such an orator as Sir Dominic Corrigan would probably have the effect of bettering the position of the whole rank and file of the Medical Profession in Ireland. We see that a Medical subscription towards a guarantee fund for the expenses of Sir Dominic's candidature has been started. Five hundred pounds have already been subscribed, the list being headed by two subscriptions of £100 each from Dr. Robert M'Donnell and Dr. Robert D. Lyons. We earnestly appeal to all the Medical men of Dublin who either are on the Liberal side in politics or who believe that the return of an able and independent

member of the Profession is a matter of very high importance to the whole Medical body to assist both by purse and influence in returning Sir Dominic Corrigan.

Dr. Sandwith continues his candidature in Marylebone, and Mr. Alfred Smee at Rochester. They are at the opposite poles of political belief, but we believe that they would both unite in any effort for obtaining better terms for Poor-law Medical officers, and we shall be glad to see both of them in Parliament.

A paragraph has lately gone the round of the papers stating that a Professor Casturani, "the celebrated oculist" of Turin, had discovered a way of killing animals "by forcing air into their eyes." The process is said to be fatal in a few seconds, to be as easily applied to men as animals, and to leave absolutely no outward trace. These somewhat alarming statements produced a sensational leader in one morning paper, which descanted upon the impropriety of making facts of the kind public, and hinted that there were always scientific assassins, such as Pritchard and Palmer, who were on the look-out for them. The paragraph certainly struck us as one of the silliest of the silly season; but as it had been largely circulated, and had drawn some attention, we thought it right to refer it to an eminent experimental physiologist, by whom we have been favoured with the following report, which seems to us to relegate the matter to the class of thoroughly well-known phenomena, and at the same time is well fitted to allay any public anxiety. He writes:—

"1. The statement that immediate death follows the injection of the eyeball with air is not true.

"2. If air be not driven into the eyeball, but into the skull through the optic foramen, the animal (the experiment has reference to the rabbit) dies at once.

"3. The experiment in any case is difficult.

"4. On the human subject the operation could not possibly be performed without extreme violence.

"5. After death from the process, as stated above, the indications of the cause of death are well marked, and would be detected by any skilled observer. The wound in the conjunctiva and in the structures of the orbit would be discoverable. Air and frothy blood would be found in abundance beneath the membranes of the brain, and even of the spinal cord. Air would be also in abundance in the cavities of the heart and mixed with the blood generally.

"6. Physiologically the subject is of some importance, but the safety of the public is in no sense imperilled by the so-called discovery."

The Council of the Medical Teachers' Association have published a "Report on the Present Obligatory Conditions of Study for the Medical Profession, and on the Constitution and Relations of Medical Schools." The Council assume that, in this country at least, the principle of so-called "free studentship" cannot be generally adopted, and that the examining boards are obliged to supplement their examinations by collateral evidence that the student has gone through a course of study which would probably qualify him for the licence. The Council then proceed to comment on the present conditions of candidature for the Medical Profession in this country, and, selecting the curricula of the Royal College of Surgeons and of the Apothecaries' Company as examples, they pronounce their regulations "in general needlessly minute, and in some respects improperly stringent." The "excess of regulation" they pronounce to be the essential evil. We shall return at greater length in a future number to a consideration of this report, which is in unison on many important points with the views on Medical education which have often been advocated in our own columns.

One of those unfortunate accidents which no amount of care seems to prevent occurred last week at Brompton. Scarlatina was rife in a house, two children were lying dead, the father was suffering from sore throat, and a young child from ophthalmia. A gargle and powder were sent for the father, a lotion and powder for the child. Unfortunately the wrong powder, consisting of eight grains of Dover's powder, was given to the child, who died narcotised shortly afterwards.

We would call attention to the case of Parsons *v.* Ravelon, in reference to which we publish a letter in another column. We have no hesitation in saying that we believe Mr. Blair, the Judge of the Liverpool County Court, is in error in the judgment which he delivered. We know that one Practitioner in London has twice recovered his fee under similar circumstances to those under which Mr. Parsons sued. When a Medical man is engaged to attend a patient in a confinement, he feels that he is no longer a free man; he is obliged to remain within call, and is often compelled to decline lucrative country journeys, or to refuse himself a necessary holiday. It is simply preposterous to affirm that the patient can throw over the contract she has made at her pleasure, send for another Doctor, and refuse all acknowledgment of the Medical man she had engaged. We lately published a case of a monthly nurse who, having been engaged to act *as a midwife*, and the contract having been broken, recovered two-thirds of her charge in the Brompton County Court. We believe that Mr. Blair's judgment is wrong, at least in equity, and we should be glad to have the judgment of experienced counsel on the matter. Is there no local Medical Association who would take it up?

We are sorry to record the death of Mr. Henry Brown, of Windsor, the Surgeon who was honoured for many years by the confidence of the Queen and Prince Albert. A year or two ago failing health compelled him to resign his active duties and to retire from attendance on the Royal Family. Mr. Brown died on Saturday last at his residence in Sheet-street, Windsor, aged 66. The cause of his death was dropsy, depending on cardiac disease.

We have also to record the death of Mr. Alderman Partridge, of Colchester, who was for forty-two years Surgeon to the Hospital in that place. As one event in a somewhat uneventful life, we may state that he was a Medical witness who appeared in the once celebrated case of Cooper *v.* Wakley. He was an honorary F.R.C.S., a member of the Society of Apothecaries, and in practice prior to 1815.

It is said that Dr. Minter, Deputy-Inspector of Hospitals and Fleets, Surgeon Extraordinary to the Prince of Wales, has been selected for the honour of accompanying their Royal Highnesses the Prince and Princess in their tour through Europe and to Egypt. Dr. Minter, who is Surgeon to her Majesty's yacht, has just been elected Honorary Fellow of the King and Queen's College of Physicians in Ireland.

THE "PHARMACY ACT, 1868," AND THE RIGHTS OF THE GENERAL PRACTITIONER.

A LETTER from "A Many Years' Subscriber," which will be found in another column, announces a disagreeable discovery which has been made respecting the effect of the Sale of Poisons and Pharmacy Act passed last session. As the law stands at present, no person after this year, 1868, can legally sell or keep an open shop for the retailing, dispensing, or compounding poisons, unless he be either registered as a chemist and druggist, or be a "legally qualified apothecary." The term "poisons" within the meaning of the Act includes certain substances named in a Schedule A annexed to the Act, and any other substances which may hereafter be added by the Council of the Pharmaceutical Society, with the consent of the Privy Council. Suffice it for the present to say that the list includes ergot of rye, chloroform, belladonna and its preparations, and opium, and all preparations of opium or of poppies.

It seems clear that, as the Act stands, a very great restriction is imposed upon the business of such Medical men as keep "open surgeries" or "apothecaries' shops." The business of such establishments, which have been carried on

in a certain traditional routine for many generations, consists not only in dispensing or sending out medicines to the private patients of the Practitioner, but in two other distinct branches —viz., 1, supplying medicines to persons who come in asking for something good for a particular ailment; and 2, supplying medicines to persons who desire to have such medicines for use at their own discretion. For example, the Practitioner might supply from his "open surgery" or "apothecary's shop," we will say, a liniment, composed of equal parts of the belladonna and chloroform liniments, and a small bottle of solution of morphia, to a patient whom he has visited and prescribed for in ordinary family practice. He might supply the same to an unknown casual patient who might come to the Surgery and ask for something good for the rheumatism, and he might supply the same to any person who came in with a prescription in which they were ordered, or who merely asked for them by word of mouth.

But of these three customary—heretofore legal—and useful functions, it is very doubtful whether all are not now rendered illegal to all Medical Practitioners who are not "legally qualified apothecaries." Hence an M.D., or L.R.C.P., or M.R.C.S., or L.F.P. and S. of Glasgow—in fact, the bulk of Scottish Practitioners—find themselves deprived of their privilege of supplying medicines; for, be it observed, no man can be registered *both* as chemist and druggist and as Medical Practitioner. We are aware that between the apparent meaning of the raw words of an Act and the meaning which those words may bear after having been submitted to the ingenuity of barristers and judges is often a wide difference; hence we do not presume too strictly to define the words "open shop," "retail, dispense, and compound," and other terms in the Act, nor to say how far they may be evaded in real life. Their obvious meaning is unmistakable. Let us suppose a traveller in Scotland calling on M.R.C.S. or L.R.C.P. Ed. and asking to be supplied with a little chloroform or laudanum for a toothache; the act of supplying him would be an offence against the law, for which the Medical Practitioner would be liable to a penalty of £5. It is clear, then, that M.R.C.S. in 1869 will have lost powers which he enjoyed in 1867, and the next question is, Who is to blame?

On this point we believe that the very able and energetic managers of the Pharmaceutical Society, whilst actuated by every wish to raise their own body, disclaimed all intention of injuring the body of Medical Practitioners; and their Bill, as introduced into Parliament, expressly saved the rights of Medical Practitioners. There is little doubt that the obnoxious words were inserted by Lord Robert Montagu at the instance of the Privy Council. The purport with which the alteration was made was, without doubt, a good one; possibly it was to raise Medical practice by dissociating it compulsorily from the "shop." Whether the means taken were the best for the purpose it is not for us to say. It is a pity that the almost universal custom was not observed of saving existing rights; but then *there are no Medical men in Parliament*, and the thing was done in hot haste. Probably that "let alone" system would have been better which distinguishes all modern legislation on trade, and allows it to adjust itself to the wants of the community, without the minute regulations and restrictions and monopolies which characterised the middle ages, and are revived by some parts of the Bill before us. But we believe that no Medical Practitioner need fear the slightest interference from the Pharmaceutical Society, and probably this Society will not oppose a short Bill next session for the preservation of ancient rights. It is for the public good that qualified Medical Practitioners should be induced to settle in poor and scantily peopled districts; and if an open surgery helps to maintain them, no thriving London Physician need sneer at them, and none of the wealthy members of the Pharmaceutical Society need begrudge them this honest, ancient, and customary source of emolument.

THE PUBLIC HEALTH.

The Quarterly Return of the Registrar-General for the three months ending September 30 last shows that while the births were above the average of the season, the deaths were to a much greater extent in excess of the recognised standard numbers. The mortality during the quarter was at the annual rate of 23·9 deaths to every 1000 of the population, the average rate being 20·2. In the districts comprising the chief towns, the death-rate was 26·5, the average being 22·5; in the country districts, 20·4, as compared with an average of 17·5. The mortality in some of the great towns was excessively high; the annual rate per 1000 was 38 in Manchester, 36 in Salford, 33 in Leeds, 33 in Sheffield, 32 in Liverpool, 31 in Bradford, 30 in Hull, 30 in Birmingham, 27 in Newcastle-upon-Tyne, 25 in London, and 22 in Bristol.

MR. SKEY AND DR. MACLOUGHLIN.

In reading the letter to the *United Service Gazette*, in which Mr. Skey fully disposes of Dr. Macloughlin's claim on the Treasury for the sum of £30,000 for his alleged proof of the non-existence of an enthetic disease which, under the designation syphilis, has produced, and continues to produce, such an amount of sickness and invaliding among our soldiers and sailors, it has occurred to us that it may be well to remind our readers that previous to, and during the sitting of, the Commission over which Mr. Skey presided, there appeared in this journal a series of papers on "Modern Syphilography," containing information which, at that time, was very considerably in advance of the general knowledge of the subject in the Profession, and that the evidence of many of the best-informed among the witnesses then examined fully confirmed the doctrines laid down in the papers to which we allude.

THE TROOPSHIP "CLARA."

The military correspondent of the *Times* of Saturday last gives all the credit to the military authorities at Portsmouth for the discovery of the unwholesome state of the hold and decks of this ship, and for refusing to embark troops on board a ship of whose sanitary condition they entertained a doubt. But we believe that, if the whole facts of the case had been stated, it would have appeared that the initiative step had been taken by Staff Surgeon G. L. Hinde, in Medical charge of the drafts proceeding to India in the ship, who reported to the officer commanding the troops on board the state of the bilge to be bad, and that it would be highly dangerous to proceed to sea while such was the case. This opinion was fully confirmed by the principal Medical officer at Portsmouth, Dr. Gordon, C.B., who, on receipt of Mr. Hinde's report by the military authorities, was directed to survey and report upon the condition of the ship. The consequence was, that the embarkation of the troops was delayed until efficient measures were taken to remove all cause of offensive smells, which had arisen, it appears, from the decomposition of seeds which had formed part of the cargo of the ship during the preceding voyage, and some of which had worked their way in between the ship's timbers, and had rotted when acted upon by the bilge water. It is fortunate that the matter was so promptly brought to notice by Staff-Surgeon Hinde, and the probable danger of sailing into tropical regions under such circumstances thereby averted; but we do not think it was quite fair to the Medical authorities that the whole credit of the affair should have been ascribed to the military, on whom but a small portion of the blame would have rested if, the necessary steps not having been taken, an outbreak of disease had occurred during the voyage. "Honour to whom honour is due" is the watch-word of fair play all the world over, except in matters Medical and sanitary, in which this good precept is so frequently infringed that it would almost appear that, as in horse-dealing, the moral sense is subject to some strange perversion.

UNIFORM OF MILITARY MEDICAL OFFICERS.

The uniform of military officers having recently undergone some modifications and additions, by which a more ornamental character is imparted to it for dress occasions, we may be allowed to hope that some corresponding improvement may be introduced into that of Medical officers. The sombre dinginess of the black pouch and sword-belt might well be relieved by a few bars of gold lace, so as to assimilate the equipments to those of the Royal Engineers. We have received so many complaints about the cocked hat, particularly from those Medical officers who have to attend military parades on foot, that we are sure that its abolition would be received as a great boon. The badge V.R., though not open to any objection on the forage caps of Staff-Sergeants—the only other class in the army who wear it, we believe—might well be removed from those of Medical officers, and a gold-lace band substituted. At the same time, we think it might be well to consider the advisability of rendering the official costume of army Surgeons as purely Professional and as little military as possible; there are many experienced army Surgeons who would, we believe, advocate such a course.

FROM ABROAD.—LUNACY IN FRANCE—REDUCTION OF DISLOCATION OF THE FEMUR.

Before adverting further to M. Bouchard's papers on the French Lunacy Laws (*Medical Times and Gazette*, October 17, p. 455), we may refer to a paper which has just appeared in the Journal of the Paris Statistical Society for August, on the Statistics of the French Public and Private Lunatic Asylums during the seven years 1854-61, which seem to be the last concerning which any general report has appeared. Here is the summary given. 1. At the end of 1860 there were 57 public and 42 private asylums in France. Twenty-nine departments are, notwithstanding the law to the contrary, still without public asylums, and consequently often have to send their lunatics to most inconvenient distances. 2. The number of lunatics has continued increasing since the date 1835, which is the first year in which exact accounts of their numbers were kept. From 10,539 in that year they increased to 30,239 in 1861. The proportion of the increase has, however, diminished of late years; and, indeed, any increase at all may, to a considerable degree, be accounted for by the successive increase of new asylums providing for patients heretofore living with their families. 3. Of every 100 lunatics under treatment in the asylums in 1861, 87 were insane, 12 idiots, and 1 cretin. Among the insane there were 59 females to 41 males, and among the idiots 49 females to 51 males. 4. Of every 100 insane under treatment 81 were deemed incurable, and almost the whole of the idiots and cretins were so circumstanced. 5. Of every 100 patients, 51 were treated in public asylums, 23 in hospices, and 26 in private asylums. Of the 99 asylums, 70 contained less, and 29 more, than 400 patients. The three largest are the Salpêtrière (1362), that at Mareville (1347), and at Clermont (1247). 6. The increase of the number of annual admissions of 7·94 per cent. during 1835-39 diminished to 2 per cent. during 1855-61. 7. Of 100 admissions, 92 were lunatics, 7 idiots, and 1 cretin. 8. Of 100 admissions, 23 were due to relapses, transfers, or *réintégrations*. The relapses were more frequent in men than in women, as 102 to 100. It is during the first year of recovery that the greatest number of relapses occur. 9. More than two-thirds of the admissions were effected on demand of the authorities, and only one-third on that of the families of the insane. 10. There were 109 male to 100 female admissions among the insane, and 113 to 100 among the idiots and cretins. The fact of the predominance of females in the asylums already noted is attributable to the mortality among them being less. The mean duration of the stay of females in the asylum is 9 months 5 days, that of males 8 months 20 days. 11. On examining the ages of the lunatics admitted for the first time during 1856-60, it was found that insanity was scarcely met with before the 20th year, and that it continued to become more and more frequent between that age and 40. From this age the number of cases gradually diminished. 12. The unmarried exceeded the married lunatics nearly at the rate of 50 per cent. Is this enormous difference attributable to the fact that the unmarried, deprived of family care and consolations, support less easily the trials of life, or that, becoming insane, they have no other refuge than the asylum? Probably both circumstances contribute to the result. 13. Among 33,100 lunatics whose amount of instruction was inquired into, it was found that 27 per cent. did not know how to write or read. In the general population at the same age the proportion is 38·50 per cent. 14. The above conclusion as to the influence of education in the production of insanity is explained by the fact that (excluding soldiers and sailors, the large number of insane amongst whom may be in part explained by facility of admission) there was 1 admission per 1912 inhabitants following the liberal professions, 1 per 3609 proprietors and fund-holders, 1 per 5487 persons engaged in trade and commerce and artisans, and only 1 per 18,819 persons engaged in agriculture. 15. The urban element thus predominates greatly over the rural in the admissions. This, however, is much less to be attributed to the greater liability to insanity among agglomerated populations than to the greater strictness with which confinement of lunatics who may only possibly become dangerous is carried out in towns. 16. Among 30,738 patients, the causes of whose affections were more or less ascertainable, in 135 per 1000 of the male and 141 of the female lunatics hereditary predispositions were found, as also in 110 per 1000 of the male and 150 of the female idiots and cretins. In 607 per 1000 cases, insanity occurred under the influence of physical causes, and in 393 of moral causes. In 3014 of the male cases, or more than a fourth due to physical causes, the insanity was preceded by the abuse of alcoholic drinks. 17. The duration of the disease at the time of admission exerts great effect on the probability of cure. Of 1000 lunatics admitted for the first time, 174 had been mad less than a month, 269 from 1 to 6 months, 134 from 6 months to 1 year, 111 from 1 to 2 years, and 120 for more than 2 years. 18. Of 100 lunatics quitting the asylums, 53 did so after, and 47 before (by transfer, or escape, or after amelioration) recovery; of idiots, 5 after, and 95 before recovery. 19. The recoveries did not exceed 8·5 per cent. of those treated, and were more frequent in males than females. 81 per cent. of them took place during the first year; and the chances of recovery are greater in proportion to the shorter duration of the disease on admission, and as the patient is younger. Insanity due to moral causes is more easily curable than other forms. 20. As in ordinary life, a greater proportion of men die than women. About one-fourth of the deaths takes place during the first three months of treatment. There is greatest mortality amongst the most destitute classes, and more insane die who owe their disease to physical than to moral causes. 21. Of 203 violent deaths, 128 occurred in men, and 75 in women. 87 were accidental deaths due to physical causes, and 116 suicides. The number of the accidental deaths per annum was 12, and of suicides 16.

The same number of the journal contains a paper by M. Legoyt on the numerations of the insane which have been made on taking the various censuses. He observes that the great increase of their numbers would naturally cause great alarm were it not borne in mind that the procedure of inquiry and numeration has become more and more exact. In 1851 the insane, idiots, and cretins were all lumped together, and amounted to 46,357. In 1856 they were first distinguished, and then there were found to be 35,031 insane, and 25,259 idiots; total, 60,290. In 1861 still greater exactitude was aimed at, and the aid of the Medical men of the eighty-nine departments enlisted, and then

there were found to be 42,689 lunatics, and 41,525 idiots; total, 84,214. In 1866 great zeal was exhibited in getting at the true facts of the case as nearly as possible, and the numbers returned were 50,726 lunatics and 39,953 idiots—total 90,679; *i.e.*, an absolute increase of 6465, and a relative one of 7·67 per 100 for the period 1861-66, or 1·53 per annum, while the increase of the population for the same period was only 0·35 per annum. In 1861 there was 1 lunatic, idiot, or cretin for 444 inhabitants, and in 1866 1 for 420. In 1861 63 per cent., and in 1866 60 per cent., were treated *à domicile*; in 1861 37 per cent., and in 1866 40 per cent., in asylums. M. Legoyt believes that, as far as the rural districts are concerned, the number of lunatics may now be considered as pretty exactly ascertained; but he has very great doubts of this as regards the towns, and especially the large towns, where families, under the influence of false shame, contrive to conceal the patients as long as possible from observation, to the great detriment of their future recovery. As to the question whether insanity is really on the increase in France, he believes that the fact of the number of admissions being still on constant increase may be, in fact, explained by the far more rigid execution of the law of 1838 which is now insisted on, the departments being compelled to provide for their indigent insane by building or enlarging asylums, while the authorities sequestrate all lunatics endangering public safety. Still he thinks that insanity is on the increase, although not to the degree the results of these two last censuses would imply. It is not possible to furnish an exact account of the amount of such increase; but the fact of its existence is corroborated by the rapid increase of the number of suicides.

At the Academy of Medicine, M. Dolbeau, who is a candidate for the vacant seat in the section of Surgical Pathology, read a paper upon the reduction of dislocation of the femur by combined flexion and rotation, or, as he terms it, Desprès' method. He says that Pouteau, in the last century, first conceived the idea of reducing this dislocation without employing force, recommending flexion and moderate traction, at the very time when Petit was inventing his powerful traction machine. The gentler method has been subsequently recognised as the preferable one by various Practitioners; but it is to Desprès, in 1835, that is due the honour of combining into a method Pouteau's plan of flexion with rotation of the limb outwards. During ten years M. Dolbeau has had occasion to resort to this plan eleven times, eight of these being ilio-ischiatic, two ilio-pubic, and one ischio-pubic dislocations. They have all been easily reduced by himself alone without assistants, all the patients having been first submitted to chloroform. His experience, therefore, leads him to conclude—1. That all recent dislocations of the thigh may be easily reduced by Desprès' method. 2. This may succeed even when force has been employed in vain. M. Dolbeau gives a case of a dislocation of fifty-five days' standing which he reduced after several attempts with the pulleys had been made in vain. 3. The flexion of the thigh, combined with external rotation, permits the head to be disengaged from all the obstacles retaining it, causing it, at the same time, to traverse the various points of the circumference of the cotyloid cavity until it is brought in relation with the rent in the capsule, through which alone it can gain re-admission. 4. Always, before having recourse to force, Desprès' procedure should be tried. M. Dolbeau says he professes nothing new, but only recalls attention to a simple manœuvre in every one's power to execute, and the value of which has become doubled since the discovery of chloroform.

GENERAL HOSPITAL, BIRMINGHAM.—Two vacancies have occurred in the Medical staff of the General Hospital, occasioned by the resignation of Dr. Evans and Mr. Crompton, who have been connected with the Hospital for many years, and to whose labours much of its prosperity and renown must be ascribed. Already there are two candidates in the field, Dr. Bracey and Mr. Goodall. Both gentlemen are highly qualified for the appointment, and both have many friends. It is probable that there will be a warm contest.

ANNUAL MEETING OF THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE Poor-law Medical Officers' Association held their annual meeting and dinner at the Freemasons' Tavern, Great Queen-street, on Tuesday evening.

Dr. ROGERS, President of the Association, took the chair, and submitted the quarterly report of the Council, which announced that the Association now numbered over 600 members, and was represented by 66 local secretaries throughout England and Wales. The Council, in their report, put forth two main objects to be aimed at for the present—permanence of appointment and adequate remuneration. They urged that the best means of securing these was to increase their Parliamentary influence by obtaining promises of support from the Parliamentary candidates.

The report was approved and adopted.

The PRESIDENT delivered an introductory address.

Dr. THOMAS moved the first resolution—"That, in the opinion of this meeting, the salaries of the Poor-law Medical officers are totally inadequate to the onerous and very responsible duties they are required to perform; and the meeting recommends that the Council of the Association be authorised to memorialise Parliament on the subject, and to take such other steps as they may deem requisite to insure to the Medical officers a fair and equitable remuneration for their Professional services."

Mr. BENSON BAKER seconded the resolution, which was carried unanimously.

Dr. FOWLER moved the second resolution—"That this meeting is of opinion that all Poor-law Medical officers should be appointed for life, as recommended by the Select Committee of the House of Commons in 1854."

The resolution was seconded by Mr. BRUCE, and was also carried unanimously.

After a vote of thanks to the President and the officers of the Council, the meeting adjourned to the adjoining room to celebrate their annual dinner. After an excellent *menu* had been served up,

The PRESIDENT proposed the usual loyal toasts, which were heartily responded to.

In proposing the toast of the evening, "Prosperity to the Poor-law Medical Officers' Association," Dr. ROGERS spoke most hopefully of the rapid development of the Association since it had been thrown open to country members.

In proposing "The Press," the PRESIDENT paid a tribute to the immense advantages which the Medical Profession had derived therefrom.

Drs. ANSTIE and STALLARD responded to this toast, their names having been coupled with it, and the assembly shortly after broke up.

REVIEWS.

The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHRY, M.D., F.R.S., Professor of Anatomy in the University of Cambridge; and WILLIAM TURNER, M.B., F.R.S.E., Professor of Anatomy in the University of Edinburgh. Second Series. Nos. I. and II. Cambridge and London: Macmillan and Co.

SOME time ago we gave an account of a French perodical which had just then been published; it was intended to foster the study of physiology, and we described its contents as of a high character. It would be very unfair were we now, therefore, when two specimens of an English journal devoted to like purposes are before us, to overlook or under-estimate their value and importance. We are too frequently twitted with neglect of scientific pursuits to allow ourselves the satisfaction of pointing out that we are really not so bad as we are painted, and that scientific journals of high standing can make their way among English as well as among foreign Medical men. To turn, however, to the work more immediately before us, we shall attempt a short account of the materials contained in these numbers, some of which have already been laid under contribution for our readers' benefit. First, then, Mr. Gulliver again takes up the subject of mammalian blood-corpuscles, and again insists on their non-nucleated nature; but the whole subject has already been so fully discussed in these columns, in which Professor Gulliver's

lectures were published at length, that we may be excused from further reference to them. Dr. Macalister discusses the nature of the coronoid portion of the *pronator radii teres*, accepting the doctrine of Meckel that "whenever a muscle presents two or more separate heads of origin, unless when these are the result of the splitting of a single part, it indicates development from several distinct embryonic germs;" he tries to indicate the nature of this slip of muscle. He points out that it terminates variously, and that it may therefore be looked upon as a partially suppressed element coalescing with the nearest developed organ. Its comparative anatomy teaches but little, it being rarely prseent in the lower animals. Its homotypy in the lower extremity is equally barren, and the only clue to its nature Dr. Macalister finds in the laws of symmetry, from which he concludes that it is the germ of an upper transverse muscle existing at the lower part of the limb in a more highly developed condition as the *pronator quadratus*.

Dr. Chiene tells how, in a female subject dissected in the anatomical rooms in the University of Edinburgh, the two innominate veins opened separately and directly into the right auricle. In this respect it somewhat resembled cases described by Mr. Marshall and Professor Humphry. There were, however, certain other abnormalities, especially in the abdominal viscera. Among the most important of these was the extreme laxity of the attachments of the cæcum and colon, thus allowing these parts to occupy very abnormal positions.

Mr. Hulke, continuing his admirable researches on the optic apparatus of the lower animals, gives some account of the structure of the retina in the common porpoise, having had the opportunity of examining the eyes of one which died in the Zoological Gardens. This communication is further illustrated by a plate. In his conclusions he differs considerably from Ritter, who examined the eye of the *Balæna mysticetus*, and more closely corresponds with Schultze, whom Ritter had contradicted as to the existence of a membrana limitans externa. Unfortunately, we cannot enter more fully into this valuable paper.

At the suggestion of Professor Goodsir, Dr. Philip Hair had taken up the study of the muscular fibres of the alligator, and has, in his academic thesis, here reprinted, given some valuable results. The thick skin on the back is closely adherent to the muscular mass below, and the latter, when examined, presents certain tendinous intersections at a distance from each other, corresponding with the size of the armature plates. The marks are semicircular, and their concavities are all turned in one direction. They represent the bases of cones, in which the muscular mass is arranged, and each cone is connected with its neighbours. Further, each cone, being hollow at its base, contains the apex of the one immediately succeeding it, and so on. The cones are slightly flattened from before backwards, and in this way the animal's powerful muscles are built up. Dr. Hair further describes the general relations of the muscles, and corrects certain mistakes into which he thinks Professor Haughton has fallen.

Professor Humphry contributes an account of the skeleton of a rickety dwarf, which is also illustrated by a figure. He points out from it the influence of rickets in dwarfs in altering the relative sizes of the bones. In this case the femur was only the length of the tibia. Another peculiarity is the enlargement of the extremities of the long bones, dependent on growth of cartilage and non-development of bone. In the instance given the individual was old, and the skeleton presented all the marks of advanced life. The measurements of the various bones are given, and contrasted with their normal sizes.

Professor Rolleston gives a most interesting article on domestic cats, ancient and modern. He holds that the white-breasted marten was the animal employed by the ancients as we employ our domestic cat, but that the latter animal has been used in its present capacity in Western Europe for upwards of a thousand years. It would be impossible to give a full view of his argument without entering more into scholarly details than it is customary or proper for us to attempt. It is, in reality, a work for learned naturalists, such as are fortunately not wanting in our Profession.

Dr. Balthazar Foster, of Birmingham, treats of a new plan for increasing the pressure of the sphygmograph, and thereby adding to the utility of the instrument. The plan he recommends is to add little weights which shall act directly on the spring of the instrument, not indirectly as hitherto proposed, whereby much friction is avoided. Professor Turner, of Edinburgh, gives some account of the anatomy of the pilot whale, a specimen of which he secured from the Firth of Forth. The vessels, the organs of digestion, and the cervical structure are here described; an account of the brain is to be given in a subsequent article. An excellent paper, read by Dr. Anton Dohrn before the British Association in 1867 on the morphology of the Arthropoda stands next; it adds materially to our knowledge of the various stages of growth in these creatures, especially Mysis and Cuma. A physiological demonstration by Dr. Rutherford, of Edinburgh, on the subject of *electrotonus*, follows. It conveys a clear and distinct notion of this curious phenomena, as well as of the best means of causing its manifestations. Dr. Charlton Bastian's paper on some new methods of preserving thin sections of brain substance has already been extensively quoted in these columns, so that there is no necessity for further reference to it here. A note on a three-toed cow, by Neville Goodman, B.A, and a highly elaborate article by Mr. Mivart on the osteology of the Insectivora, conclude this portion of the work, which, however, further contains some excellent reviews and physiological notices, some of which we have laid before our readers.

The second number of the new series of the journal is somewhat larger than the first. It commences with an article by Professor Cleland, of Galway, "On an Abnormal Arrangement of the Peritoneum; with remarks on the Development of the Mesocolon." This is intended to supplement the paper by Dr. Chiene in the former number of the journal. Professor Cleland is opposed to the notions propounded by Dr. Chiene. Next come some notes on the myology of the *Viverra Civetta*, by Mr. C. W. Devis, Manchester. The nature of the paper prevents any abstract being here given. Dr. Chiene in this number contributes a description of a case of intra-peritoneal hernia. He thinks that intra-abdominal herniæ might be classified as intra-peritoneal, the peritoneum being unruptured; extra-peritoneal, but intra-abdominal; and those cases where the hernia lies in the smaller cavity of the peritoneum. Another curious abnormality described by Dr. Chiene is an obliterated internal jugular vein. Probably the most valuable paper in the volume is that which next occurs, being the joint production of Drs. Crum Brown and Frazer. It deals with the connexion between chemical constitution and physiological action. Their experiments were intended, by giving rise to certain known changes in certain bodies, and studying carefully the consequences of these changes in the bodies, to give some notion of what was variable and what constant—in other words, of the results of the changes in the bodies. The bodies investigated were iodide of methyl-strychnium, with the sulphate of the same compound radical, as well as corresponding compounds of brucia, thebaia, codeia, morphia, and nicotia. Apart altogether from the valuable facts contained in this communication, it is of immense value as suggestive of quite a new line of research.

Dr. Grainger Stewart reports a case of congenital malformation of the Fallopian tubes. Both were closed externally, and connected by means of connective tissue with the rectum. Professor Strangeway gives some account of a supernumerary oblique muscle discovered by him in the eyeball of an ass. He thinks it acts as a sort of check to the superior oblique. A most interesting paper by Professor Turner follows. He describes a tumour removed from the body of a man aged 54. The tumour was connected with the lower portion of the spine and pelvis, and presented a structure similar to that of the fœtal chorda dorsalis. Professor Huxley contributes a paper on the form of cranium among the Patagonians and Fuegians, adding certain observations on American crania in general. He places the Patagonians among the brachycephalic, and the Fuegians among the dolichocephalic races, thus opposing the notion that all American crania are of one type. Dr. Murray, of Newcastle, makes some very good remarks on osmosis as related to digestion and dyspepsia. He endeavours to show that faulty or insufficient elimination may be the cause of faulty nutrition; if the former be corrected, the latter will improve. Dr. Blake, of San Francisco, sends a short note as to the nourishment of the fœtus in viviparous fishes; and Dr. Davidson, of Liverpool, mentions a case of malposition of the right kidney.

Two important anatomical papers follow, one by Mr. Macalister, Demonstrator of Anatomy Royal College of Surgeons of Ireland, on the homologies of the flexor muscles of the vertebrate limb, and the other by Professor Humphry, of Cambridge, on the myology of *Orycteropus capensis* and *Phoca communis*. The former of these, an Edentate, has scarcely been hitherto described. Mr. Bankart, Demonstrator at Guy's Hospital, treats of the function of the buccal branch of the fifth nerve. He concludes that in the dog it is purely

sensory, and does not preside over the functions of the buccinator muscle. Dr. Beigel next communicates an elaborate article on the nature and action of Indian and African arrow poisons. It is well known that these poisons are totally different in character; this Dr. Beigel's researches confirm, and add some important materials to our knowledge of their action. Professor Cleland gives a short paper read before the British Association in 1867 on the epithelium of the cornea of the ox. He endeavours to show that the ordinary notions as to the growth of epithelium by the subjacent layers giving rise to the more superficial are scarcely tenable. Lastly, Dr. McIntosh describes the structure of a monstrous kitten.

Not the least useful, and certainly not the least able, portions of this journal are the abstracts and notices of advances made in anatomy and physiology; made by men who thoroughly know what is being done on the subject, they possess twice the value of the random selections made by quasi men of science. The journal has a good work before it, and the valuable communications it contains—in fact, we might say the altogether admirable manner in which it is conducted—give good assurances of this being well done.

FOREIGN CORRESPONDENCE.

GERMANY.

The Annual Congress of German Naturalists and Physicians.

BERLIN, October 5.

DRESDEN is perhaps as well suited as any other German town for receiving within its walls the members of a scientific congress, and supplying at least the external elements of success. It is neither a University nor a great industrial centre, and yet there is something in the place that exerts an irresistible attraction on all those who take an interest in art and science, and liberal pursuits altogether. If in the metropolis of England everything seems to work at full steam, and in most Continental towns of any pretensions everything is working at half-steam, one may say that in Dresden there is no steam whatever, but a happy *laisser-aller*, which is infinitely refreshing to those who have been in harness for ten or twelve months previously, and to whom the cares and troubles of practice have left little or no time for recreation and quiet leisure. Dresden, indeed, would appear to have but little changed during the last fifty or a hundred years. To be sure, there is a railway station, and there are steamers plying on the Elbe; but the Castle, the Zwinger, and most public and private buildings have that venerable air of antiquity for which one now looks in vain in the great political or industrial centres of Europe, where everything old has been, or is being, pulled down, and all that meets the eye is almost painfully fresh and new. By mere way of contrast, therefore, Dresden appears most delightful and enjoyable to those who have been wearied before by our rather too rapidly advancing civilisation.

The venerable Professor Carus had been last year elected president for the Dresden meeting, but this was generally looked upon as an act of courtesy rather than an earnest of the intention to have him take an active part in the proceedings of the Congress. A philosopher of the old school, a contemporary of Schelling and Oken, a man who is burdened with far more than threescore and ten, and utterly estranged from the science of the present day, could not be expected to take upon himself the by no means easy task of arranging everything for the convenience of a host of more or less youthful visitors, to some of whom he might have been great-grandfather; or to preside over debates, some of which might have been unintelligible or distasteful to him. Yet the Nestor of Saxon Medicine could not forego the pleasure of addressing a written warning, in the old spirit of Schelling, to the materialistic tendency of modern scientific investigations, and which read, indeed, to our profane eyes as if it had been penned in 1799. The origin of all things (so the venerable philosopher said) was in the high (whatever that may mean), while their ultimate end was in the deep. Just as brooks and rivulets, rivers and streams, poured their waters into the widely-branched basin of the ocean, and again evaporated from the sea in the form of vapour, thus human life, knowledge, or energy was not possible without the synergy of all individuals for the highest aims of humanity; and just as, in the grey antiquity, the Egyptian priest stood at the waters of the Nile, in order to watch the eternal rising and falling of the river, thus the thinking observer stood at the current of the history of mankind and science, in order to observe and to write down its alternate fall and rise!

The first meeting of the Congress, which took place on September 18, under the presidency of Professor Schlömilch, was graced by the presence of his Saxon Majesty and the two Royal Princes, as well as of the Minister of State, Baron von Nostiz. The president opened the meeting with a few pleasant and pithy remarks, after which M. de Nostiz welcomed the assembly in the name of the Government, in a well-set speech, in which great stress was laid on the practical importance of scientific pursuits, and the high value attached to them by the Saxon Government. M. von Nostiz was loudly cheered, and was followed by the Burgomaster of the town, who gave expression to the feelings of gratification with which the citizens of Dresden looked upon an assembly of such a distinguished character meeting for the second time in their city.

The first general address was delivered by Professor Bruhns, and treated of the most recent celestial phenomena. At the present moment (he said) astronomers were chiefly occupied with the endeavour to determine the so-called astronomical fixed points. The work was now so well organised throughout Europe that we should most likely, within another ten years, have a perfect knowledge of the position of a hundred thousand stars. Three new asteroids had been discovered during 1867, making the entire number 102. Encke's and Brorsen's comets had both returned. The observation of the former of these, which took the same apparent course as it had done in 1825, did not yield any certain results concerning the periodical weakening of the comet which had been asserted to take place by some astronomers. A correct determination of the resisting medium had not yet been made, but we knew already that it was not identical with the "æther" of physicists; and Olbers's supposition that the zodiacal light was the medium in question had lately found some supporters. Brorsen's comet required five years and a half to return to its perihelion, and had been observed in 1846, 1857, and 1868. It did not appear from the observations made concerning the same that there had been any diminution in its light. The question whether there was any definite connexion between comets and shooting-stars had not yet been settled. Some astronomers were of opinion that shooting-stars were comets, either in process of formation or dissolution, while others denied that there was any such connexion. Professor Bruhns closed an able address with some remarks on the total eclipse of August 18, saying that we should no doubt gain considerable information from the reports which were now being drawn up, since no eclipse of such long duration had previously been observed with the aid of the polariscope, spectroscope, and the photographic camera.

The second general address was delivered by Professor Virchow, "On Instruction in Natural Science." He said that although for the present the question of general disarmament was one of the most urgent public concerns, yet, as soon as "armed peace" was put an end to, the question of education would occupy the world principally; since it was even now generally understood that the system of education had to be entirely remodelled, if the European states were to continue to lay claim to intellectual progress. It was necessary that far more time should be given in public schools to instruction in natural science. The objections which people in high places had previously entertained against the so-called dangers of natural science were gradually waning away. It was not true that natural science had ever been aggressive; on the contrary, it had always been attacked, especially by the Romanists, who thought it incompatible with their doctrines. Natural science ought to be extensively taught, not only because it was useful, but also because it was an excellent educational agent, second to none in training the mind. It had been objected by some that there was too much change in natural science; but wherever there was life, there must be change and progress. Change was observable in other domains that that of natural science. The same church which had excommunicated Galileo on account of his observations in natural philosophy, had only this year sent out a celebrated astronomer, Signor Secchi (and a Jesuit, too!), for observing the eclipse, and had furnished him with all modern appliances suggested by the progress of natural science. Next to the Church, "historic truth" had always been believed to be unchangeable. Yet the discovery of new documents had entirely changed our knowledge of some of the most important historical transactions. As an educational agent, natural science was so important, because its method was that of

repeated examination and severe criticism, and because it encouraged men to see for themselves, and to form their own judgment about things.

The second general meeting took place on Monday, September 21, when the voice of the assembly was taken as to where to meet next year. Professor Seitz, of Munich, recommended Innsbruck, in the Tyrol, where the Congress had never met before, where there were considerable treasures of art and science, and whence it would be easy to run over to Florence, to take part in the International Medical Congress to be held there in 1869. It was objected to this that Innsbruck might be looked upon as almost the centre of Austrian obscurantism and intolerance; but Professor Seitz said justly that this was the very reason why it would be so desirable to go there and meet the enemy face to face. This view of the matter seemed to recommend itself generally to the meeting, which adopted Innsbruck by a large majority, only a few votes being given for Hamburg and Stuttgardt.

Professor Hallier, of Jena, then gave an address "On the Parasites of Infectious Diseases." He said that it was Böhm who, thirty years ago, first discovered minute organised beings in the intestines of cholera patients. This important observation, however, remained unnoticed for a considerable time. The minute organisms observed by Böhm belonged to the species of Bacteria and Vibrio, which had been known as far back as the last century, but had only been accurately examined by Ehrenberg, and which were by some zoologists classed amongst the Infusoria, while others placed them with the Algæ and Fungi. Quite recently a number of observers had commenced to investigate their origin and their conditions of life, because the fact of their being found in fermenting and putrid substances, as well as in pathological liquids, had invested them with a considerable degree of interest. It had been too much the custom in former times, as soon as any such formations were observed, to make immediately a number of species and genera of them, without investigating at all the origin of these minute organisms. It had now been shown that they were nothing but lower grades of development of higher classes of fungi. In sixteen infectious diseases the presence of a peculiar and characteristic fungus had now been demonstrated—viz., in cholera, typhoid fever, typhus, measles, dysentery, and certain diseases of the domesticated animals. Whether the parasite was the actual cause of the pathological process could at present not be made out with any degree of certainty; but the fact that certain peculiar forms of parasites were invariably present in certain diseases was no doubt most significant. In the disease of the silkworm it had been irrefutably proved that, in spite of numerous conditions favouring the tendency to the development of the disease, the parasite itself was the sole and exclusive cause of it, and that not only the hereditary transmission, but also the epidemic character of the complaint, was entirely dependent upon the presence of the parasite.

The afternoon of the same day was devoted to a pleasant excursion to Meissen. The railway directors had provided a train, capable of accommodating 1000 passengers, gratuitously; and on our arrival at Meissen we were received with all honours by the municipal authorities, while salvos of artillery announced the fact to the natives. A splendid musical performance then took place in the cathedral, after which some visited the Royal China Manufactory, others a mineralogical collection which had been purposely got up for the occasion, while again others strolled about to enjoy the pleasant scenery, or thought of their papers which were to be read next morning in the sections.

GENERAL CORRESPONDENCE.

THE CONTRACT WITH ACCOUCHEURS.

LETTER FROM DR. DANIEL W. PARSONS.

[To the Editor of the Medical Times and Gazette.]

SIR,—It may interest your readers to know the decision given by Mr. Blair in the County Court, Liverpool, in a case in which I sued a patient who engaged me to attend her in her confinement, but who did not send for me at the time. His Honour's decision was as follows:—

"In the case of Parsons *v.* Ravelon, the plaintiff seeks for compensation for the non-fulfilment of a contract, as between a Medical attendant and patient. The defendant states that his wife was taken suddenly ill, and was obliged to send for the nearest Doctor. This is quite possible; and I cannot think that, under such circumstances, the plaintiff is entitled to recover. No actual loss has been sustained by the plaintiff. There is no proof nor statement made by him that such engagement prevented him making similar contracts for the same time. I can very well understand that a monthly nurse should recover, if her services were not demanded after she had been engaged, because she could not form another contract for the same time; but an engagement between a patient and a Medical man is not a legal contract, but subject to contingencies." Verdict for defendant accordingly.

If such be the law, Sir, it is high time that we adopted the plan which is so general with our friends of the bar—namely, get a retaining fee of, say, half a guinea, from those who wish to secure our services in their time of trial. I intend to adopt this plan in future with strangers, and I shall be glad to hear that the general body of Practitioners will take the hint and do so likewise. I am, &c.

DANIEL W. PARSONS, L.R.C.P. Lond., etc.

31, Everton-crescent, Liverpool, October 24.

THE SALE OF POISON AND PHARMACY ACT.

[To the Editor of the Medical Times and Gazette.]

SIR,—The "Sale of Poison and Pharmacy Act" passed last session causes considerable dissatisfaction amongst Medical men, because their privileges are invaded, their vested interests much curtailed without an equivalent, and their efforts to ameliorate human suffering hampered. The Act seems as if designed to have a slap at the Medical Profession in Scotland, and so cleverly was it accomplished that it was not till the Bill was about to become an Act of Parliament that the obnoxious changes were made, and that too at a time when the Scotch Universities and Colleges were in a manner lured into silence.

The Bill went through the House of Lords, and was presented to the House of Commons for the first time on June 22, 1868. In the former House the rights and privileges of Medical men were completely preserved; for the 16th clause said, "Nothihg hereinbefore contained shall extend to or interfere with the business of any duly qualified Medical Practitioner," or any Veterinary Surgeon, etc., but on July 15 the Bill, as amended in Committee of the House of Commons, left out the words "duly qualified Medical Practitioner," and inserted "legally qualified apothecary," a class of Medical Practitioners almost unknown in Scotland. I have reason to believe that the Secretary of the Pharmaceutical Society, who must be supposed to be up to the legal interpretation of the 16th Clause, says "that Medical men who are not apothecaries cannot sell or keep open shop for retailing, dispensing, or compounding the articles mentioned in Schedule A."

Why one class of Medical Practitioners, veterinary Surgeons, and others, have their privileges preserved, and another class of Medical men consisting of Physicians and Surgeons, constituting the entire bulk of Practitioners in Scotland, have their privileges withdrawn, although armed with diplomas specially authorising them to practise pharmacy given by royal colleges and faculties which are incorporated and chartered by Parliamentary Acts, one so recently as the 13th Vict., chap. xxiii., to exercise and enjoy all rights to practise in the arts or sciences of anatomy, Surgery, and pharmacy, is to me quite incomprehensible unless ultimately to prevent Medical men from selling or keeping drugs. Error cannot account for the change of "duly qualified Medical Practitioner" into "legally qualified apothecary," but intention and design may.

It is odd that it is legal for Medical Practitioners and chemists and druggists to sell or dispense certain drugs mentioned in Schedule A up to January 1869, but after that date it is illegal for Medical Practitioners, unless apothecaries, but legal for chemists and druggists. What has occurred, or may occur, between the passing of the Act and January next to diminish the knowledge and lessen the responsibility of the legally qualified Medical man and to increase the knowledge of the mere druggist in botany, chemistry, Materia Medica, or toxicology, is hard to say.

Look how the Act is to work. A Medical Practitioner, suppose him an M.D. and L.R.C.S.Edin., and there are plenty such practising all over Scotland, is asked to visit a patient for whom opium or any of its preparations is considered necessary, and the sooner it is got the better. At present the Medical Practitioner would likely say, "Come to my surgery, and I will give you the medicine." But after January 1 he

cannot legally sell it; his patient will require to send miles—ten, fifteen, or twenty—to procure the dose of opium from the so-called pharmaceutical chemist. An apothecary, according to the 16th and 17th clauses, would be allowed to supply "his patient" in the above case, but no other Medical man could legally do so.

I have in the above long letter gone on the assumption that the Secretary or Registrar of the Pharmaceutical Society is correct in his legal interpretation, and, I admit, I think he is. I have doubts, however, if a general Act can annul private Acts of Parliament and repeal charters without even referring to them; but there should be no doubt on the matter; the different Colleges should assure their Licentiates that their privileges are secure, and their position unassailable by the Act promoted by the Pharmaceutical Society.

I am, &c.

October 23. A Many Years' Subscriber.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 20.

J. Simon, Esq., F.R.S., President, in the Chair.

After some opening remarks by Mr. Simon,

Dr. Peacock exhibited an Aneurism of the Cerebral Artery, from a female who was seized, in December, with coma, convulsions, paralysis of the right side, and loss of speech. She recovered considerably, but in February a second attack cut her off. Extensive extravasation was found to have taken place in the left side of the brain. There was no connexion between the sac of the aneurism and the blood effused; but there was extensive softening of the brain at the part.

Dr. Peacock also showed a case of Malformation of the Heart sent him by Mr. Gascoyen.

Dr. Burdon Sanderson presented the Supra-renal Capsules from a female who had died in the Middlesex Hospital of Addison's disease. The chief points of interest in the case, in addition to the characteristic symptoms found in Addison's disease, were that the history was one of phthisis, and there were evidences of tubercle present in the lungs. The temperature, however, was normal. The pulse was constant; but the respirations were variable, according to the presence or not of attacks of dyspnœa under which she occasionally laboured. She had several attacks of incoherence or maniacal delirium, which passed off. She died rather suddenly of exhaustion. The post-mortem examination showed that the semilunar ganglia and nerves connecting them with the capsules were surrounded by adenoid tissue, which also enveloped the capsules. Both capsules were diseased; the left more advanced. The left capsule was adherent to the kidney; the right to the liver. There were two substances observable in the capsules: one the normal cortical tissue, and another which had the characters of the adventitious or adenoid tissue.

Mr. Carr Jackson exhibited a case of Cancer of the Lungs, secondary to Osteoid Cancer of the Humerus, for which the patient, a boy, was operated on in October last. He made a good recovery; but in the spring his lung became affected, and he died in a month. The pleura was full of fluid; and an irregular tumour was found in the lung, with bony nodules. The stroma had undergone partial fatty degeneration.

Mr. Jackson then showed two specimens of Calculus—one phosphatic, of ten months' growth, removed from a boy, who had passed a piece of sealing-wax with wire attached into his bladder. Lithotomy was performed, and the wire found forming the nucleus of the calculus. (The President remarked on its peculiarly lobed appearance on section.) Another, a mulberry calculus, from a boy, who had suffered for ten years with symptoms of stone. Lithotomy was performed, and he recovered well.

Dr. Murchison exhibited a Liver, from a patient, aged 41, who had died with vitiligoidea. He had been very intemperate, and had had dyspeptic symptoms five years. These increased, and three years afterwards he observed swelling of his abdomen. A few months before admission in July, jaundice and epistaxis supervened. His motions were never, before or after admission, free from bile. There were no patches or tubercles on the gums, hands, or elbows. There were, however, tubercles in the eyelids, and pityriasis, with great itchiness. The abdomen was greatly enlarged; the surface smooth, dense, and slightly tender, with constant pain in the region of the shoulders. There was no evidence of ascites. The tongue was dry and unusually red; and there was much vomiting after food. There was a systolic murmur at the base of the heart. The urine (specific gravity, 1012) contained no leucine or tyrosine, but bile and a small quantity of albumen. He died ten weeks after admission, the jaundice having increased, and purging and hæmatemesis supervened. When the tubercles of the eyelids were examined microscopically, minute granules of oil and compound granules were found in the cutis. The liver, which weighed eighty-one ounces, was pale and dense, consisting of jaundiced lobules of the liver and a dense white material made up of nuclear deposit, like adenoid matter, and apparently becoming fibrillated. It seemed like early cirrhotic liver. The glands in the fissure of the liver and along the large arteries of the abdomen were enlarged. The spleen, which weighed twenty-three ounces, and the kidneys, contained masses like embolic deposits. There was a large simple ulcer of the stomach, which had perforated. Its floor was formed by the pancreas. Two semilunar valves were united together.

Dr. Fagge remarked that this case—the seventh recorded instance in which jaundice had been associated with vitiligoidea—would go far to convince those who still denied the connexion between the two affections. What he had asserted was not that all kinds of jaundice might produce vitiligoidea, but that this change in the skin went with a peculiar form of jaundice, lasting for years, and independent of obstruction of the ducts. He must, however, modify his former statement as to this connexion being constant. There was no doubt that vitiligoidea of the eyelids might occur without jaundice. One of his out-patients now presented an example of this, and the mucous membrane of her mouth also showed the characteristic change.

Dr. Douglas Powell exhibited for Dr. Quain a case of Congenital Opening in the Pericardium.

Mr. Birkett exhibited a Fibro-plastic Tumour developed around the Knee-joint, and amputated on the 16th inst. It was referred to the Committee on Morbid Growths.

Dr. Fagge exhibited a living patient affected with Diffused Scleriasis. The case was a typical example of the form of disease described by Thirial in 1845, and the first (Dr. Fagge believed) which had been noticed in this country. The woman was aged 40, and the affection had begun about seven months before with a feeling of stiffness and hardness at the back of the neck. The skin at this part soon became hard, and the change rapidly spread over the whole body. When she was admitted into the Hospital, it terminated rather abruptly at the epigastrium, but now the hands and feet were the only parts entirely free. The skin was rather of a brown tint; there was no decided loss of sensation, and the temperature in the axillæ was not higher than 97·8°. She had derived some benefit from hot baths. Dr. Fagge remarked especially on the relation which he believed to exist between this affection and that known as the "keloid of Addison," which by all German writers was included under the head of sclerodermia or scleriasis. If such a connexion could be proved, it would tell greatly against the view that Addison's keloid was a representative of the ancient leprosy, and also against the opinion that the seat of the patches was in any way dependent on the distribution of nerve-trunks.

Mr. Sydney Jones brought forward an enormous Enchondroma of the Scapula, which had commenced when the patient was 9 years old, and continued increasing for fifteen years, the last year very rapidly. He had suffered little inconvenience latterly, except from the weight and numbness of the arm. It was removed, along with the entire scapula, on October 2; but the patient died on the fifth day from exhaustive inflammation of the neck, the muscles being infiltrated with pus. The viscera were healthy.

Dr. Crisp exhibited the Cerebellum of a young lady 13½ years of age, who died, in a short time, from rupture of a vessel in the left lobe. He (Dr. Crisp) thought that there were not many cases on record where a girl in good health, and with all the organs of the body apparently in a normal state, had died at this early age of sanguineous apoplexy. As far as his researches had gone, he found that the greater number of these cases of sanguineous apoplexy in early life was among the female sex.

Dr. Crisp also exhibited the Kidneys of a young man who had died of phthisis. They were excessively congested, and they weighed fourteen and a half ounces. The patient had been a large spirit-drinker.

Mr. Pick showed for Mr. Prescott Hewett a Cystic Tumour of the Breast, of eighteen years' standing, taken from a patient aged 40. The cysts had been frequently tapped, and a clear fluid drawn off. The axillary glands became cancerous, and she soon died.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 7, 1868.

Dr. Hall Davis, President, in the Chair.

Dr. Bousfield, of Thetford, was elected a Fellow.

Dr. Wynn Williams exhibited a specimen of ovarian tumour, and gave full details of its dissection.

Dr. Heywood Smith exhibited an early fœtus in which an intra-uterine rent of integument had occurred. Referred to a committee for further report.

Dr. Gervis exhibited a double monster, in whose delivery there occurred several points of obstetric interest.

Dr. Tilt read a paper on

"IRRITABLE UTERUS."

The author commenced by objecting to the term "irritable uterus" as representing a pathological nonentity, unless it were only intended to mean the aggravated uterine neuralgia that may accompany any kind of chronic uterine and ovarian disease in women of highly susceptible nervous system. He remarked that the eminent Practitioner who invented the term, and thought it represented a new disease, was well aware of the neuralgic character of the phenomena he had observed, comparing it with the hysterical joints of young women, of which Sir Benjamin Brodie had then lately written. Dr. Tilt observed that it was not Gooch's fault if, when he wrote, uterine pathology was in a very defective state, for the means of diagnosis were so very imperfect that he could not separately identify several chronic uterine diseases that set on foot and kept alive that distressing form of neuralgia which he looked upon as a separate disease. Dr. Tilt maintained that there was no greater difference between the intense form of uterine neuralgia called "irritable uterus" and the ordinary pains of uterine disease than between the toothache of a long-diseased fang and the toothache of a comparatively healthy tooth, or than between an ordinary headache and the excruciating cerebral neuralgia of brain tissue the nutrition of which has been impaired by years of confinement to a sick room. He considered the paramount cause of uterine neuralgia to be a morbidly inclined nervous system, without which severe uterine disease will not cause severe uterine neuralgia. Given this morbid tendency, a very slight amount of any kind of uterine or ovarian disease may cause all the symptoms described as "irritable uterus." It may be congestion of the womb, or metritis, or cervical ulceration, or uterine displacements and flexions, the amount of mischief being often small, but there is always evidence of the womb having been more or less diseased for many years. Entertaining these views, Dr. Tilt entirely dissented from the statement lately put forth by Dr. Graily Hewitt, that "irritable uterus" was nothing more than retroflexion of the womb in a marked form. Dr. Tilt found aggravated uterine neuralgia to be of such rare occurrence that he could not understand how it could be considered of comparatively frequent occurrence, unless the name was given to ordinary cases of retroflexion. Neither could he reconcile the assumed possibility of almost universally curing irritable uterus by the use of the American pessary with the well-known fact that many of these cases of aggravated uterine neuralgia are actually made worse by Surgical manipulation.

Dr. Meadows then read a paper on

FLEXIONS OF THE UTERUS.

The author began by asking whether the congestion and inflammation, with the attendant pain and local distress, which are so frequently present in uterine flexions, are the cause or the consequence of such flexion. He pointed out the practical bearing of the question in its relation to therapeutics, showing that if they were the cause of the flexion, treatment should be mainly directed to them, but if the consequence, then the mechanical reposition of the uterus claims first attention. Allusion was made to the recent advocacy of the latter view by Drs. Graily Hewitt, H. G. Wright, and others, from which the author expressed his entire dissent, maintaining that the former was entirely reconcilable with the clinical history of these displacements, and contending that the explanations offered by the advocates of the latter view were not borne out by facts. The author showed that in the great majority, if not in all, the cases of uterine flexion which apply for treatment, congestion and inflammation of the uterus exist, and he adduced the following reasons for believing that this inflammation almost invariably precedes, and is the principal if not the sole cause of, the displacement:—1. That very commonly there is an antecedent history of uterine disorder. 2. That cases are often met with presenting very much the same general symptoms as those met with in uterine flexions, but where, on examination, inflammation without any flexion whatever is discovered. 3. When in such cases flexion takes place, the additional symptoms are due merely to the mechanical effects upon the surrounding parts, and are clinically separable from the preceding symptoms. 4. Cases of acute flexion are sometimes met with where no uterine symptoms whatever exist, and in such cases there is a complete absence of all inflammation. Various statistics were brought forward to prove that enlargement of the uterus from frequent gestation strongly predisposes to uterine flexion. Lastly, the author remarked that for the foregoing reasons our first care in the treatment of those cases ought to be to remedy that which is not only the cause of the flexion, but is at the same time responsible for by far the greater part of the patient's sufferings. When this is accomplished, but not before, we may resort to mechanical or other treatment for the reposition of the organ. The author believed that great evils would be likely to ensue if this plan of treatment were reversed.

Dr. Henry Bennet thought that the differences of opinion alluded to in the valuable papers just read might be briefly embodied in two views, which divided the Profession as it were into two camps. One party attributed most of the varied forms of uterine suffering to displacements; whilst the other thought that these displacements were generally secondary and often unimportant, and that the uterine suffering was generally the result of chronic congestion and inflammation. To this latter section he himself belonged. He was profoundly convinced that the real benefit to be derived from the treatment of uterine diseases generally was oftener prospective than present. There were so many sources of fallacy at the time of treatment that it was vain then to judge of the results obtained. The rest from usual occupations, the attention to general health, the removal of abdominal pressure from the uterus by the recumbent position, or the temporary removal of down-pressure by pessaries, all contributed to produce a fallacious improvement. For his own part, he looked for the real result six months, a year, or more after the entire cessation of treatment. He was not satisfied with an examination, unless so made that every part of the cervix and its cavity was as clearly seen as the palm of the hand; or with treatment, unless all inflammatory disease was removed. Once treatment ended, he usually placed his patients under a good home hygienic system, including cold water uterine douches, and then, if the patient be really free from inflammation, nature unaided generally does the rest, fines down hypertrophied tissues, and restores the uterus to its natural size. He had found that then, with few exceptions, his patients cared nothing at all for the displacements and flexions which often still existed; indeed, he had known patients who had had slight retroversions and flexions for ten or twenty years without any consequent trouble. He would also remark that there were two causes of uterine flexions which were not sufficiently taken into account—viz., arrested absorption of the uterine tissues after miscarriage or childbirth, and marital contact. After childbirth the uterus had to fine down in six weeks from a weight of thirty ounces or more to that of two or one and a half, and any contusion or laceration of the cervix, any inflammatory action in any part of the uterus, arrests this process, the uterus remains at eight, six, four ounces, and becomes displaced from over-weight. Hence, to cure the displacements it is necessary to treat the inflammation or lesion which has led to it. Marital contact, as a cause of displacement, was of still more frequent occurrence. If the cervix were rigid from inflammation, it was mechanically retroflexed and thrust towards the sacrum, or if the uterus responded to the leverage, the latter was thrust forward in anteversion and the cervix backwards. What mechanical treatment could permanently remedy such a condition, in itself innocuous and most common in married women?

Dr. Graily Hewitt considered that while the subject under discussion was of the very highest importance and very suitable for discussion, it could hardly be settled by discussion

alone. He felt much obliged to Dr. Tilt and Dr. Meadows for the courteous manner in which they had dealt with the matter so far as he was concerned. With reference to the point for which he had in a recent paper contended—the identity, viz., of cases of supposed irritable uterus and cases of retroflexion of the uterus—the views expressed were the result of careful clinical study, and he had nothing on this head to retract or modify. Dr. Meadows had, however, inferentially allowed it to be supposed that he (Dr. Hewitt) thought little of inflammation of the uterus as connected with flexions of the organ. On the contrary, he believed that in almost all cases of flexion there was a condition of the uterus characterised by engorgement, congestion, enlargement, etc., pre-existing and predisposing thereto. So far, then, he entirely agreed with Dr. Meadows. But as to the question whether in cases of flexion the coexisting engorgement, increased bulk and tenderness constituting the "irritability" or "inflammation," as you please to call it, be the cause of the symptoms, as Dr. Meadows contends, or the reverse, he differed from Dr. Meadows, and believed that, pathologically as well as therapeutically, the flexion was the prominent and remarkable feature of these cases. The tenderness of the uterus was generally limited to the displaced fundus, which was usually sensitive to the slightest touch. The restoration of the organ to the proper shape was, in his mind, the first indication, and the success of this mode of treatment amply justified this view of the case. To treat the inflammation of the uterus without altering the shape of the organ appeared to him as illogical as the application of cooling lotions to the arm with the view of reducing a swelling and tumefaction due to a dislocated shoulder-joint. The parallel was not complete, but would serve to illustrate his meaning. The fact that the uterus was sometimes in such a state that rectification could not at once be attempted must, of course, be recognised. The inflammation had to be treated undoubtedly, but in most cases he contended the mechanical rectification did remove or materially improve this so-called inflammation. He believed, with reference to the bearing of this subject generally, that further advances in uterine pathology must be associated with a full recognition of the importance of flexions of this organ. The os and cervix uteri and their lesions were of course important, but there could be no question that great errors had resulted from the adoption of a system of uterine pathology and treatment which practically ignored the disorders and displacements of the body of the uterus.

Dr. Tyler Smith had not found the so-called "irritable uterus" dependent on any special pathological condition. It was met with in various morbid states of the uterus and ovaria, but in some of the most marked cases no displacement or inflammation existed. It was often, in fact, a form of hysterical hyperæsthesia or hysterical neuralgia, defying purely local treatment. In the existence of acute suffering without obvious pathological lesion, it resembled vaginismus and excessive sensibility of the meatus urinarius occurring in hysterical subjects. He certainly did not think that retroflexion and irritable uterus stood in the relation of cause and effect. Passing to the question of the importance of mechanical displacements of the uterus and mechanical treatment, he must dissent from much which had been said by the authors of the papers. Retroflexion sometimes existed without causing much, if any, trouble or inconvenience. But this was the exception. As a rule, the subjects of it suffered, and often most distressingly. Without underrating the importance of metritis and chronic enlargements of the uterus, he believed retroflexion generally depended on mechanical causes. There was often a history of its occurring suddenly, after some fall or strain. If he were asked to name the most frequent single cause of retroflexion, he should mention laceration of the perineum. Here, the cause of the backward descent of the uterus was obviously mechanical. He had known cases where the patients, subjects of retroflexion, had borne several children, the uterus returning after labour to the retroflexed condition. Such patients showed no signs of metritis during their pregnancies, nor could we ignore the results of treatment. If you placed a pessary in contact with an inflamed uterus, you were soon made aware of the fact, and obliged to remove it. But in the majority of cases the relief afforded in retroflexion by a proper pessary was often most marked. Patients, before unable to walk, could take exercise without pain, and in the end got well. He made these remarks because the mechanical treatment of retroflexion had seemed to be put on its trial by the papers which had been read. Had the same kind of attempt to ignore the importance of acute and chronic metritis been made, he should have been found in opposition. Dr. Bennet, to whom they all owed so much in regard to uterine pathology, had wondered that in this and other countries there should be two camps holding opposite views upon the mechanical treatment of uterine displacements. He had no such surprise, for there were in reality two sides to the question. Some had a tendency to undervalue the importance of mechanical lesions and mechanical modes of treatment, and others dwelt upon them too exclusively. The progress of knowledge would, he believed, bring the two parties into harmony and agreement, and both would be found to have a measure of truth.

Dr. Rasch said that a great deal of the discrepancy in the opinions of different authors would disappear if pure cases of flexion were properly diagnosed from those complicated with infiltration of the ligaments, inflammation of the ovaries, adhesions, etc. After describing his mode of exploring the pelvis, he stated his belief that flexions were by no means the harmless affections they were asserted to be by some. The symptoms were mostly well marked, and the relief given in properly selected cases very striking.

Dr. Head had for some time, in all aggravated cases of retroflexion, made examination per rectum, and he had so frequently found the left ovary low in the pelvis, swollen and painful, that he was inclined to believe that the symptoms hitherto supposed by some to denote irritable uterus depended mainly on a morbid sensibility of the left ovary, and that this condition had been confounded with the so-called irritable uterus.

Further discussion on the papers was adjourned until the November meeting.

OBITUARY.

JOHN WINDSOR, F.R.C.S., F.L.S., OF MANCHESTER.

The subject of this brief memoir was a good example of a successful General Practitioner in a large provincial town. Born at Settle, in Yorkshire, in 1787, and one of a numerous family, he made his way by great energy and unwearied perseverance. Early in life he formed the resolution always to attend any one who requested his aid—a rule he kept to the day of his death, on the morning of which he saw two patients. His services were ever ready wherever desired, however great the personal fatigue involved; and his great kindness and attention to the poor were very remarkable. He was very regular in his habits, a very early riser, extremely temperate in his diet, buoyant and elastic in his temperament, and enjoyed throughout life almost constant good health. "For forty years," as he occasionally said himself, "he had not been confined to bed for a day." He was of medium height, thin, but strongly built, and, until recently, possessed great physical vigour and power of endurance, In his earlier days he was an excellent swimmer and pedestrian, on several occasions walking great distances, as from Manchester to Settle, about fifty miles distant, in twelve hours. It is much to be regretted that, having amply provided for himself and family, he, like too many Medical men, did not give himself a few years of complete rest—all the more that, from his love of scientific and general literature, he possessed resources which would have prevented the ennui so often assailing those who have led a long life of action. Botany was a favourite study almost from boyhood, and so early as 1810 Sir James Smith, in his "English Botany," styled him an assiduous young botanist. He was elected a Fellow of the Linnæan Society in 1814, and only a very short time before his death had finished compiling and preparing for publication a flora of Settle and the neighbouring district. He was chiefly educated at Giggleswick Grammar School, afterwards became the pupil of Mr. William Sutcliff, a Surgeon at Settle, and then went up to London, where he was some time with Mr. Allen. He studied with indefatigable industry, frequently rising at three in the morning; and at the close of the session 1811-12 he received a prize from Sir Astley Cooper for public examinations in Anatomy and Surgery at St. Thomas's and Guy's Hospitals. He passed the College of Surgeons in May, 1812, and spent the next winter in Edinburgh, attending Hospital practice and the lectures of Barclay, Hamilton, Gregory, Rutherford, and Holme. He returned to London for the ensuing winter, and became clinical clerk to Sir Astley Cooper at Guy's, and occasionally attended Abernethy. Whilst in London he

attended, amongst others, the practice of St. Thomas's and Guy's Hospitals, five courses of the lectures of Astley Cooper and Henry Cline on anatomy and operations, the lectures of Astley Cooper on Surgery during the years 1810-14, the London Eye Infirmary, the lectures of Dr. Haighton on Midwifery, and of Drs. Babington, Marcet, and Allen on chemistry. He passed the Apothecaries' Hall in 1815, and began practice in Piccadilly, Manchester, in June of the same year. Not long afterwards he was elected a Surgeon to the Manchester Eye Hospital, and for some forty years he discharged its duties with great skill, attention, and kindness, remaining in connexion with it as Consulting Surgeon to the end of his life. His first contribution to Medical science was published in 1819.(a) He gave, in this paper, a graphic account of the course of an unreduced inversion, and illustrated it by a case to which he had been called some thirty hours after its occurrence, and in which he had found it necessary to remove the uterus. His paper appears to have had considerable effect in calling attention to the subject; a summary of it was published by L. Krüger in Horn's *Archiv für medic. Erfahr.* (Bd. i. pp. 299-313); it was translated *in extenso* in the *Samml. für Aerzte* (1821, Bd. xxix. pp. 113-147); Mr. Samuel Cooper made considerable use of it in his article (*Dictionary of Practical Surgery*, art. "Uterus, Inversion of"), and the case has been repeatedly quoted by other writers.

Many years afterwards Mr. Windsor was able to complete his account by giving the history of the patient until death.(b) As the nature of the case has been thus placed beyond the possibility of doubt, it may be worth while to once more give an outline of the main facts. The inversion took place January 10, 1817; the uterus was ligatured August 22, 1818; and on September 2 the author notes—"On examining this evening, which is the twelfth day since the first application of the ligature, the thin, or rather broad, peritoneal surface of the uterus appeared to be the only portion remaining undivided. It was, therefore, thought advisable to complete the separation by dividing this part with a pair of scissors, which gave her very little pain. No hæmorrhage followed. . . . The removed uterus measured three inches from the fundus to the cervix, and the same from side to side, being nearly square, but a little rounded off at the fundus; colour chiefly red, but, probably from incipient putrefactive process, marked a little with greyish spots and lines; the circumference of the whole around the fundus and cervix exactly nine inches. The uterus, being cut open, exposed a part of the Fallopian tubes and the ligamenta rotunda; the ovaries and the fimbriated extremities of the tubes, it was found, were left behind. The length of the Fallopian tubes removed measured two inches and a half on each side; the extremities of them on the naturally internal rugous surface of the uterus admitted a bristle. Coagulated lymph in small quantity, and but slightly adherent, was observed on the peritoneal surface; but the uterus was open at the part where it was divided, the opposed peritoneal coverings having not become sealed together by the adhesive inflammation. The mouths of a few blood-vessels appeared on the rugous surface."

She lived till October 27, 1854, and, through the kindness of Mr. Teale, of Leeds, Mr. Windsor was enabled to add the post-mortem examination. The os uteri is "apparently in its normal state; it is about half an inch in width. A probe passed through it into the blind or closed cavity beyond does not penetrate more than three-eighths of an inch. This, therefore, is all which remains of the truncated cervix uteri by the operation performed in 1817. The communication with the abdomen seems to have closed well, and on the abdominal aspect of the cervix (or opposite to the vaginal one) a sort of extended membranous or fleshy surface is seen, on which a portion apparently of one Fallopian tube, with its fimbriated extremity, can be traced, and near it is an appearance of an atrophied ovarium. On the opposite side are somewhat similar appearances of tube and ovarium. Both terminate in the membranous-like expansion near to the cervix uteri, each being about two inches in length."

Noticed by Antoine Petit and Camper, more fully described by Dupuytren, the painful subcutaneous tubercle has been considered alternately to be a neuroma and a fibro-cellular tumour. Dupuytren and Velpeau, on careful dissection of such tubercles in the dead subject, could not find any nerves connected with them, whilst, on the other hand, Chaussier, Liston, etc., have traced nervous filaments to them. Although the extreme neuralgic pain attending them appears to show that they must have some very intimate relation to the nerves, many excellent Surgeons doubt their neuromatous character; Pirogoff, for example, who says ("Grundzüge der allgem. Kriegschirurgie," p. 385) that he has excised them more than a hundred times, remarks "that they are called by the French *tubercules nerveux*, but unjustly, for, so far as I know, no one has discovered a degenerated nerve-twig in these little nodules." In Mr. Windsor's case,(c) a small nerve penetrated the tumour, and, what is still more unusual, the latter consisted of a number of granules quite gritty or earthy to the feel. In the same volume, Mr. Windsor relates "a case of malformation, with ascites, in a fœtus."(d)

Shortly after this period, he paid a visit to Paris, to one result of which he alluded at a later period in the following words (*Assoc. Med. Journal*, 1854, p. 945):—"Perhaps I may be permitted to state that in the year 1822 I had an opportunity of accompanying Laennec in the wards of the Hôpital Necker, and of bringing with me from Paris stethoscopes in that year, and thus introducing into this part of the country their use; one was for my old friend, Dr. Hull, then at the head of the Profession in Manchester."

Mr. Windsor's next publication was "A Case of Bronchocele cured by the Seton."(e) In his detailed account we find that on January 29, 1829, the right lobe was very prominent, and measured fourteen inches in circumference, seven inches and a half from the right side to the left, and five inches and a half from the upper to the lower surface; the left lobe was also slightly enlarged. The breathing was difficult. Iodine, both internally and locally, was ordered. On February 6 she had a fit of extreme dyspnœa, in which her face assumed a deathly pallor; her respiration was very difficult and sonorous, and her pulse extremely small and frequent. On June 2, it is noted that, as the tumour has remained nearly stationary for the last three months, though the iodine has been steadily continued, a seton of narrow thick tape was passed; some thin darkish fluid of a rather fœtid odour escaped. Suppuration followed, and the tumour gradually lessened; so that on July 7 it was eight inches and a half in circumference, four inches and a half from side to side, and three inches and three-quarters from above to below. The seton was not withdrawn till near the end of the following March; the left tumour was then also treated in the same way. The ultimate result was that, on July 1, "a small nucleus, about the size of a walnut, remains on the left side, and one about the size of a hazel nut only on the right side. Scarcely any prominence of the neck appears, and no inconvenience is experienced." A final note on August 12 states that she "continues well; no prominence of the neck apparent, and on examination a very small indurated nucleus only can be felt."

Passing over one or two minor communications,(f) we come to a collection of four cases of pleuritic effusion, in one of which paracentesis was performed;(g) a paper(h) on the spontaneous discharge of vesical and salivary calculi, appended to which is a curious case in which a stone made its way partially into the rectum, from which it was extracted by Mr. Moore, of Bolton, and found to weigh over fifteen ounces.

He then published a series of cases of carcinoma of the eye.(i) Among these cases we find one of cancer commencing in the caruncle; it was twice removed, but the adjacent glands enlarged, and death followed; the orbit was then found to be filled with a cancerous mass. In another case (that of Mrs. Jackson) the eye was removed and found to contain a cancerous mass (glioma); there was no return in the orbit, but two melanotic tumours appeared on the chest and several on the abdomen, and ultimately death followed eighteen months after the operation. Another patient with melanotic cancer of the eye was found, after death, to have similar tumours on every part of the body.

In 1853 he published a short essay on palpebral tumours,(k)

(a) "Some Observations on Inversion of the Uterus, with a Case of Successful Extirpation of that Organ." (Read June 22, 1819.) Communicated by Mr. Astley Cooper, *Med. Chir. Trans.*, 1819, vol. x. pp. 358-88.

(b) "Sequel of a Case of Extirpation of the Uterus." Communicated by J. M. Arnott, Esq. *Ibid.*, 1855, vol xxxviii. p. 219.

(c) "Case of Painful Subcutaneous Tumour, in which the Tumour was penetrated by the Twig of a Nerve," *Edin. Med. and Surg. Journ.*, 1821, vol. xvii. p. 261.

(d) *Ibid.* p. 561, and Meckel, *Deutsches Archiv für Physiol.*, 1822, Bd. vii. S. 20.

(e) *North of England Medical and Surgical Journal*, 1830-31, p. 325.

(f) "Some Remarks on the Opacities of the Cornea due to the Use of Acetate of Lead, and on the Discoloration of the Conjunctiva by the long-continued Use of the Nitrate of Silver," in the *Lancet*, 1830-31, vol. i. p. 430; "On Permanent Contraction of the Fingers," *ibid.* 1833-34, p. 501.

(g) Transactions of the Prov. Med. and Surg. Assoc., 1837, vol. v. p. 375.

(h) *Prov. Med. and Surg. Journal*, 1842, vol. iv. p. 183.

(i) *Prov. Med. Journ.*, 1844, vol. vii. p. 423; 1850, vol. xiv. p. 225.

(k) Trans. of the Prov. Med. and Surg. Association, vol. xiv. p. 212.

and in 1854(l) an important case of empyema successfully treated by thoracentesis and iodine injection. Fifty-two ounces of purulent fluid were evacuated on April 14; 30 oz. by a repetition of the puncture on May 3; finally on May 30 "I operated for the third time, and drew off from near the same part of the chest two pints and a half, or forty ounces, of sero-purulent fluid, but certainly less puriform than on the two former occasions. Immediately afterwards I injected five ounces of the following solution:—℞ Iodinii ʒj., potassii iodidi ʒij., spiritus rectificati ʒj., aquæ puræ ʒv. M. After retaining it in the chest a short time, and moving him a little about to bring the injection better into contact with the pleural membrane, I withdrew my thumb from the canula, when about an ounce of the injection returned through it, the rest remaining in the cavity." The convalescence was uninterrupted. It may be added that on the third day after the operation the urine showed the presence of iodine.(m) In the same volume(n) Mr. Windsor has recorded a case of strangulated hernia masked by a glandular tumour in the groin.

His next paper was one on paralysis of the third pair of cerebral nerves, with illustrative cases,(o) and with an appendix on some cases of mechanical ptosis. This was followed by a case of suppurative ovaritis communicating with the urinary bladder,(p) a case in which an exostosis of the posterior part of the orbit was removed,(q) cases of glistening appearance of the eye, probably due to cholesterine(r) in the lens—in the second case the greater part of the anterior chamber was occupied by a shining, metallic-like substance in the form of a granular disintegrated mass, very much resembling in appearance the old preparation called *aurum musivum* (mosaic gold); four or five portions were extremely resplendent—cases of lead deposit on the cornea and conjunctiva,(s) and cases of vesicles or bullæ of the conjunctiva,(t) a note on poisoning by *Œnanthe crocata*,(u) a case of cysticercus in the anterior chamber of the human eye,(x) and a note on the cause of hay-fever.(y)

Mr. Windsor gave, in 1864, a good account of inflammation of the epiglottis,(z) illustrated by a detailed account of a case he had observed, and a summary of the few papers previously published on this rare affection, and in the following year he issued some remarks on syphilitic ulceration of the palpebral conjunctiva,(a) which are of value as a record of his experience, and show, in an interesting manner, the continued attention he paid to Medical literature, even to the close of life. His Medical publications were concluded by a short note on trichinosis;(b) a second one on the use of belladonna had been partially prepared, when death came to interrupt his labours.

In later years he had resumed, with great delight, the botanical studies that had been very much laid aside during the incessant toils of a large Medical practice, and had published at intervals the following papers:—"Plants found in the Neighbourhood of Settle, Yorkshire, omitting some of the very common ones." (*Phytologist*, 1855-56, vol. i. p. 145, 173, 259, 348; *ibid.* 1857-58, vol. ii. p. 12.) "*Hypochæris maculata.* Botanical visit to Humphrey Head, Cartmel." (*Ibid.* p. 257.) "*Poa glauca*?" (*Ibid.*, p. 302.) "Mosses growing near Settle." (*Ibid.*, p. 423.) "Visit to Humphrey Head," etc. (*Ibid.* 1861, vol. v. p. 259.) "Visit to Longsleadale." (*Ibid.* 1862-63, vol. vi. p. 257.) "J. Windsor on some Species of *Thlaspi*." (*Naturalist*, 1866, ii. 31, 60.) "On *Thlaspi alpestre*," etc. (*Journal of the Linnean Society*, 1868, Botany, vol x. p. 196.) And, as has been already mentioned, a flora of Settle and the surrounding district had been prepared for publication in a separate form. We have still to add that Mr. Windsor lectured on Medical jurisprudence about 1837, and for some years on midwifery. He was to the time of his death a member of the British Medical Association and of the Manchester Medical Society. Well read in the classics, which he often loved to quote, and reading French with facility, his later years were fully occupied, and he seemed to turn with equal pleasure to the *Edinburgh Review* or the *Medical Times and Gazette*, a book of travels or one on botany. His herbarium, which throughout his life he had continually augmented, engaged many spare hours. Some portion of almost every day was given by him to Professional study, and till the day of his death he continued to carefully peruse the Medical journals and some of the principal works on special subjects, especially those on diseases of the eye, on affections of the skin, and on parasites—subjects to which he had always paid much attention. His illness was only of a few days' duration, and his mind remained perfectly clear till the last few minutes. He died on September 1 in the 82nd year of his age, and is deeply mourned by his large family and friends.

(l) *Association Med. Journ.*, 1854, p. 943.
(m) To the report of this case we may add that the patient remained permanently well, though some contraction of the side of the chest ultimately ensued.
(n) *Ib.* p. 992.
(o) *Association Med. Journ.*, 1856, pp. 401, 418.
(p) *British Med. Journal*, 1857, p. 772.
(q) *British Med. Journal*, 1858, p. 219, and *Annales d'Oculist.* vol. xxxviii. p. 211.
(r) *Ib.* p. 257.
(s) *Ib.* p. 303.
(t) *Ib.* p. 304, and *Annales d'Ocul.* vol. xl. p. 137.
(u) *Med. Times and Gaz.*, 1858, vol. xxxvii. p. 280.
(x) *Ophth. Hosp. Reports*, 1860-61, vol. iii. p. 322, and *Annales d'Ocul.* vol. xlix. p. 150.
(y) *Med. Times and Gaz.*, 1863, vol. ii. p. 681.
(z) *Brit. Med. Journ.*, 1864, vol. i. p. 120.
(a) *Ibid.* 1865, i. 553.
(b) "The Discovery of Trichina," *ibid.* 1863, i. 319.

WILLIAM WILLIAMS, ESQ., F.R.C.S.

On the 11th inst., Wm. Williams, Esq., F.R.C.S., of Dolgelly, North Wales, died in the 52nd year of his age. Mr. Williams was returning home from visiting a patient in the neighbourhood of Talyllyn, when he fell off his horse, and was found shortly afterwards on the road in a state of insensibility. He died on the following day. By his Professional skill, Mr. Williams had acquired for himself a wide reputation, and he enjoyed an extensive practice as a Surgeon. He was much respected throughout the county, and many among all classes have to deplore the loss of a faithful friend and a kind trusted Medical adviser.

NEW BOOKS, WITH SHORT CRITIQUES.

On the Parasitic Affections of the Skin. By Dr. M'Call Anderson, Lecturer on the Practice of Medicine in Anderson's University; Physician to the Dispensary for Skin Diseases, etc., Glasgow. Second edition. London: J. Churchill and Sons. Pp. 250.

*** This really beautiful work is considerably enlarged and altered compared with the former edition; new illustrations have been added, and the whole nearly rewritten. Dr. Anderson most justly remarks that the affections, comparatively neglected when the former edition of this work was published, nowadays occupy perhaps too prominent a position, our ideas as to parasites, both vegetable and animal, especially the former, having been so greatly extended. We are perhaps too much inclined to refer the causation of disease to parasitism, and to neglect more general and more potent causes.

Notes on the Metals: being a Second Series of Chemical Notes for the Lecture Room. By Thomas Wood, Ph.D., F.C.S., Lecturer on Chemistry at the Brighton College. London: Longmans. Pp. 180.

*** In noticing Dr. Wood's former volume of chemical notes, we fairly enough expressed our opinion of them. If any one desires to pass an examination on chemistry without thoroughly understanding the subject, Dr. Wood's notes will be found useful; but not equally so should the student desire to attain an intimate knowledge of chemical philosophy and chemical methods, as well as of mere chemical facts.

The Anatomical Memoirs of John Goodsir, F.R.S., late Professor of Anatomy in the University of Edinburgh. Edited by William Turner, M.B., Professor of Anatomy in the University of Edinburgh. With a Biographical Memoir by Henry Lonsdale, M.D., late Lecturer on Anatomy. Two vols. Edinburgh: Adam and Charles Black. Pp. 469 and 524.

*** All old pupils of John Goodsir will rejoice in the publication of these posthumous volumes. They contain much that is valuable, but they do not entirely reveal the man. Of a retiring disposition, and latterly of weak health, Goodsir rather shunned than courted popular admiration. His published works were comparatively few, and much unrecorded knowledge died with him. In these volumes, however, a good deal not previously published is contained. In the first of them we would especially direct attention to the lectures on the dignity of man, which, at the time they were delivered, excited great admiration. In the former of the volumes, besides the lectures just referred to, are several papers on comparative anatomy, and an appendix of short notes referring to human anatomy. The second volume begins with Goodsir's world-famous paper on the development of the teeth, the whole being chiefly devoted to development and morphology, together with miscellaneous papers on various subjects connected with anatomy, physiology, and pathology, several on the mechanism of the joints being quite new. In this volume are also included certain papers by the lamented Harry Goodsir, which originally appeared in the "Anatomical and Pathological Observations" published by the two brothers in 1845. Both editors and publishers have done their work well, and the volumes are a fitting memorial of the man whose life-history they contain.

Croonian Lectures on Matter and Force, given at the Royal College of Physicians in 1868. By Henry Bence Jones, A.M., M.D., F.R.S., Consulting Physician to St. George's Hospital. London: John Churchill and Sons.

*** Dr. Bence Jones's intention in publishing these lectures is to give greater precision to our ideas as to force and matter, to illustrate in animal life the principle of the conservation of energy, and, in the appendix, to show how the progress of physiology nowadays depends on chemical and physical research.

Die Wunden des Herzens und des Herzbeutels. Von Dr. Georg Fischer, in Hannover.

Wounds of the Heart and Pericardium. By Dr. Georg Fischer, Hanover. Berlin: Hirschwald. Pp. 340.

*** Dr. Fischer's elaborate treatise on the subject of wounds of the heart is a separate publication from Langenbeck's "Archives of Clinical Surgery." It enters fully into the subject, being founded on 452 cases, and contains dissertations on the history of heart injuries, anatomy, experiments on animals, statistics, etiology, and pathological anatomy. The last-mentioned chapter deals with punctured and cut-and-thrust wounds, with gunshot wounds, contused wounds, ruptures, foreign bodies, and the site of the wounds of the soft parts The symptoms, diagnosis, progress, termination, prognosis, and treatment of such injuries are also discussed. A variety of cases of different kinds of wounds conclude the work.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 22, 1868:—

England, George, Handsworth.
Fielding, Thomas, Milton Abbas, Blandford.
Giddings, John Allan, Old Trafford, Manchester.
Higgs, Frederick Seagrave, Twyford, Melton Mowbray.
Littlejohn, Saltern George, 31, Gresham-street, E.C.
McClean, Edward Henry, Barbadoes, West Indies.
Pickburn, Thomas James, Fisherton House, Salisbury.
Timmins, John Aaron James, Granville-square.

The following gentleman also, on the same day, passed his First Examination:—

Grover, John Pollington, Guy's Hospital.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY, October 20.—Hart Gimlett, M.D., has this day been promoted to the rank of Staff Surgeon in her Majesty's Fleet, with seniority of October 11, 1868.

HILLYARD, JOHN, M.D., Bengal Establishment—Deputy-Inspector-General of Hospitals.

JERDON, Surgeon-Major THOMAS CAVERHILL, Madras Establishment—Deputy-Inspector-General of Hospitals.

MEDICAL DEPARTMENT.—Surgeon-Major Alexander Smith, M.D., from the Royal Artillery, to be Staff Surgeon-Major, *vice* Surgeon James Hannan, appointed to the Royal Artillery.—Assistant-Surgeon John Edward Fannin, from the 103rd Foot, to be Staff Assistant-Surgeon, *vice* Albert Egerton Hall, appointed to the 103rd Foot.

PENNY, HENRY JAMES, Madras Establishment—Deputy-Inspector-General of Hospitals.

RAWES, WILLIAM WILSON, Madras Establishment—Deputy-Inspector-General of Hospitals.

ROYAL ARTILLERY.—Staff Surgeon James Hannan, to be Surgeon, *vice* Surgeon-Major Alexander Smith, M.D., appointed to the Staff.

BIRTHS.

ADAMS.—On October 27, at Barnes, Surrey, the wife of James Adams, M.D., of a son.

BELCHER.—On October 16, at 10, Pavilion-parade, Brighton, the wife of H. Belcher, M.D., of a daughter.

DE LA GARDE.—On October 23, in Gandy-street, Exeter, the wife of John L. De la Garde, M.B., of a son.

DYER.—On October 21, at Ringwood, Hants, the wife of Samuel Sumner Dyer, M.D., of a son.

HARE.—On October 19, at 57, Brook-street, Grosvenor-square, W., the wife of Charles J. Hare, M.D. Cantab., of a daughter.

MAXWELL.—On October 23, at Richmond, Surrey, the wife of T. Maxwell, late Surgeon-Major H.M.'s Indian Army, of a son.

ROOME.—On October 21, at Packhurst, Isle of Wight, the wife of Henry Roome, M.D., of a daughter.

SIMPSON.—On October 22, at 12, Canonbury-square, N., the wife of Archibald Simpson, M.D., of a son.

MARRIAGES.

AVELING—HARFORD.—On October 21, at the Congregational Church, Kingsland, Charles Taylor Aveling, M.R.C.S., of Homerton, to Annie, second daughter of James Unwin Harford, Esq., of Watford. No cards.

BARROW—BEVAN.—On October 21, at the Priory Church, Brecon, South Wales, Thomas Samuel Barrow, M.D., Assistant-Surgeon 23rd Royal Welsh Fusiliers, eldest son of Thomas Waller Barrow, Inspector-General of Hospitals, to Catherine Mary, second daughter of the late George Rees Bevan, Esq., of Pengay, Carmarthenshire.

BUCHANAN—MCLAGAN.—On October 21, at St. Peter's Church, Rilston, Yorkshire, Robert Buchanan, of San Miguel, Central America, to Emma Eugenia, only daughter of the late John McLagan, M.D., of Demerara.

BUTT—VEREY.—On October 22, at Holy Trinity Church, Kilburn, Wm. F. Butt, M.R.C.S.E., of 17, South-street, Park-lane, to Eliza Ann, second daughter of George Verey, Esq., of the Elms, Kilburn.

HOWARD—HEAP.—On October 22, at St. James's Church, Miluron, by the Rev. Canon Raines, Rural Dean and Vicar of Miluron, assisted by the Rev. S. E. Bartleet, M.A., Vicar of Shaw, James Fielden Howard, M.D., of Shaw, to Jane Kershaw, eldest daughter of the late Thomas Heap, Jun., Esq., of Haugh, near Miluron.

KENDALL—NORMAN.—On October 22, at St. Nicholas' Church, Great Yarmouth, by the Rev. H. Neville, Rector of the parish, T. E. O. Kendall, 9, Fitzwilliam-road, Clapham, only son of T. M. Kendall, F.R.C.S., of King's Lynn, to Emily, eldest daughter of R. B. Norman, M.R.C.S.

DEATHS.

BARLOW, MARY EDITH GRACE, third child of Robert Barlow, M.R.C.S. Eng., at Norfolk House, Albion-road, Dalston, on October 22, aged five months and sixteen days.

BOKENHAM, Dr., third son of the late George Bokenham, Esq., at Iquique, killed in the dreadful earthquake which desolated Peru, on August 13 last, aged 50.

CUSACK, JAMES WILLIAM, third son of the late J. W. Cusack, M.D., of Merrion-square, Dublin, at Beulah, Dalkey, Ireland, on October 3, aged 44.

DIVER, ANNA, the wife of Thomas Diver, M.D., at Bombay, on September 27.

EVES, AUGUSTUS, M.D., F.R.C.S., at Cheltenham, on October 22, aged 69.

KNAPP, JAMES MICHAEL, Surgeon Major (late Bombay Army), youngest son of the late Joseph John Knapp, Esq., of Brompton, Middlesex.

PARTRIDGE, ALDERMAN, F.R.C.S., for forty-two years Surgeon to the Essex and Colchester Hospital, at All Saints, Colchester, after a lingering illness, on October 24.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Alton Union.—Mr. C. J. Allan has resigned the First District; area 13,596; population 3752; salary £100 per annum.

Blandford Union.—Mr. John Ewens has resigned the Third District; area 14,464; population 3385; salary £107 per annum.

APPOINTMENTS.

Barton-upon-Irwell Union.—James Affleck, L.R.C.P., M.R.C.S.E., L.S.A., to the Stretford District

Nuneaton Union.—Richard B. Nason, M.R.C.S.E., L.S.A., to the Chilvers Coton District.

HEALTH OF ALDERSHOT.—A correspondent informs us that scarlet fever and measles, attended by considerable mortality, continue to prevail among the children in the Camp at Aldershot, and that cases of the same disease are of occasional occurrence among the troops.

ARMY MEDICO-CHIRURGICAL SOCIETY AT ALDERSHOT.—It is proposed, we believe, by the military Medical officers in the Camp at Aldershot to institute a Medico-Chirurgical Society similar to that which has been so successful at Portsmouth.

DR. GATEHOUSE, of Sark, being about to establish himself professionally in the island of Alderney, and desirous of proceeding thither with that view, joined a boat party returning from Sark to Guernsey, and (with the whole party, five in all) was lost. He has left a widow and three children.

BEQUESTS, ETC., TO MEDICAL INSTITUTIONS.—A legacy of £200 has been bequeathed to the Cancer Hospital, Brompton, under the will of Mrs. Mary Ann Booth, of Bishop's Waltham. Legacies of £100 each have been bequeathed, under the will of the Earl of Abergavenny, to the West Kent General Hospital, the Ophthalmic Hospital at Maidstone, and the Sussex County Hospital. A legacy of £100 has been bequeathed to the Arbroath Infirmary under the will of David Duncan, Esq., of Greenbank, Arbroath. A legacy of £100 has been received for the General Infirmary, Hereford, from the executor of the will of George Croose, Esq. The Fishmongers' Company have voted £50 to the East London Hospital for Children, Ratcliff-cross.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the annual meeting of the College on October 21 the following office-bearers were elected for the ensuing year:—*President:* James Spence. *Secretary:* James Simson, M.D. *Treasurer:* John Gairdner, M.D. *Librarian:* Archibald Inglis, M.D. *President's Council:* James S. Coombe, M.D.; Andrew Wood, M.D.; James Dunsmure, M.D.; James D. Gillespie, M.D.; William Walker; Henry D. Littlejohn, M.D.; *ex off.*, John Gairdner, M.D.; *Examiners:* James Simson, M.D.; William Dumbreck, M.D.; Archibald Inglis, M.D.; Robert Omond, M.D.; James Dunsmure, M.D; Peter David Handyside, M.D.; James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; David Wilson, M.D.; John Smith, M.D.; D. M. C. L. Argyll Robertson, M.D. *Assessors to Examiners:* James S. Coombe, M.D.; James Syme; William Brown; Adam Hunter, M.D.; *Conservator of Museum:* William R. Sanders, M.D. *Officer:* John Dickie.

DR. DIPLOCK held an inquest on Wednesday evening on the body of Louisa Thomas, whose death occurred under very distressing circumstances. The deceased went at seven o'clock on Monday evening to the house of Mr. Powell, Surgeon, of King's-road, Chelsea, and went into that gentleman's consulting-room with him. She was never more seen alive. About half-past nine Mr. Powell came out of his consulting-room, and gave his servant a letter to take to Mr. Turner, a neighbouring Surgeon. That letter stated that

Mr. Powell was endeavouring to procure abortion on the deceased, when she suddenly fell down and died. Mr. Turner on going to the house found the story to be too true. A post-mortem examination revealed the fact that the heart was diseased, and that an attempt had been made to procure abortion. A verdict of wilful murder has been returned against John Powell, but he has not been seen since the dreadful affair, and there is much reason to believe that he has committed suicide.

THE PARIS FACULTY OF MEDICINE.—The lectures for 1868-69 will commence November 3. The following are the names of the respective Professors: — Gavarret, *Medical Physics*; Verneuil, *Surgical Pathology*; Sappey, *Anatomy*; Lasègue, *General Pathology and Therapeutics*; Wurtz, *Medical Chemistry*; Axenfeld, *Medical Pathology*; Denonvilliers, *Operations and Apparatus*; Robin, *Histology*; Bouillaud, Constantin-Paul, Béhier, and Grisolle, *Clinical Medicine*; Laugier, Gosselin, Broca, and Richet, *Clinical Surgery*; Depaul, *Clinical Midwifery*; Roger, *Diseases of Children*.

INTERMITTENT PTYALISM IN A LUNATIC.—Dr. Paulicki furnishes an account of a woman, 38 years of age, now in the asylum at Altona, who has an attack of ptyalism on alternate days with the greatest regularity. It begins in the morning about eight, and continues to about six. During its continuance the patient sits in bed in a state of great mental depression, answering no questions and refusing food, the saliva flowing out of her mouth. Upon an average 2½ kilogrames are collected in a day, and sometimes it almost amounts to 3½. On her free days the patient remains out of bed, and although she answers questions correctly, she is very reserved, and takes no interest in the doings of the other patients. On these free days no ptyalism whatever has been observed, nor do two free days or two days with ptyalism ever come together. According to the account of her friends, the ptyalism has continued with the same regularity for nearly five years—the patient having been the subject of melancholia for several years prior to its appearance. There is no elevation of temperature during the presence of the ptyalism, but an abundant sweating coincides with it. This last also prevails in a less degree on the free days. Quinine has been administered without any benefit.—*Centralblatt*, Aug. 29.

DECAY OF ERUDITE PHYSICIANS.—Speaking of the seventeenth century, M. Montanier observes:—"One feels astonished, almost alarmed, at the erudition exhibited by the men of that period, whether magistrates, advocates, Physicians, etc. In our own Profession, these erudite and lettered men were very numerous, and we are surprised by the deep and varied knowledge of a Naudé, a Riolan, of a Guy-Patin, and many others. Those even who did not attain this highest reputation were yet men of very great merit, and their vast erudition reflected a ray of brightness over the whole Profession. In our own day, truly erudite Physicians are indeed rare. Scarcely can one name two or three in Paris, and these may be said, as it were, to make erudition their Profession. As to single Medical Practitioners having a tincture of the history of their art and profession, so few are they that it is doubtful whether they could be counted. In my opinion, this is a sad state of things."—*Gaz. des Hôp.*, Oct. 15.

MEDICAL EXTORTION.—M. Montanier, in an interesting account of an old lawsuit between the Physicians and Apothecaries of Dijon (*Gaz. des Hôp.*, Oct. 13), observes: "Of course their advocate urged that Physicians are neither rapacious nor greedy, and cheerfully exercise their art without exacting any payment from the poor, and that their disinterestedness is well known by the fact of none of them making large fortunes. That might be so at Dijon, but not at Paris. There, as at the present time, were to be met with Physicians and Surgeons, true dealers in health, for whom the sole preoccupation was to gain money, and plenty of it, without much caring what was thought of them. Nevertheless, the world judges such with severity. Not many days ago I heard a great and very wealthy person bitterly complaining of a Paris Surgeon of great renown. He had opened a chronic abscess in a child, and demanded 5000 francs as his fee. 'This sum is nothing for me,' said the personage in question, 'and I paid it without complaining, but in truth I look upon this as only an indirect mode of picking one's pocket. How long would my fortune last if every one thought, like Dr. A., that he had a right to make a prey (*m'exploiter*) of me? Suppose my baker, knowing me to be very wealthy, made me pay ten or twenty francs per kilogramme for my bread, and refused to serve me on more moderate terms.'"

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

It is clear, upon the face of the thing, that Dr. Balthazar Foster has nothing to do with the advertisement of etherised cod-liver oil, and we have reason to know from private sources that he has taken every means to prevent its repetition.

The Abercorn Chair.—A very useful invention has been recently brought out by Mr. Josiah Le Butt, of Bury St. Edmund's, consisting of a chair that can instantly be converted into a pair of useful steps. This is likely to be of great use in libraries and book rooms.

Pancreatic Emulsion.—A correspondent calls our attention to the fact that in the *Hastings and St. Leonard's Advertiser*, of October 22, 1868, there are four advertisements of this substance, one of which he encloses. The person really aggrieved is the Physician whose name is inserted so prominently, and we reccomend our correspondent to communicate with that gentleman if the repetition of the advertisement offends his eye. The Physicians of the Hospital for Consumption are not likely to originate or to sanction such an advertisement.

Note to Article on Hospital for Paralysis and Epilepsy.—Duchenne suggested for induced electricity, the terms *faradic* electricity or *faradism*, and for its therapeutical use *faradisation*. Of voltaic electricity he speaks as *galvanic electricity* or *galvanism*, and its use as *galvanisation*, and of the therapeutical use of static electricity as *static electrisation*. Duchenne's suggestion as to the terms "faradic electricity," "faradism," "faradisation," was as good as practical, but for the other forms of electricity neither so good nor so free from confusion in practice. Mr. J. N. Radcliffe proposes to carry out the principle of nomenclature Duchenne adopted in respect of the induced currents more accurately into use, and has suggested—for *induced* electricity, *faradaic* (not *faradic*, Faraday's name being better transformed into *faradaic* for English use), or *faradism* and *faradisation*; for *voltaic* electricity, that term as in use, or *voltaism* and *voltaisation*; for *static* or, as physicists now prefer to term it, after Franklin, *franklinic* electricity, that term, or *franklinism* and *franklinisation*.

PROFESSIONAL ETIQUETTE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read the controversy betwixt Drs. Steele and Johnston, of Montrose, with no little curiosity. Every Practitioner must be interested therein. Your decision has not a little surprised me. It is directly in teeth of the following rule, drawn up for the guidance of the Fellows, Members, and Licentiates of the Royal College of Physicians of London:—"No Fellow or Member shall officiously, or under pretence of benevolent purpose, prescribe for, or visit, any patient whom he knows to be under the care of another legally qualified Medical Practitioner." Here is a first rule in Medical ethics, laid down by the first Medical College in the kingdom. I do not know whether Dr. Johnston be a Fellow or Member of that College, but the law thereof must be binding on all Medical Practitioners who call themselves gentlemen. And if it be not binding, what is to be the result? Perpetual confusion! Another Practitioner is, under sorry pretences, to visit a patient of mine, and I, the regular Practitioner, am not to know what is going on. The extra Practitioner prescribes, I prescribe, and the whole affair ends in a mess. As I understand the case, the Practioner with whom I refuse to consult is to visit the patient, but only after I have resigned the case or been dismissed. Before then he is religiously to abstain. That is very simple.

I beg of you to give insertion to this in your journal. Though the law of the College of Physicians be not to your liking, it is very interesting to general Practitioners.

I am, &c.

Edinburgh, October 26. A PRACTITIONER.

*** If any Fellow, Member, or Licentiate of the Royal College of Physicians, or of any other Medical university or corporation, either with or without the hypocritical pretext of benevolence, shall intrude himself on any sick person who is attended by another Practitioner, and shall prescribe, we desire that such person be stamped as a sneak and a touter, and be made to suffer any disgrace which the authorities can inflict, and then sent to Coventry by his Professional brethren. But if any patient whatever, spontaneously and *bona fide*, calls in any Physician or other Practitioner, and desires his advice, that Physician is entitled, and not only entitled, but bound, to give his advice unless there be some reason to the contrary. If he finds that a patient who calls him in is already at the time under the care of another Practitioner, he will, as an act of common courtesy, desire that that Practitioner shall be informed of his visit, in order that the two may meet in consultation; after which, if a gentleman, he retires till his advice be sought again. Should the Practitioner refuse or neglect to meet him, of course the consultant is free to do as he pleases. Why should he not? Is any Practitioner entitled to lay an embargo on a patient, and to say "You are 'my patient,' and shall not consult any one else without my permission?" or has he the right to affix a contraband stamp on another Practitioner, and to say "You shall not be consulted by A., B., or C, unless I give permission?" If "A Practitioner" will consult his own good sense and good feeling, he will be aware that such a usurpation of authority would be unreasonable in itself and injurious to the Profession, and such as no Practitioner would submit to if he happened himself to be the patient. Occurrences like these are anything but rare—we heard of one very lately. Dr. Blank, a respectable Physician, had a feud with a neighbouring *confrère*, Dr. Brown, arising not out of any Professional matter, but out of the local politics of the district. One day

Dr. Blank received a note, in the ordinary way of business, requesting him to visit a Mrs. ——, who had been ill for some time under the care of Dr. Brown. Of course he sent his compliments to Dr. Brown, and proposed a consultation, not dreaming that private feuds were to interfere with Professional, which are really public, duties. Brown, however, sent back an offensive message, saying that he declined to meet Dr. Blank. Hereupon, of course Blank, like a man of sense, saw the patient, gave his opinion and prescription, took his fee, and made his bow, leaving Brown to "seethe in his own grease," as old English writers would say, or *cuire dans son propre jus*, which is the politer French phrase.

Late Development of Vaccine.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Under the above head, Mr. Park, of Broughty Ferry, asks for confirmatory evidence. Two cases have occurred in my practice so lately that I can give dates easily. One occurred only this afternoon; so I refer to it first. The child of a patient, living some miles from here, whom I attended in her confinement three months ago, was brought to me some six weeks since. It had been taken to a Surgeon nearer the locality to be vaccinated, and was brought to me (four days after the operation) with the arm and hand frightfully inflamed, but no appearance of the vaccination except the slight scratches on the skin. I gave some alterative and a lotion, and the mother requested that I would call some time when in the neighbourhood and revaccinate the infant. I called this afternoon, and found one good cicatrix (five incisions had been made) existing. The arm had got quite well from the inflammation in three days after applying the remedies, and immediately the vesicle began to appear. It was at its height about the fourteenth day.

The other case occurred a few months ago. I vaccinated a boy, about two years old, twice, and each time inspected the arm on the seventh day, and found it unsuccessful. I deemed the case one of insusceptibility, but at the parents' wish called again. They were just coming to my surgery to show the arm. This was on the eighteenth day after the second operation, and the vesicles had appeared about three days before. They would, therefore, be perfectly developed about the twenty-first day. This is more extraordinary than either the other case or the one of Mr. Park, which seem very similar. I am, &c. W. E. Stainton Stanley.

Leicester, October 21.

COMMUNICATIONS have been received from—

Dr. W. E. S. Stanley; Mr. J. Robertson; Dr. D. W. Parsons; Mr. Harry Leach; Mr. Alexander Sull; Mr. Sergeant; Dr. Hilton Fagge; Dr. J. W. R. Mackie; Dr. Beveridge; Dr. Walter Rickards; A Practitioner; Dr. Muspratt; Dr. Crisp; Mr. Thomas Windsor; Mr. C. J. Fox; Dr. Mapother; Dr. H. Buss; Dr. J. Hughlings-Jackson; Dr. Gervis; Dr. Day; Dr. Robert Barnes; Dr. C. A. Gordon; Dr. A. L. Mackay; Dr. Richards; Mr. F. J. Wilson; Dr. John Fairmann; Mr. J. Chatto; Dr. Gwynne Harries; Mr. E. L. Fenn.

BOOKS RECEIVED—

Storey's Hastings and St. Leonard's Pamphlet—Clouston's Experiments on Bromide of Potassium in Epilepsy—Clouston's Observations on the Temperature of the Body in the Insane—Hughlings-Jackson on Cases of Disease of the Nervous System in Patients the Subjects of Inherited Syphilis—History of the Anæsthetic Discovery—Moore's Power of the Soul over the Body—Cassell's World of Wonders, Part 1—Liverpool Medical and Surgical Reports, Vol. II. 1868.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Medical Press and Circular—Tower Hamlets Express—Saunders's News-Letter.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 24, 1868.

BIRTHS.

Births of Boys, 1012; Girls, 1022; Total, 2034.
Average of 10 corresponding weeks, 1858-67, 1964·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	719	702	1421
Average of the ten years 1858-67	619·4	598·9	1218·3
Average corrected to increased population..	..	..	1340
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	2	26	1	2	9	6	..
North ..	618,210	1	11	19	3	4	22	5	..
Central	378,058	..	1	12	1	4	2	8	..
East ..	571,158	1	2	27	2	3	22	4	..
South ..	773,175	2	3	21	3	8	12	7	..
Total ..	2,803,989	4	19	105	10	21	67	30	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·627 in.
Mean temperature	42·6
Highest point of thermometer	59·6
Lowest point of thermometer	29·3
Mean dew-point temperature	39·8
General direction of wind	W.S.W.
Whole amount of rain in the week	0·49

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 24, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Oct. 24.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Oct. 24.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2034	1441	1421	59·6	29·3	42·6	0·49	49
Bristol (City) .	167487	35·7	116	75	*62	..	..	..	..	..
Birmingham (Boro')	352296	45·0	225	171	144	61·7	29·3	42·4	0·33	33
Liverpool (Borough)	500676	98·0	348	290	292	60·6	31·1	43·6	1·64	166
Manchester (City) .	366835	81·8	250	208	*223	..	..	..	..	..
Salford (Borough) .	117162	22·7	77	59	85	59·5	28·0	41·9	1·25	126
Sheffield (Borough).	232362	10·2	174	122	112	59·6	31·8	42·4	0·70	71
Bradford (Borough)	108019	16·4	88	55	73	..	..	..	..	..
Leeds (Borough) .	236746	11·0	201	120	138	54·0	33·0	42·1	0·44	44
Hull (Borough) .	108269	30·4	83	50	65	55·0	27·0	39·6	0·59	60
Nwcstl-on-Tyne, do.	127701	23·9	75	68	62	54·0	31·0	39·8	0·41	41
Edinburgh (City) .	177039	40·0	119	85	94	49·7	30·0	40·8	0·60	61
Glasgow (City) .	449868	88·9	314	262	264	50·2	29·5	40·5	1·31	132
Dublin (City and some suburbs) .	319985	32·8	147	157	134	60·8	31·1	44·9	0·44	44
Total of 14 large Towns . . .	6391080	34·7	4251	3163	3169 Week ending Oct. 17.	60·8	27·0	41·9	0·75	76
Vienna (City) . .	(1863) 560000	..	..	..	276	..	..	53·6	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·627 in. The barometrical reading decreased from 29·88 in. on Thursday, October 22, to 29·14 in. on Saturday, October 24. The general direction of the wind was W.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

October 31. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

November 2. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. Mr. Henry Lee, "On the Mediolateral Operation for Lithotomy."

Odontological Society, 8 p.m. Mr. G. Laurie, "On Plastic Fittings of Teeth."

3. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Pathological Society, 8 p.m. Meeting.

4. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Obstetrical Society of London, 8 p.m. Adjourned Discussion on the Papers of Dr. Tilt and Dr. Meadows. Dr. Copeman (Norwich), "The Treatment of Imperforate Hymen." And other Papers by Dr. Cory and Dr. Martyn.

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society of London, 8 p.m. Mr. J. Z. Laurence, "On Abnormal Lachrymation: its Causes and Treatment, especially by Excision of the Lachrymal Gland."

6. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Western Medical and Surgical Society, 8 p.m. Practical Evening, for the Narration of Cases and the Exhibition of Specimens.

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

By desire of the Radcliffe Trustees I have been asked to give, in connexion with the Library, during two terms annually for three years, some demonstrations in histology, human and comparative, normal and abnormal. I propose to devote this, my first course, to the consideration of the germinal or living matter of living beings, with observations on the anatomical element or cell, its origin, formation, and growth, including its structure in healthy tissues and the modifications occurring in disease. This will be followed by short courses of demonstrations on the structure and growth of the higher tissues, and on the general structure of the nerve textures of man and animals.

I enter upon my new duties in this place with feelings of special pleasure and gratification, for the circumstance recalls to my mind happy working days which were spent at the commencement of my career in the museum at Christchurch, as assistant to Dr. Acland, who was then Lee's Reader of Anatomy. This has naturally led me to feel much interested in the great alterations which have taken place in this department during the twenty years which have elapsed—changes which are of the deepest importance, not only to those studying in this University, but to every one interested in the progress of anatomy healthy and morbid, comparative anatomy, and physiology.

Unceasing progressive work has caused the comparatively small but useful series of preparations, then under the charge of Dr. Acland, to expand into the magnificent teaching collection recently arranged in this splendid museum, and added to by Professor Rolleston, and continually improving under his guardianship. In this work there have been many helpers, and it would not be difficult, even now, to identify the labours successively of Melville, Victor Carus, and myself, the specimens of insects prepared by the Rev. J. G. Wood, the anatomical work of Dowson and Stewart,(a) and the chemical preparations of Von Bose. Charles Robertson alone has seen and taken part in every change which has been made in the collection, and has, by his unremitting work and great skill, contributed more to making the series of preparations what it is, than all the rest. Our chief, who then designed so much and laboured so diligently himself, is still active; all know the good work he has done and is doing. The workmen of those days have since been led to pursue somewhat different paths, but all save one are still hard at work, and most are keenly prosecuting some kindred labours to those they were engaged in when assisting Dr. Acland—like their master, students still, studying, though perhaps in many different ways and with varying success, the wonderful lesson of which every man learns a little, but which the wisest and most persevering of students can never completely master, though he live long and strive hard.

No branch of natural knowledge exhibits such wonderful and uninterrupted progress as physiology. Not only is the superstructure being constantly added to and altered at the same time, but the very foundations are being continually extended, improved, and renovated. No wonder, then, that, in our anxiety to add to existing knowledge, we sometimes misjudge facts and misinterpret phenomena. No wonder that observations regarded as very accurate at the time they were made, afterwards prove to have been erroneous, or that the conclusions of one observer should be strangely at variance with those of another. Like the living things which it treats of, physiology is incessantly changing, and the true physiologist endeavours not only to add to existing knowledge, but so to add that further changes, which he knows are inevitable, may be made with the least possible derangement. In progressing he desires to provide for further, and he hopes unceasing, progress.

Few things are more difficult than to observe and interpret correctly the mere structure of the various tissues of man and animals, and we have yet very much to learn in connexion with this subject. It is, therefore, all-important to obtain specimens which shall demonstrate clearly any new facts we think we have proved. Every effort has been made to illustrate by specimens the views I shall advance in the lectures I am about to give; but the difficulties in the way of obtaining and preserving a good preparation, which positively demonstrates at one view the facts upon which conclusions concerning structure and growth have been based, are so great that I cannot hope my efforts will meet with anything approaching complete success.

The specimens which I shall submit to your notice have all been prepared upon the same definite plan, and have been preserved in the same medium. They will be exhibited under objectives magnifying from 50 to nearly 3000 diameters.(b) In order that some idea may be formed of the degree of amplification of the one-fiftieth object-glass lately made by Messrs. Powell and Lealand, it is only necessary to mention that if it were possible to see a hair in its entire width under this power it would appear to be nearly one foot in diameter, and an object an inch in height would be made to appear as if it was 250 feet high.

I shall have to direct your attention to some facts which have led me to conclude that certain phenomena manifested by part of the material substance of which all living things are composed, are peculiar to the living world; that between the *living* state of matter and its *non-living* state there is an absolute and irreconcilable difference; that, so far from our being able to demonstrate that the *non-living* passes by gradations into, or gradually assumes the state or condition of, the *living*, the transition is sudden and abrupt; and that matter already in the living state may pass into the non-living condition in the same sudden and complete manner; that, while in all living things chemical and physical actions occur, there are other actions, as essential as they are peculiar to life, which, so far from being of this nature, are opposed to, and are capable of overcoming, physical and chemical attractions. And I think the evidence which I shall adduce will convince you that the *non-living matter* is the seat of the physical and chemical phenomena occurring in living beings, but that the vital actions occur in the living matter only. Moreover, we shall see that this living matter, which exists in every living thing in nature, can be easily distinguished from the matter in the non-living state, and that the one cannot be mistaken for the other.

I shall not confine myself to the demonstration of the structure of tissues which have been removed from the dead body, but shall endeavour to describe what probably takes place during life while these tissues are being developed, are growing, and are acting each in its own peculiar way. And if I fail in my attempt to give, as it were, an account of the life-history of a tissue, I trust I shall at least be able to assign a more definite meaning to the words "life," "living," "vital," etc., than has been done hitherto. It would be presumptuous in me to hope to place on a more sure foundation the science of the living, but I shall do my utmost to rescue physiology, for a time at least, from being considered a mere subsection of physical and chemical science.

OF VERY MINUTE LIVING PARTICLES.

It is difficult for the mind to realise the wonderful minuteness, the extraordinary number, and the almost universal distribution of particles of living matter. Not only are they found in and upon the earth and water, but the air teems with them, and is, as is well known, the medium by which particles of comparatively large size and of complex organisation are carried from the place of their formation to the seat of their development

(a) Thos. Howard Stewart, even while a Medical student at King's College, was remarkable for a rare love for comparative anatomy, natural history, and physiology. Living near the coast in Devonshire, he had had splendid opportunities for pursuing his studies, and at a very early age became an active member of the Devon and Cornwall Natural History Society. After having spent some time in Oxford as assistant to Dr. Acland, he was elected, in June, 1855, student in human and comparative anatomy in the Royal College of Surgeons. Three years later he succeeded Dr. G. V. Carter as senior assistant in the Museum, an appointment afterwards filled successively by Murie, Bader, and Bell Pettigrew. In 1861, Stewart was attacked by serious illness, which ended fatally on December 21 of that year. His beautiful preparations, particularly of the echinodermata, in the museum of the College of Surgeons, and several short papers which he wrote, show plainly that in him science lost one who was eminently qualified for becoming one of her most earnest and successful labourers.

(b) *Proceedings of the Royal Society*, January 19, 1865. "How to work with the Microscope," 4th edition, p. 286.

and growth. But of microscopic germs the air contains vast quantities differing entirely in their nature, their mode of origin, and in the results of their development and growth. Living particles giving rise to various forms of microscopic fungi are wafted by currents of air into situations favourable for their development; and in the same way there is reason to think particles of living matter capable of giving rise to the most serious and fatal diseases of which man is the subject are carried to an organism which is in a state favourable for their reception and germination. No doubt millions of such living particles perish for every one that germinates. Some are much more easily destroyed than others. Certain kinds retain their vitality for a comparatively long time in a moist warm atmosphere, and it is not improbable that they may even grow and multiply, and perhaps produce particles differing from them in properties or powers. Some of these particles possess inherent motion, and it is probable that they climb, as it were, through still and moist air, just as certain other living particles are capable of climbing in any direction through water which is in a state of perfect rest. Minute particles possessing these inherent powers of active movement can insinuate themselves into the slight chinks in fully formed tissues in every part of the body, and may easily make their way along the crevices between protective epithelial cells into the tissues beneath, and then through the thin walls of the smallest vessels into the blood.

General Structure of the Particles.

The most minute living particles may be obtained from the air in many ways. Perhaps the simplest process is to allow the vapour of the atmosphere to condense on the sides of a perfectly clean glass vessel filled with ice. The drops of water as they trickle down the sides are to be received into a conical glass, and any living particles entangled in the fluid can be detected upon microscopical examination with a sufficiently high power. In many instances two kinds of particles will be found—one soft, exhibiting movements in the fluid in which it is suspended; the other spherical or oval in form, comparatively firm, and possessing considerable resisting power. The first are often extremely minute, and so very transparent that they can only be distinguished from the medium in which they are suspended by very high magnifying powers, used with the greatest care and under the most favourable circumstances. Further examination enables us to demonstrate that the particles last spoken of are composed of two kinds of matter: 1, a firm envelope closed at all points, and 2, a little delicate transparent matter within this, and resembling the material of which the first kind of particles seems to be entirely composed. I shall presently endeavour to show that the encapsuled particles of living matter did not always exhibit this character, and that the capsule was, in fact, formed in consequence of changes taking place upon the surface of a particle of living matter like the particles first referred to. Living things in water, and living things on or in the ground, may in like manner be divided into (1) those which consist of living matter capable of moving in every direction, of dividing and subdividing, and invested only with a very thin layer of fluid or semifluid matter, and (2) those which are covered with a layer of a more or less resisting material, which interferes with or entirely prevents such movements of the living matter within as have been referred to above. So also the elementary parts of which the tissues and organs of man and all the higher animals are composed are found to consist of these two classes of particles—the first exhibiting the general characters already described, the last manifesting a great variety of form, structure, and properties, according to the arrangement, character, and composition of the external or enveloping matter.

But the great difference between particles of apparently naked germinal matter and particles enclosed in a thick envelope or capsule is but a difference of degree. The first or apparently naked particles are probably invested with so very thin a layer of soft and perhaps fluid formed substance that it follows the movements of the living matter, and is almost invisible; while in the last this formed matter has increased in thickness, and has undergone condensation, so as to interfere with the free motion of the living matter within, or, at most, to permit it only to move round and round within its prison wall. Our investigation is therefore narrowed to the study of the changes taking place in the transparent *living matter itself*, and the production of the material upon its surface.

It is, indeed, very remarkable that at an early period of development the entire organism of every living thing consists of one or more particles of clear, transparent, structureless matter, capable of moving in all directions, which undergoes division and subdivision as it grows. The material forming the investing capsule is gradually formed, as I shall endeavour to show, by changes taking place on the surface of the germinal or living matter.

Process of Investigation.—But in order to distinguish the transparent living matter from the frequently transparent formed material, it is necessary to pursue a particular method of investigation, which I have fully described elsewhere.(c) The value of this process depends upon the fact that the *germinal matter is coloured red by an ammoniacal solution of carmine, while the formed material, notwithstanding it has been traversed by the coloured fluid, remains perfectly colourless.* In practice certain precautions must be taken, and the density and composition of the colouring fluid slightly varied in special cases, but it may be affirmed that *every kind of germinal matter receives and fixes the colour, while no formed material is tinged.* All the specimens I shall show you have been prepared according to this plan, and you will, I think, be able not only to distinguish the germinal matter from the formed material, but to observe the different proportions present at different periods of development of the tissue, at different ages, in health and in disease.

(To be continued.)

LECTURES ON
DISEASES OF THE NERVOUS SYSTEM.

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Locomotor Ataxy.

I have now to direct your attention to another form of paralysis which has attracted a great deal of attention of late. I mean the *ataxie locomotrice progressive*, or locomotor ataxy. The disease has long been known, but not recognised in all its peculiarities until a few years ago by Duchenne, of Boulogne. It is a disease characterised by a peculiar form of paralysis of the limbs, especially of the legs, which are thrown out in so strange a manner that it would seem that a knowledge of their action is altogether lost, and consequently it is suggested that the affection is due to a failure of the muscular sense. Such cases, I say, had long been observed, especially in a particular class of men who had led a life of dissipation, and more especially been addicted to immoderate sexual indulgence. They are the same, I believe, as those described by Dr. Gull in his Gulstonian lectures many years ago under the term cerebral paraplegia. The term did not imply that the mind was affected, but rather that the ordinary symptoms of spinal disease were wanting. When, however, at a subsequent period, Dr. Gull had discovered in such cases the actual existence of morbid changes in the cord, he said, "In the year 1848 I proposed a classification of paraplegia which recognised the existence of cases which might be considered encephalic; but better methods of investigation make it doubtful whether paraplegia, properly so called, is ever due to lesions which are strictly cerebral in their seat."

The disease of which I am now speaking would be styled superficially paralysis or paraplegia, but the peculiarity lies in the fact just mentioned, and which was only clearly enunciated a few years ago by Duchenne—that although the legs are tottering, and the patient may fall, yet there is no real want of power in the limbs, but the disease consists in the regulating influence of the nerves being deficient. The power of co-ordination of movements, in fact, is wanting. Duchenne's words are, in describing the disease, "Progressive abolition of co-ordination of movement and apparent paralysis, contrasting with integrity of muscular force," and he proved this at once to his class by his making the patient thus affected take a student on his back, and carry him across the lecture-room. Also, when placed in a chair, the resistance which the patient could oppose to any effort to bend the limb was as great as natural. When, however, he stood up and attempted to walk, the limbs were thrown out in a most extravagant manner, and it was only by constantly looking at them that the patient could tell where about he was to place them; as soon as he took his eyes off, he fell. This is the test for the ataxic condition. You place the patient on his legs with his feet together and command him to shut his eyes, when he

(c) "How to work with the Microscope," 4th edition, p. 299.

immediately falls. For the same reason he cannot walk in his own accustomed rooms in the dark without feeling his way. These disorderly movements are implied in the term "ataxy."

Those of you who had never heard of such an affection, or seen a case for the first time, would say at once that, according to the physiological doctrine, the cause of it must lie in the cerebellum. This is the organ, we are told, which has for its function the co-ordination of movement; the will, it is said, may stimulate the muscles to act through the nerves, but these muscles would move in a most disorderly manner were they not restrained and regulated by the cerebellum—that, indeed, none of our movements would be marked with propriety were they not regulated by this organ. Now, here is a case of disease where the muscles are acting in this disorderly manner, and control is wanting over them. Therefore it might be suggested that disease exists in the cerebellum. This is not, however, found to be the case, nor do I know of any clinical facts to warrant the opinion that the cerebellum has such a function as is generally assigned to it. In the disease I am now speaking of, a morbid change has invariably been found in the spinal cord, and more particularly in the posterior columns, though even this has been advanced as an argument in favour of the cerebellum being engaged in the control of movements, since it might be argued that disease of the posterior columns would of necessity cut off much cerebellar influence from the limbs.

The co-ordinating or regulating power being clearly wanting, another theory has been started in explanation, and this is the one now mostly in vogue, and it is that the muscular sense is lost, and thus, the patient being ignorant of the position of his muscles, he does not know how to use them. They are good and powerful, but he has lost all sense of where they are, and does not know what to do with them, in a somewhat similar way as in the case mentioned by Sir C. Bell of a woman who had lost sensation of one arm, but not the use of it; consequently, she could carry her child in her arm as long as she looked at it, but directly she directed her eyes away the arm would fall. In this illustration there was simply a loss of common sensation, whilst in ataxy this is only occasionally wanting, but I mention it to show that we must have a knowledge of the position of our limbs, as well as having possession of a power over them, in order to use them rightly. It is thought by some that there is a special sense which conveys to our sensorium a knowledge of the actions of our muscles, and that in the disease known as "ataxy" this sense is lost. The doctrine was first advanced by Sir C. Bell, who says, "When a blind man, or a man with his eyes shut, stands upright, neither leaning upon nor touching aught, by what means is it that he maintains the erect position? The symmetry of his body is not the cause: the statue of the finest proportion must be soldered to its pedestal, or the wind will cast it down. How is it, then, that a man sustains the perpendicular posture, or inclines in due degree towards the winds that blow upon him? It is obvious that he has a sense by which he knows the inclination of his body, and that he has a ready aptitude to adjust it, and to correct any deviation from the perpendicular. What sense is this? for he touches nothing and sees nothing; there is no organ of sense hitherto observed which can serve him or in any degree aid him. Is it not that sense which is exhibited so early in the infant in the fear of falling? It can only be by the adjustment of muscles that the body is firmly balanced and kept erect. There is no other source of knowledge but a sense of the degree of exertion in his muscular frame by which a man can know the position of his body and limbs whilst he has no point of vision to direct his efforts or the contact of any external body. In truth, we stand by so fine an exercise of this power, and the muscles are from habit directed with so much precision and with an effort so slight, that we do not know how we stand. But if we attempt to walk on a narrow ledge or stand in a situation where we are in danger of falling, or rest on one foot, we become then subject to apprehension, the action of the muscles is, as it were, magnified and demonstrative of the degree in which they are excited. It must be a property internal to the frame by which we know this position of the members of our body, and what can this be but a consciousness of the degree of action and the adjustment of the muscles?"

Such a doctrine as here laid down of the existence of a muscular sense is by no means, I believe, generally held, for, in the first place, Sir C. Bell's statements that sensitive fibres do pass into the muscles, have not been proved. Moreover, as a matter of fact, the muscular tissue is almost devoid of feeling, except when spasmodically contracting, as in cramp. Again, in ordinary contraction of a muscle, as when we grasp anything in the hand, no sensation is experienced in the forearm.

Supposing, then, that we have no knowledge of the active or passive state of a muscle, how do we account for the fact which Sir C. Bell alludes to, that a man has no difficulty in preserving his equilibrium? This is accounted for by some on the supposition that the cutaneous nerves are sufficient to acquaint us with the posture of a limb or of the whole body; and this would be explained by a fact of which Sir C. Bell was probably ignorant—a fact which there is every reason to believe was first demonstrated in this theatre more than thirty years ago by Mr. Hilton—that the same nerve which supplies a muscle also sends its sensitive branch to the skin over it, and to the textures which form the neighbouring joint. It would thus follow that when the arm, for example, is flexed, a corresponding nerve to that which supplies the muscles is giving notice of the state of the skin and of the joint which is moved, and thus we are possessed of a knowledge which is equivalent to that of a muscular sense. You might infer from this, then, that coexistent with cutaneous sensibility would be the acquaintance which we all possess of the position and action of the various parts of our body. To a certain extent this is true, for I have seen only this day a lady who, being paralysed many years ago, recovered her power of movement in part, though sensation is almost gone. She is in the habit of using her hand, as, for instance, in carrying her bag along the streets, but only so long as her arm is across her chest and she can see it; if her eyes are removed from it, she frequently drops it. To strengthen this view it is found that in these cases of "ataxie locomotrice" anæsthesia does sometimes exist, and then there might appear to be a ready explanation of the phenomena; but unfortunately in many cases perfect sensibility remains. Besides, we meet with anæsthesia constantly, as in hysterical women, but there is no ataxia or want of co-ordination.

Appendix.

[You will see, then, that the question of muscular sense is not decided—its existence is not yet accepted as a fact; but I think it must be admitted that we must possess something equivalent to it, even if the sense resides in our bones and ligaments, since we should otherwise be in the position of the statue or the patient with ataxia. From another point of view, it seems that many physiological phenomena can scarcely be accounted for except on some such knowledge. This was hinted at by Sir C. Bell, but, as far as I know, has never been thoroughly worked out by his successors. He says:—"We owe other enjoyments to the muscular sense. The divisions in music, in some degree, belong to the muscular sense. A man will put down his staff in regulated time, and the sound of his steps will fall into measure in his common walk. A boy striking the railing in mere wantonness will do it with a regular succession of blows. This disposition of the muscular frame to put itself into motion with an accordance to time is the source of much that is pleasing in music, and aids the effect of melody. There is thus established the closest connexion between the enjoyments of the sense of hearing and the exercise of the muscular sense." I say this subject, as far as I know, has not been thoroughly developed, for I cannot help thinking that that knowledge which we possess of the contraction and relaxation of a muscle has more to do with many phenomena of our lives and pursuits than we are aware of. Why is it, in Sir C. Bell's illustration, that the leader of the band regulates the time with his staff? The beating time is in reality the contraction and relaxation of certain muscles. This proceeds with such regularity that there is no appeal by the ear against it. When the music teacher counts to the young player on the piano, he could do so equally well were his ears closed, the time being regulated by the contraction and relaxation of the muscles concerned in vocalisation. May not the notion of time, then, come from the muscular sense? What is meant by rhythm, by accent, and quantity in verse? What is the rising or falling of the voice but an operation brought about by muscular action? If we remember that the chest must expand and contract for purposes of life, and that we can only use for the requirements of speech as much air as can be breathed in and out in a certain time, also that during this period we contract the muscles of the larynx and again relax them, we must arrive at the conclusion that all our movements during speaking, reading, or singing are due to alternate contractions and relaxations of muscles; that there must be a rising and falling of the voice, and what we call rhythm is dependent on simple physiological action. Accentuation of words would follow, and many other interesting

points which it would be out of my province here to dwell upon. In order to prove whether this feeling of rhythm depends upon the ear or some other sense, we should naturally turn to the deaf and dumb, and inquire what knowledge of music they possess, for I think any evidence in favour of or against their possession of any degree of the perception of rhythm would be a corresponding forcible argument as regards the existence of a muscular sense. Now, the fact of many deaf and dumb persons having written poetry or being able to versify might appear sufficient to warrant an affirmative to the question, whether they possess a sense of rhythm or of tune; but, having taken some little trouble in order to investigate the matter, I find that most of these writers of poetry were not born without the sense of hearing, but, on the other hand, distinctly remembered the time when they had the enjoyment of this sense. Still there are those who never heard a sound in their lives and are able to read poetry with the appropriate accent and rhythm, but to this the objection might be made that the method had been learned by the ordinary means. It is well known that the deaf and dumb are now made to speak by the method of watching the movements of the speaker's mouth and by feeling his larynx, and I am much indebted to the Rev. Mr. Watson, the Principal of the Deaf and Dumb School in the Old Kent-road, for the opportunities he has given me of testing his scholars and for giving me his own opinion on the subject I am now discussing. It is this gentleman's opinion that in speaking his pupils are conscious of the effort by a sensation in the larynx, and that a degree of cadence is necessarily produced by the alternate contraction and relaxation of the muscles, although, no doubt, the pronunciation and accentuation of the word are learned by merely tracing the movements of the speaker's lips. I might state that two of the teachers in this school were born deaf and dumb; on asking them to read aloud, they did so in a somewhat discordant tone, but with a proper accentuation of the words. A book of poetry written by a former inmate was presented to them, and they read without hesitation. The man the following verse:—

> When friends a lasting farewell take,
> There comes the ill-suppressed sigh;
> The sad fond heart is nigh to break,
> And tears quick rising flood the eye.

The author of this book of verse, Mr. Simpson, believes that the deaf and dumb are as capable of writing and reading poetry as other people, but then it must be stated that it was not until he was seven years old that he totally lost his hearing, and thus the memory of words remained to him. It was so, also, with the deaf authoress, Charlotte Elizabeth, who wrote much poetry, but who did not lose her hearing until the age of twelve. Then, again, Dr. Kitto, who, I believe, lost his hearing at twelve, when writing on deafness, says:—"It is not wonderful that deaf mutes, and those who have become deaf in childhood, never do attempt to contend with those difficulties which seem absolutely insuperable. I am utterly ignorant of any verse written by any person under such circumstances." In answer to this I was presented with a piece of poetry composed by a late inmate who was said to have been always deaf and dumb; but of this I feel somewhat doubtful. These contradictory statements show that some further observations are required in reference to the capabilities of the deaf and dumb. At present my own opinion is in agreement with that of the Rev. Mr. Watson, that they do possess a knowledge of rhythm.(a) This gentleman informs me that they dance to music, and move their limbs in true time. If this be satisfactorily proved, it will show that we human beings are in possession of a muscular sense, or some sense equivalent to it—that is, that we are conscious of the contraction and relaxation of our muscles, or of the movements which those muscular contractions entail; and that to this sense is due not only that knowledge which is necessary to enable us to preserve our equilibrium, but that sense of tune or rhythm which is an essential part of our appreciation of music. In corroboration of this view, I am informed by a singer that when reading a piece of music he mentally "hums" the air; but if he has a sore throat, or is hoarse, he cannot appreciate its merit to the same degree as when he is well. If this be so, it would tend to prove what I believe is correct of the deaf and dumb, that the movements of the larynx provide us with a sense of some of the qualities of music. If, then, it be true that we have a full knowledge of all our movements, we are in possession of what is equivalent to a muscular sense.]

(To be continued.)

(a) It is probable that the readers of this journal may be in possession of some positive facts which may prove that the deaf and dumb have an appreciation of poetical measures. If so, the editor might not object to receive any communications to this effect, as the subject is one of great interest.

ORIGINAL COMMUNICATIONS.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,

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Language and Thought—The Duality of Mental Processes.

I suggested in my last article (Hemispherical Co-ordination, September 26, p. 358), of which the present is a continuation, that the pair Expression and Perception are really two pairs—(1) Involuntary and (2) Voluntary Expression, and (1) Involuntary and (2) Voluntary Perception.(a) I was led to this supposition by a consideration of the phenomena of some cases of speechlessness the result of damage to one [usually the left] side of the brain, or, as I would put it (see pp. 358-9), of the cases of persons who cannot revive words *voluntarily*. What follows is mostly an amplification of the concluding paragraph (p. 359) of the preceding article, and an attempt (see the part on representative perceptive signs) to make clearer what I have in the paragraph under (4) (p. 359) spoken of crudely as a double revival of "images," "concepts," etc.

I ought, in fairness, to state beforehand that most of what follows is speculative. The justification of the speculations lies, I imagine, in their leading to a more orderly method of investigating the revelations which cases of disease of the Nervous System are constantly making. It is obvious that much of what follows is accepted doctrine, and the only point I wish myself to urge is the *doubleness* of mental processes. I would especially refer to the writings of Laycock, Spencer, Carpenter, and Lockhart Clarke.

Words serve not only in speech, but in thought; in the former they are usually actually uttered; in the latter the processes for them are only nascently excited. But I think it is not sufficiently exact to speak of Thought as "internal Speech."

(a) It is needful to say how the term "perception" is to be understood in this article. *The psychical, like the physical, processes of the nervous system, can only be functions of complex combinations of motor and sensory nerves.* I have in the former paper guarded myself against being understood to imply that sensation and movement exist separately, although, for simplicity, I speak of them as separate. (See p. 358.) Moreover, it is not implied that Sensation and Perception are altogether different. A Perception is a complex and yet an orderly development of impressions chiefly received in the past from *many different* sense surfaces, and when I speak of a sensation arousing a perception involuntarily I simply mean that, for instance, a noise or a touch may at any time make *actual* in the higher parts of the central nervous system (and their peripheral connexions) a *unit*, which is at all times potential, formed out of *many* impressions. It is as if, to use a very crude and inadequate illustration, the sound of one letter were to develope, not an auditory image of itself or several repetitions of itself, but the sound of a whole word made up of different letters, of which word the one letter is perhaps the first letter. In perception (as the term is to be used in this paper) several sensations, simple or complex, or both, have yielded, so to speak, their own personality into the formation of a higher unit which we then distinguish as a perception.

Similarly in Expression, the corresponding opposite of Perception, we find in a certain disorder of articulation (from disease of the higher parts of the nervous system—*e.g.*, of the region of the [left] corpus striatum) that the defect is not of the muscles of the palate alone, nor of those of the tongue alone, etc., nor of all of these *grouped* together. It is a disorder of a complex unit for the whole process of articulation. But I must defer the more complete consideration of these points until I come to treat of "Spectral Illusions," which are, I conceive, the sensory correlatives of those complex motor disorders which border on, or constitute, incoherent talk.

I adopt the expresssion "thread of consciousness" for those of our always possible sensori-motor processes, which are for the time *actual*, and into which sensations or perceptions are continually bringing modifications.

I may here say something on the use of the words "will," "voluntary," etc. Although we "will," in the sense that we do what we like, provided there are no external hindrances, we do not desire as we like. (See Spencer on the "Will," "Principles of Psychology," Lockhart Clarke on "Volition," *Psychological Journal*, Nos. 8, 9, and 10.) I must use some such word, and I use the words "will," etc., pretty much as "effort," "reflection," etc., are used.

It is not enough to say that Speech consists of Words. It consists of words *referring to one another in a particular manner;* and without a proper interrelation of its parts a verbal utterance would be a mere succession of names embodying no proposition. A proposition—*e.g.*, Gold is yellow—consists of two names, each of which, by conventional contrivances of position, etc. (called grammatical structure in well-developed Languages), modifies the meaning of the other.(b) All the names in a random succession of words may, it is true, one after the other, excite perceptions in us, but not perceptions in any relation to one another deserving the name of thought. The several perceptions so revived do not make a unit. We are *told* nothing by a mere sequence of names, although our organisation is stirred up by each of them. Now, a proposition is not—that is to say, in its effect on us is not—a *mere* sequence.

When we apprehend a proposition, a *relation between two things* is *given* to us—is for the moment, indeed, forced upon us by the conventional tricks which put the two names in the respective relations of subject and predicate. We receive in a *twofold* manner, not the words only, but the order of words also.

Within the speaker's mind, the complete process must correspond to this double gift. I remarked, p. 359, September 26, "there is [internally] something like a reduction of [apparent] relations of sequence to relations of co-existence (*i.e.*, alternate sequence) in the *two* terms of a proposition." His uttered sentence is the result, I conceive, of a double succession of movements (words). There is, I imagine (when we take into consideration what we may suppose to be the full process which ends in the actual utterance), a corresponding double succession of perceptions too. I tried to show that in the process which leads to outward speech—not necessarily outward, of course, let us say, to propositions—there is a double revival of words—automatic revival prior to voluntary revival—and that the *automatic* revival occurs first, and on the *right*, and the voluntary revival afterwards on the *left*, side of the brain. Concepts, images, perceptions, or whatever they may be called—I shall use the word perception in this paper—develope words automatically in no order, or rather in their own order, on the right side of the brain. Words are, or may be, objectively considered on the left—put into new relations—made into propositions. I wish to speak of the links *between* these two revivals. The links are, I imagine, the perceptions of which the words are the arbitrary signs. I wish also to speak of the links between the revived perceptions. They are the aforesaid revived movements of words. In fact there is, I conceive, an alternate play between the higher "movements" and "sensations" of mind, as there is in the commoner movements and sensations of the body. In the latter, after a sensation has excited a movement, the presumption is that the sensory nerves from the muscles put in action, or perhaps from the skin over them, register the form and degree of the *movement made or making*, and no doubt in such automatic processes as walking these supervising nerves serve also in the excitation of the movement which is to follow in adaptation to the common purpose of the series of movements—helps to determine *its* form and degree. In walking there is no difference, or no obvious difference, in the alternating movements, but in the leading parts of the nervous system the processes are not altogether automatic. If they were, there would scarcely be a consciousness. See Spencer's "Psychology," chapter "Will," pp. 612-3.

It is convenient to speak first of the two revivals of perceptions, and next of revivals of words, although, as already said, I conceive the revivals to be *alternate*—involuntary motor, involuntary perceptive; voluntary motor, voluntary perceptive.

It seems plain that there is, at least often—always, I imagine—involuntary prior to voluntary(c) revival of perceptions. To take an instance. When I hear a certain creaking noise, I "see," in spite of myself, a certain room. I should have so *suffered* any time the last twenty years, and may for the next twenty. Here a simple sensation rouses a perception. The creaking sound is merely a particular noise affecting the auditory nerve, but the induced change in this nerve necessarily revives in the brain to which it "travels" impressions of other things with which, in coexistence or in sequence, it had been often formerly received. Probably the noise always acts on me in essentially the same way, but in very different degrees. When I am thinking of something important, there is either no obtrusion or the *faintest* or perhaps I should say only the most *temporary* obtrusion of the awakened perception on the "thread of my consciousness." But were I not strongly preoccupied, or granting that certain circumstances, say the recent death of a friend whom I used often to meet in that room, were *en rapport*, it would take the lead in my mind. I should "will" to dwell on the perception which has been obtruded on me, and for this there would, I presume, be required a *voluntary* revival of the perception—objective consideration—and this second revival would occur, as I speculate, on the right side of my brain. In short, the sensation first acts upon me as it finds me, unawares. I am suddenly its victim, for it brings the room before me in spite of me. The awakened perception may or may not quickly fade out of my consciousness, or it may be revived by effort when the noise has ceased and is perhaps forgotten. Moreover, it must take a place in, so to speak, any "proposition of perceptions" (d) I like to put it in. Or, using popular language, I can reflect on it.

To repeat, there is first involuntary revival of perception, afterwards there is or may be voluntary revival. And of the voluntary revival it must be added that the perception, besides being modified, is or may be put in a new order with others. Indeed, it is necessarily modified by being put in a new order, as words are in a proposition. But what is the intermediation betwixt these two different perceptions? They are really different, each being not merely a repetition of the other. It is movement—*i.e.*, the movement of words.

Let us see how the hypothesis applies to what follows hearing the word "horse" in a proposition. Horse (the real thing, that is) cannot be considered objectively in the same sense as the room can. Nevertheless, when the word "horse" is said to me I do properly understand what is meant, and I understand sentences of which the word "horse" forms a part, as "horse is swift." The word cannot, it may be urged, revive the perception of any thing automatically, as it is not the name of any one thing—of any particular horse. It serves as a sign for all horses—for horses of different colours, for young horses, for old ones, for fat or for lean ones. Still, it revives something. There have long been permanent modifications of my brain which make it possible for another person at any time to *compel me* to have in my consciousness, at least momentarily, unless I am strongly preoccupied, *some* kind of notion of horse. He excites certain changes in the "grooves" of those permanent modifications of my brain which are always with me, part of me. And although what the speaker can bring about directly is only a certain series of vibrations on my auditory nerves, these vibrations are of necessity, in all Englishmen who have seen horses, followed by a notion of "horse." What is the nature of this ever-present modification of my organisation, usually sleeping, but any time to be awakened by the noise "horse," to give me a notion of horse? Is it a sensory or is it a motor process? In other words, is it a (potential) perception—*i.e.*, a unit formed out of certain complex sensations, having a *direct* relation to horse, woven from former seeings of more than one horse—or is it an arbitrary (potential) motor sign in itself altogether meaningless—a counter which is revived to serve in thought *instead* of a perception (a spectre) of horse? I think there must be both a motor and sensory process.

It is plain that I have always in my brain a motor sign for horse, for I can say the word horse at any time. And no doubt, when I hear the noise horse, the motor process—the word—is the one first revived in my mind by the aural sensation. Its revival is, fundamentally considered, an instance of a particular movement blindly following, by acquired habit, a particular sensation. This motor sign is, or may be, developed *automatically* on the right side of the brain, for it is (see pp. 358 and 359) possible to rouse it in a man who has lost the

(b) The remarks of Waitz, from whom I have borrowed the idea in the above paragraph, are of very great interest in this connexion. The passages are too long for quotation. (See Waitz's "Anthropology," translated by Collingwood, p. 241 *et seq.*)

(c) Although I must speak, for convenience, of the two sides as being respectively voluntary and involuntary, I do not think there is any abrupt difference. The remark in the text implies the belief that there are all degrees betwixt automatic action and that kind of imperfect action which is the dawn of "will." (See Spencer's "Psychology," chapter "Will.")

(d) It seems to me that this view, or a similar one, clears the difficulty stated under the heading "Attention," p. 131 *et seq.* of Mansel's "Metaphysics." "It appears certain," Mansel says, "on the one hand, that, in order to arouse the attention to any sensible phenomenon, that phenomenon must first be presented to consciousness; while, on the other hand, it has been argued, with some plausibility, that unless the attention be previously aroused, consciousness has no intimation of the existence of the phenomenon at all." Again, "Is the phenomenon of which we become fully conscious by attention the *same phenomenon* that it was before we attended to it? or has attention itself added an element which brings it within the sphere of consciousness?"

side of *voluntary* revival of words by disease.(e) But have I not something more in my mind than the mere *motor* sign when I understand a proposition with the word "horse" in it?

There must, I conceive, be besides a sensory image of some kind—a perception. Moreover, there is, I speculate, a double revival of perceptions in understanding a proposition with "horse" in it.

The first thing in this double process of perception, I presume, is that the automatic motor sign "horse" acts on the left side of my brain as the creaking sound did, and developes that *perception with which it is arbitrarily associated.* [The creak has a direct relation with the perception "room." The noise "horse" has an indirect relation with this arbitrary sensory image horse, through the word "horse."] So far the process is still involuntary. We must stay here to consider what the nature of the revived involuntary perception is.

In the case of the creak the perception of one *particular room is revived*, not a "general notion" of rooms. The creak is, then, so to speak, that one room's Proper Name. But in the case of horse, there being no particular horse in question, what is the nature of the perception revived?

My notion is that we not only think by help of arbitrary *motor* signs (words), but by help of arbitrary perceptive signs, and that we have permanently in our brain organised forms of the latter, just as we have organised forms for the former—movements of words. I will try to illustrate this, saying, however, beforehand that the illustrations are scarcely parallel to the case of "horse"—at least, not seemingly so.

When I am made to think of a place I have once visited, I "see" faintly some part of it which has struck me most—*e.g.*, of Petersfield, the market-place; or, of a certain village, The Green where there are railings under an elm tree. Such fragments stand to me, I conceive, as counters in ordinary thought for the whole place. If I am made to think of a place I have never seen, but have read of, I have still some sensory sign for it, which is really quite arbitrary. Thus, when I think of Berlin or of America, all I can put before me for these places are visions of maps or of names on maps. These perceptive signs are really quite as arbitrary signs as words are, although each person has his own perceptive signs. It would seem as if anything of the sort would do, for when I think of New York I "see" a picture I once looked at of Broadway. When I read of scenes in "Arctic Voyages," I think of vast hills of ice and water.

Now I can in each of the above cases, according to the degree of my direct or indirect knowledge of the place or scene, enlarge the simple sign or alter it, or perhaps translate it into some other perception which the circumstances may require. When I have seen Berlin, I shall have a different perception of it; and even now I can at will think of it as an assemblage of houses with streets, shops, public buildings, etc. There is automatic revival followed by voluntary revival—the latter revival being essentially an adoption of the obtruded perception by my consciousness—*i.e.*, putting it in new relations by which it is necessarily modified.

The above-mentioned perceptive signs for single objects are analogous to proper names, and it does not follow that I have an arbitrary perceptive sign for horse in a proposition referring to no particular horse. It is next to impossible to analyse one's thoughts on such a point, but my impression is that we have ever present in the nervous system an organised form which, when revived, is a shadowy vision of some horse—perhaps of one particular horse with whose shape, etc., we were struck—and this serves with the word horse for "horse" automatically in rapid thought. It is possible—this is the belief of some,(f) at least—that the word "horse" was at the earliest part of our intellectual life the *proper* name of some one horse—the one, possibly, we first saw. The very same word afterwards becomes the sign of our "general notion" of horse. There is some analogy in the sensory part of the mind; for as regards the room, so often mentioned above, its particular perception very often stands to me for rooms in general, and it is a revived image of this very room that I have mostly "in my mind's eye" when I read of domestic life, and I place the characters of tales in it. It has become to me the analogue of a general name.

I can at any time voluntarily "see" a horse. I can "see" a white one, a black one; a fat one, a lean one. But in rapid thought I see no particular horse, for no one is spoken of. I have only my "lay figure" of a horse. I can translate my single permanent perception of horse into the perception of any particular horse I remember.

(e) To take an old illustration—the word "triangle." How, it may be asked, can this motor sign in a proposition develope in us the perception of a triangle, of whose shape nothing special is affirmed, when actual triangles are dissimilar—equilateral, isosceles, and scalene? It is hard to analyse one's thoughts on such a matter, but I feel that I myself have a perception of a particular triangle—viz., an equilateral triangle, which, I suppose, serves automatically, in thought, for what I may call my general notion of a triangle. Suppose the following proposition is in question:—"The three interior angles of every triangle are equal to two right angles." I cannot but think that every one who heard and understood this statement would have a perception of a drawing of that kind of triangle which had, in his experience, been most frequently associated with the word triangle, or some one triangular figure which had struck him. Suppose the above statement is repeated in detail. "This is true of the equilateral, the isosceles, and the scalene triangles." There would then be developed with each name perceptions of each kind of triangle—with three equal, with two equal, and with three unequal sides.

(f) See Mansel's "Prolegomena Logica," pp. 19, 20, and 29-31.

ANEURISM OF THE COMMON CAROTID—LIGATURE OF THE ARTERY—RECOVERY—SUBSEQUENT ANEURISM OF THE ABDOMINAL AORTA—SUDDEN DEATH.

By ALFRED POLAND, F.R.C.S.E.

[From notes by Geo. Eastes, Esq.]

Edward R., aged 33, a carpenter, living in the Borough, was admitted into Guy's Hospital on October 29, 1862, under Mr. Poland. He had an aneurismal tumour of the left common carotid artery near its bifurcation; it was of the size of a bantam's egg, pulsated strongly, and readily emptied by pressure on the common carotid artery as well as by direct pressure. The contents appeared to be quite fluid. He stated that when in the Crimea in 1857 he had rheumatism, and for the last twelvemonth he had felt giddy on undue exertion; he had noticed the tumour for one year, and the pulsation in it for upwards of three months. There was no history of syphilis. He complained of headache, noises in the ear, and dimness of sight of the same side, and was much distressed with the incessant beatings of the tumour. There was nothing remarkable in the condition of the eye or the pupil, and, as far as one can recollect, nothing of any moment distinguished in the eye by ophthalmoscopic inspection. Digital compression of the common carotid was tried, but without success, causing much pain and an increase of the throbbing on the slightest removal of the pressure, so as to render the pain in the head and forehead almost unbearable. Mr. Poland decided at once to tie the common carotid artery, which was performed on November 5 under chloroform, just below the omo-hyoideus muscle. There was no difficulty about the operation. For two or three days the pulsation in the tumour was uncontrolled, but gradually subsided as coagulation took place in the aneurism; however, this soon disappeared, and the tumour becoming more and more solid, and gradual diminution steadily taking place, a successful issue resulted. He still had an odd feeling about the head, and increased pulsation in the temporal vessels on that side of the head. He left the Hospital in January, 1863, convalescent. There had been no paralysis or any other affection worth mentioning subsequently.

On July 25, 1866, he re-entered Guy's Hospital, and the following report is attached to his case. He is a healthy temperate man, and about four years ago he had aneurism of the left common carotid artery. Since then he has had dimness of sight, and latterly has had giddiness in the head at intervals with throbbing pain in the forehead. About four months ago he fancied he caught cold, and directly after he felt a pain in the lumbar region of the right side, which increased in severity. He says he tried several home remedies, but nothing would relieve him. Six weeks ago he became an out-patient, and was relieved for about three weeks, when the pain got worse, and he came into the Hospital. He now complains of continued pain through the abdomen, on a level with the umbilicus, which pain does not seem to be increased by eating or upon pressure upon any part of the abdomen, but is relieved when the bowels are freely opened. Just below the margin of the ribs, above the umbilicus and slightly to the left of the median line, there is considerable pulsation which pushes the fingers forwards, but does not exert any appreciable lateral pressure. Pressure at this spot causes much local suffering. There is no bruit; there is a systolic murmur audible on the left side of the sternum between the second and third costal cartilages, diminishing in all directions in

intensity as the stethoscope is moved from the spot. The pulse is equal on both sides. The temporal artery is less vigorous on the left side than on the right. There are no remains of the former aneurism to be felt; there is slight pulsation in the track of the left carotid to be distinguished. Pupils contracted, but of equal size. No paralysis of the face, arm, or leg, since the operation. He has lost a good deal of flesh latterly, and is much weaker. Appetite good. Bowels open.

Dr. Owen Rees carefully investigated the case, and pronounced it to be one of aneurism of the abdominal aorta; he prescribed four grains of acetate of lead and half a grain of opium three times a day. On August 4 the pain in the abdomen was easier; but he had severe throbbings in the head, and he had a peculiar sensation of pain at intervals, which he described as if all his bloodvessels were suddenly distended with blood. The pulsation in the abdomen not so distinct. He sleeps a good deal, but does not seem rested by it. He continued under this treatment for upwards of five weeks with some partial benefit, but he left the Hospital on September 28, after two months' sojourn, in much the same condition as on admission. This patient was lost sight of for some time, but in November, 1867, he was heard of as following his employment, and stated that the abdominal tumour was about the same size as when he left the Hospital in 1866. He had suffered no inconvenience from it, except occasional local pain.

It has since been ascertained that, soon after this, he was laid up at home for six weeks, and, whilst turning round in bed, he suddenly expired; and this happened about three days after Christmas in 1867. There was no examination of the body, and no further details of his case to be procured.

Remarks.—The interesting facts about this case are—1st, the unusual situation of the aneurism—viz., at the common carotid artery close to its bifurcation; in fact, it almost appeared to be a dilatation or pouch-like extension of the vessel between its two trunks. 2ndly, the absence of any marked cerebral disturbance or material impairment of vision, both before and after the operation of tying the artery; and, on making particular inquiry of his wife and relatives some short time back, they distinctly stated that his vision remained good up to the time of death, and that he was perfectly able to follow his employment as carpenter and joiner. 3rdly, the continuation of the pulsation and fluidity of the contents of the sac after the application of the ligature, which was, in all probability, due to the free return of blood from the proximity of two such large vessels as the external and internal carotids. The only wonder is that coagulation ever took place at all, and we were extremely anxious about the future; however, on the third day consolidation began to set in, and slowly and gradually converted the fluid tumour into a solid mass. It is highly probable that the orifice of communication was small, but the stethoscopic examination would not establish this fact, although the point was mooted before the operation. 4thly, the appearance of an abdominal aneurism about four years after, when he underwent the acetate of lead treatment without any benefit, since which time he had constantly been at work and able to perform it without difficulty. This, without causing any inconvenience, and without giving him any anxiety whatever, suddenly gave way and caused his death. There was no history of syphilis. Although the ultimate result of the case was anticipated, a post-mortem examination was most urgently sought for, yet we did not receive any notice of his death until several months afterwards.

ACCIDENTAL INJURY TO FINGER—TETANUS—AMPUTATION—HÆMOPTYSIS—DEATH.

By GWYNNE HARRIES, M.D. Lond.

Samuel C., aged 13, was first seen by me on September 26 last at the request of Mr. Reynolds, of this town, under whose care he was. About eighteen days previously he had had the last joint of his middle finger crushed off in a chaff-cutting machine. The wound was treated in the usual manner, with the view of saving as much of the finger as was possible. For ten days all went on well, the wound healing as rapidly as could be expected considering the nature of the injury. At the expiration of that time, however, he neglected to attend further at Mr. Reynolds's surgery, and was not again seen by him until the day above mentioned, when he presented himself in the following condition:—

The wound was fœtid and covered with large spongy granulations, and when touched intensified a constant severe pain in his back. The arm was fixed with the elbow bent, while spasmodic muscular contractions occasionally flexed it still further. His back was arched, he walked with difficulty, he could not separate his jaws more than about a line's breath, the usual grin was on his face, and, when he attempted to swallow, fluids regurgitated. Under these circumstances we deemed it advisable at once to amputate the finger, at the same time holding out little or no hope of a favourable result. The operation was performed under chloroform, and a light dry dressing applied. For the first day or two after the patient seemed somewhat relieved. He certainly swallowed better, and he stated that there was less pain in the back, though it still recurred in frequent paroxysms. On the fifth day after the removal of the finger, considerable vesication, extending over the back of the hand, appeared suddenly, but this subsided during the use of a carbolic lotion. A few mornings after this, his attendant was roused by his struggling severely for breath, which was relieved by his bringing up about a teacupful of blood; and this occurred a second time. Otherwise he remained in the same condition until the morning of October 6, when he died rather suddenly. This case is reported merely as occurring about the same time as those mentioned in a recent number of this paper, and not for any peculiar features of interest in itself.

Pembroke Dock.

CASE OF MALIGNANT DISEASE AFFECTING THE KIDNEYS.

By JOHN C. THOROWGOOD, M.D. Lond.,
Assistant-Physician to Victoria-park Hospital.

The Rev. A. B., aged 45, came to me early in the spring of last year, complaining of very obstinate dyspepsia; no loss of appetite, but much pain and flatulence two hours after meals. No rising or vomiting of the food; tongue clean, but chapped transversely; bowels costive; urine clear; pulse 80; rest at night good. The patient has been under treatment, and for a time found relief from bismuth ordered for him some months previously by Dr. Carr, of Blackheath. He is now anxious in consequence of persistent emaciation, and a constant wearing lumbar pain, which prevents his standing perfectly upright; his face is thin, anxious, and cachectic-looking, and he tells me his mother died of cancer of the stomach. Finding in the course of two or three weeks that there was no steady change for the better, I felt confirmed in my suspicion that this was a case of something much more serious than mere dypepsia, and I examined the abdomen and thorax very carefully, but found no special tenderness nor anything like a tumour. I also examined the urine, and found it clear and acid; turbidity induced by boiling at once removed by adding nitric acid. Under the microscope, however, I saw one or two bodies that I took to be blood corpuscles; there were no oxalates seen. The next feature in this case was attacks of most severe pain, like renal colic, save that there was no retraction of the testicle. This pain subsided under the influence of opiates, and the patient was able to leave his bed and move about.

On April 13 I took him to see Sir T. Watson, who made a most careful examination of the abdomen, and in the left flank a lump was then felt which Sir Thomas rightly judged to be a piece of loaded intestine, for in the course of a few days, and after some aperient medicine, it went quite away. At this time we again examined the urine. Sp. gr. 1015; no albumen; no sediment. The prescription was for nitro-muriatic acid, with dilute hydrocyanic acid; it was taken for some time with relief to the dyspeptic symptoms.

May 12.—I was called to see him on account of free hæmaturia; the urine was smoky-looking, contained albumen, and under the microscope large quantities of blood corpuscles were seen. This attack passed off, and he went for change to the seaside, taking tinct. digitalis with tinct. ferri, from a second prescription of Sir T. Watson, whom he saw at my desire before leaving. He returned from the sea coast much weaker, quite unable to stand up, and with great œdema of the feet.

July 20.—Urine found clear, free from albumen; sp. gr. 1014. Two days after there was much pain and bleeding. About this time I examined him in conjunction with Dr. Collet, of Worthing, and we both felt a hard mass in the abdomen, seeming to grow out from the lumbar spine, fixed, and not very

tender; also we observed induration of the cervical glands, and now the poor gentleman had great difficulty in moving his legs—they were much swelled, and well-nigh paralysed. At this time, too, he was seen by Dr. Carr, who quite agreed as to the malignant nature of the disease, and had suspected it long before.

On August 4 the patient died, and, thanks to the zeal and discretion of Dr. Carr, we were permitted to open the abdomen on August 6. On doing this we found a mass of encephaloid cancer, growing from the lumbar spine and invading both kidneys. The one on the right side contained cysts full of liquid blood; both were much enlarged, and presented examples of encephaloid cancer in all its stages. Stomach, liver, and bowels healthy. Thorax not examined, nor did we attempt to dissect out the origin of the mass of lumbar cancer.

This case seemed to me worthy of note, as it looked at one time like a case of morbus Brightii, and at times the symptoms were those of a renal calculus. It is true there were some gritty particles felt in one kidney, but nothing at all to be called a calculus.

I did not at any time lead the patient to expect to pass a calculus, for from the first I felt pretty sure there was some tumour of a malignant nature, and that the chance of relief was small. For these reasons also I advised the opinion of Sir T. Watson being taken at an early period in the case. I have myself once before assisted at the post-mortem of a case of cancer of the lumbar glands, in a patient of Dr. Andrew's at the Royal General Dispensary in 1863, and in this case none of the organs of the body were affected by the morbid growth.

In the *Medical Times and Gazette* for June, 1854, p. 613, are some cases of obscure renal disease by Dr. Bence Jones. One of these was a Medical man who now and then passed blood in the urine; further than this there were no symptoms to lead one to suspect malignant disease of the kidney. After death the lumbar glands were found to be a mass of cancer, and true encephaloid cancer was found in the left kidney, which was hard and as big as two fists, while the right one was to all appearance healthy. Wishing to be brief, I have not gone much into the medicines I gave in the case here first detailed, but I may say that the remedies of most use in overcoming the dyspeptic troubles were powders of bismuth with charcoal, and the nitro-muriatic and dilute hydrocyanic acids, as ordered by Sir Thomas Watson on his first interview with the patient.

Welbeck-street, W.

MISPLACEMENT OF THE SPLEEN IN CONNEXION WITH THE HÆMORRHAGIC DIATHESIS.

By HENRY BUSS, M.D., M.R.C.S., etc.

Instances of congenital misplacement of the heart and kidneys, though by no means common, have occasionally been placed on record; but displacements of the thoracic and abdominal viscera resulting from disease are very frequently met with. The following case of spleen congenitally misplaced, if not unique, is at any rate sufficiently rare to form my excuse for intruding it upon the Profession.

A pale-faced, delicate young man, of about 20 years of age and middle stature, with dark hair and white lips, disposition quiet yet cheerful, fonder of home recreations than of the more energetic enjoyments of robust youth, applied to me, about a twelvemonth before the occurrence of the particular malady which ended in his death, for severe dental hæmorrhage brought on after the extraction of a tooth. He was much subject to toothache, and on this occasion, the pain being intolerable, he, with some reluctance, applied to a dentist who extracted the first left upper molar. The dentist, being unable to arrest the profuse hæmorrhage, advised him to apply to a Surgeon. I plugged the cavity with lint moistened with the sesquichloride of iron, and afterwards with a pledget of dry lint, and advised him to give the jaw rest. He passed a quiet night, but the next morning the bleeding again came on during the act of eating. This time I applied the actual cautery and plugged it again. This succeeded till the evening, when the blood once more burst forth, and the mother, taking alarm at the pallor of the patient, put him into a cab and drove him to the London Hospital. He was at once taken in, and I understand that the Surgeon then in charge had great difficulty in putting a stop to the hæmorrhage. He accomplished it, however, by dint of plugging the cavity, and maintaining pressure thereon by tying up the lower jaw. By these means, and by full doses of quinine and steel, the young man was enabled to resume his employment as a clerk within a week.

From this time he went on for about a twelvemonth without any recurrence of hæmorrhage.

One Saturday, when he was out collecting, a pain suddenly seized him in the left groin—a pain which he described as being so severe as almost to prevent his returning home. He took to his bed, and there remained till the evening of the following Monday, when I was called in to see him. In the meantime his mother had essayed to relieve his sufferings by domestic remedies. I found him in bed, with his legs drawn up; very anxious expression of countenance; tongue coated and white; pulse full and quick; bowels confined; urine scanty and dark; skin dry; pain great, and extreme on pressure in left iliac fossa, where a tumour could be felt.

Here, then, was evidence of acute inflammation persisting for upwards of forty-eight hours, together with grave suspicion of local mischief. To keep the inflammatory symptoms in check, the liq. am. acet., with sp. æth. nit., was administered, with frequent small doses of laudanum to allay the pain. Local bleeding was inadmissible because of his hæmorrhagic diathesis. Accordingly, a strong turpentine stupe was applied to the seat of pain.

On the following day (Tuesday) his symptoms were no better, and sickness had supervened. I now called in consultation the late Dr. Hancorn. The saline was made effervescing, a blister was applied—the turpentine stupe having failed to relieve the urgent distress—and an enema was administered. But little relief was obtained, and the powers were gradually sinking. Hydrocyanic acid, stimulants, and other remedies and applications, all failed to relieve the most obstinate symptoms.

The patient was still lower on the next day (Wednesday, the fifth of the attack). The vomiting and constipation continued obstinate. Enemas quite failed to relieve the bowels. Diffusible stimulants frequently administered were unavailing to sustain the action of the heart and lungs, and the patient sank early on the sixth morning from the commencement of the attack.

Now, the points of interest to ascertain were the precise nature of the tumour in left iliac fossa, and the probable causes which led to his death.

A post-mortem was allowed and made about twenty-four hours after death. The body was moderately well nourished, though anæmic; the rigor mortis inconsiderable; the thoracic viscera, though somewhat pale and flabby, were sufficiently healthy *per se* to have kept the machinery at work. On opening the abdomen, the intestines were found surrounded by a large quantity of grumous blood. This discovery of course concentrated the interest upon the particular spot whence the hæmorrhage had arisen. Excepting a general pallor pervading all the abdominal viscera, there was no other well-marked abnormality. The liver, kidneys, pancreas, and intestinal tract were separately examined, but no rupture was detectible. On searching for the spleen in the left hypochondrium, it could not be met with, but, pursuing the investigation, it was found resting on the internal iliacus muscle in the left iliac fossa. It was quite double the natural size, was soft, dark, and ruptured at its internal border. Here, then, was the explanation. The misplaced spleen had become, from some cause, congested. This state had gone on to inflammation, probably on the Saturday when he experienced the sudden pain. The swollen and sensitive organ communicated the sensation of a tumour in the left iliac region, rendering its diagnosis so obscure. On the rupture of the spleen, copious effusion of blood took place into the peritoneal cavity, thus changing the acute inflammatory symptoms into those of depression of the vital powers, terminating in speedy death.

We thus make out that the proximate cause of death in this case was the collapse consequent on the hæmorrhage into the peritoneal cavity, and that the ultimate cause was the acute inflammation of the misplaced spleen. Now, it is a very interesting point to determine what, if any, connexion may exist between such a malposition of the spleen and the eminently hæmorrhagic diathesis which we have traced in the present instance.

The further history of this young man shows that he was the fifth child; that his father died of consumption when at the age of 31, and while our patient G. B. was only one year old. Of the four other children, two died early of well-marked consumption, another of some cachectic malady, and the remaining one fell a victim to small-pox. The mother,

who is alive and healthy, had early remarked that her son George presented great difficulties in suppressing bleeding whenever it occurred to him—that in him a slight cut or wound was the cause of unusual anxiety to her. On one occasion his gum bled, and she took him to a Surgeon, who, unable to arrest the hæmorrhage, purposely extracted the nearest tooth that he might the better plug the spot, and thus succeeded in doing so, but not without a very great deal of trouble.

This, then, is a typical example of well-marked hæmorrhagic diathesis. But what, if any, relation does this bear to the malposition of the spleen?

His history failed to afford evidence that he had ever suffered from ague, intermitting fever, or splenitis. He was the only surviving child, and his mother, an intelligent woman, would have recollected any illness that could have supplied evidence of these maladies. We may therefore conclude that his peculiar diathesis was not the product of ague, or of any inflammatory state of the spleen.

Was it congenital? We have already traced his pedigree up to a consumptive father. We have ascertained that his peculiar diathesis was declared from his early childhood, and cropped out occasionally till the period of his death. The inference is therefore forced upon us that his tendency to bleed was congenital; and that, although the father's defects took in him the form of tuberculosis, this inherited paternal dyscrasia assumed the character of hæmorrhage in the son.

Having brought the case up to this stage, the other remaining important point to canvass is whether the congenital hæmorrhage was in any way dependent upon the malposition of the spleen—seeing that that organ had not previously been the subject of disease.

I have had no previous experience of a misplaced spleen; nor do I recollect ever to have met with such a case recorded. It may be simply a coincidence without any necessary relationship.

Dr. Tanner, in a very able article on affections of the spleen, remarks "that sufferers from enlarged spleen are frequently the subjects of hæmorrhage." Dr. Hooper says "that in enlarged spleen there is a tendency to hæmorrhage, debility, and scurvy." Dr. Gregory declares "that amongst other diseases of this organ is that of softening. Its texture then gives way like a loose coagulum of blood. Under these circumstances the peritoneal coat is very easily ruptured by a blow or fall, and a fatal hæmorrhage ends it."

Several other Medical authors to whose writings on the spleen I have referred, are either silent on this particular point, or merely reiterate in substance what I have already quoted.

Whether, then, there is any relationship between the hæmorrhagic diathesis and a congenitally misplaced spleen is still a problem unsolved. Should the experience of others decide upon its being a mere coincidence, still its occurrence in company with so well marked a diathesis to bleed has added very much to the interest of the case.

PRESENTATION TO DR. J. R. WOLFE.—On Saturday, October 31, a number of gentlemen met in the Royal Hotel, Aberdeen, for the purpose of making a presentation to Dr. J. R. Wolfe, late Ophthalmic Surgeon in the Royal Infirmary, and Surgeon to the Ophthalmic Institution here, on the occasion of his leaving for Glasgow. Dr. G. G. Brown, President of the Aberdeen Medico-Chirurgical Society, was called to the chair. After some laudatory remarks, Dr. Brown presented to Dr. Wolfe a handsome timepiece set on a pedestal of red polished granite, and an elegant silver salver, each bearing the inscription, "Presented to J. R. Wolfe, Esq., M.D., F.R.C.S.E., by friends in Aberdeen, in token of esteem, on the occasion of his leaving for Glasgow. Aberdeen, 31st October, 1868." Dr. Wolfe having suitably replied, Dr. Coutts moved a vote of thanks to the Chairman, which was cordially given, and the proceedings terminated.

TAUNTON AND SOMERSET HOSPITAL.—The report of the governors laid before the annual general meeting showed a deficiency of £382 18s. 5d. Since the accounts were made up, however, a legacy of £100 has been bequeathed by the late Mrs. Alfred Marriott, of Clifton, and one of £50 by the late Mr. Howard, of Taunton. Mr. Barclay, M.P. for the borough, has put his name down for £100, and Mr. Serjeant Cox and Mr. James, the new candidates, have given £5 5s. each, thus reducing the deficiency to a trifle over £100.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 7, 1868.

REPORT ON MEDICAL EDUCATION BY THE COUNCIL OF THE MEDICAL TEACHERS' ASSOCIATION.

UNDER the above title, a paper has appeared bearing the signatures of Mr. Simon as President, and of Drs. Bentley and Broadbent as Secretaries, and it is needless to say that it is stamped by the clearness, thoroughness, and vigour which might be expected from such authorship. If we may attempt a summary of the leading points, they are these:—

The public enjoys two kinds of safeguards against Practitioners with less than a certain minimum of skill—one consisting in courts of examiners, the other in regulations which aim at securing a thorough education for the candidate. As to the courts of examiners, the Report speaks very briefly; but it says emphatically that the practical test to which Medical education is submitted is "that it shall satisfy certain examiners," and that the fruit of the education will be mainly contingent on the mode in which examinations are conducted. Without bringing any accusations against authorities, the reporters clearly intimate their dissatisfaction with things as they are.

"We cannot too strongly express our opinion that a lax or incompetent administration of this great trust is among the most grievous wrongs which can be inflicted on our Profession and the public. Not only with reference to the ultimate aim of securing in the public interests that only well-qualified candidates shall recruit the ranks of our Profession, but equally with reference to the mediate aim of securing that Medical schools shall be well conducted, it is, in our opinion, of the very first urgency that *nothing approaching to inefficiency should be tolerated in any Board of Examiners.* . . We cannot conceive that public interests are properly cared for where large permanent Boards, with no distribution of subject-matter, conduct their whole range of examination equally by all their members: believing, as we do, that every subject which ought to be separately taught ought also to be separately examined in, and that the examiner in each subject should represent as far as possible the very best special knowledge of the time. And we also think it very important that examiners should as far as possible be so appointed as *not to have any pecuniary interest* in the number of accepted candidates."

Respecting the subject-matter of examinations, the reporters point out one grievance to which the candidate is now subject—the extreme vagueness of the terms in which their duties are stated. For instance, a student is preparing to be examined in chemistry, anatomy, and so forth, but he ought to be told—

"to what exact extent in chemistry, to what exact extent in

*

Physiology, to what exact extent in Forensic Medicine, and so forth. We would insist that examinations should be thoroughly searching and strict within the area to which they purport to extend; and it is in order to this object that the examiner's requisition of knowledge should in the first instance be well defined. The present programme, unless it be understood with modifications which are not expressed in it, is, we think, too pretentious for its object. We cannot hope (much as we might wish) that every one entering upon practice in the United Kingdom shall have thoroughly mastered all the studies which are now nominally comprised in his curriculum—all the Botany, Physics, and Chemistry, all the Anatomy and Physiology, all the Forensic Medicine and Pharmacology, etc.; but if the requisition of the examining authority in regard of each such subject-matter were defined in the manner we suggest, a really thorough knowledge within that more limited area might, we think, be made indispensable, and very advantageously be substituted for smatterings of larger pretension."

Passing over this, we may come to the main body of the Report. It condemns as "illusory" the practice of supplementing the imperfect work of the examining boards by the system of requiring certificates of attendance on courses of lectures. It condemns the existing anomaly of nineteen licensing corporations, whose regulations may be not only independent of, but incompatible with, each other. It condemns emphatically the existing system of student-torture inflicted by the regulations of the two or three independent bodies in London, each of whom gives a half qualification. It claims that the power of fixing the minimum qualification (the main purpose of the Act of 1858 "with its expensive consultative machinery") should rest with the General Medical Council. It points out the hardship inflicted on the student by his repeated registrations, and by the necessity of obtaining a complicated series of certificates—a system condemned as "needlessly minute and improperly stringent"—especially as it relates not to ends but to means, not to the possession of knowledge, which ought to be tested by examination, but only to modes in which knowledge is acquired. The Report sanctions freedom in study:—

"Every possible latitude of choice, consistent with the supposition of *bonâ fide* study, ought to be allowed as to modes and places of education. To insist unconditionally on attendance on systematic courses of lectures (to the ignoring of systematic reading and other modes of study by which the same sort of knowledge may be acquired) is, we think, wrong; and we are also of opinion that no student ought to be forced to learn in any specific establiishment anything which he can reasonably be supposed able to learn elsewhere. Thus, if a student prefers to learn botany or chemistry elsewhere than in a Medical School, he ought, in our opinion, to be free to do so; and if he prefers to get his systematic view of Surgery or Materia Medica by reading printed text-books of those subjects, rather than by having (so to speak) the same text-books read to him by lecturers, we see no reason why he should not be let act upon his option."

To which we will add that, if some lecturers would but condescend to read a well-written text-book, they and pupils would be equally benefited. The great point in which strict regulations would be of service, according to the Report, would be in insisting on a certain gradation of study, to be tested by examination.

"The examinations to be passed by the candidate would in all be at least four in number—first, in common preliminary education; second, in preliminary scientific education—the chemistry, physics, botany, and zoology, of the present system; third, in anatomy and physiology; fourth (which might perhaps have to be subdivided), Materia Medica, pathology, Forensic Medicine, and the several departments of practice. To the fourth examination he would not be admissible till at least two years after the third, nor to the third till at least one year after the second, nor to the second till at least one year after the first. Thus his four years would have been used methodically. To at least the first and second examinations he would be admissible on the principle of 'free studentship'—*i.e.*, without being required to adduce evidence of having learnt in any particular way or in any particular establishment. Chemistry and physics, botany and zoology, would in this respect be on the same footing as English and Latin and arithmetic. For admissibility to the third examination, he would have to produce a certificate from 'recognised' teachers that he had for at least one year, since the date of his second pass, studied anatomy and physiology under their direction according to the method of their school, and had done so to their satisfaction. Similarly, for admissibility to the fourth examination, he would have to produce a certificate from 'recognised' teachers that he had for two years, since his third pass, studied pathology and the several branches of practice under their direction, according to the method of their school, and had done so to their satisfaction; and for this examination he would also have to show that he had attained the age for legal responsibility. Whether the final examination should, to complete it, involve some sort of recapitulatory examination in matters of previous passes, is *à priori* doubtful; but we incline to recommend that at any rate it should not generally do so with the minuteness of the original examinations."

We notice with intense satisfaction the fact that independent thinkers on Medical education always come to the same conclusion. We may point to the articles on Medical education in France and Germany which have appeared in our columns, and to our own comments on the miserable condition of some of our Medical schools, out of which the present movement has originated.

We must conclude with one remark on the status of English Medical studies in connexion with the status of Medical Practitioners. English Practitioners suffer, in comparison with the clergy, and in comparison with the Scottish and Irish members of their own Profession, for want of an academic degree. They are compelled to have as good an education in literature and science as would, in most universities, procure them a degree; yet the Arts Examination at the College of Surgeons and the Physics and Chemistry Examination at the Apothecaries' Hall earn them no social distinction. That which we would urge on students, on education reformers, and on examining boards is this:—Let all the *general* parts of a Medical education be acquired at general schools. For example, taking the fivefold division which we have lately proposed, and which we believe to be truer than that of the Report berore us, there are—1. General education; 2. Education in general physics and chemistry; 3. In biology, including general anatomy and physiology, of which anthropotomy is a part. Now all these, except perhaps special completeness in anthropotomy, had better be acquired at Oxford or Cambridge, or under the University of London, or in Scotland or Ireland, and be rewarded with a degree. Pathology, which is the fourth, and practice the fifth branch, can be studied at Medical schools alone. But the tendency of Medical schools, as at present constituted, is to encourage a dream of "Medical Latin," "Medical Chemistry," "Medical Botany," and other hybrids barren alike of honour and of profit.

HEAT, DROUGHT, AND MORTALITY.

Unmixed satisfaction seems to be in human affairs an experience as hard to realise as the discovery of the philosopher's stone or the means for insuring perpetual motion. The proverbial fickleness of the English climate, for example, has lent an additional zest to our late enjoyment of a summer Italian-like, glowing—everything, in short, that is unlike the type of our ordinary insular summer; and it is a thousand pities that, now it is all over and we are verging towards the season of fogs and gloominess, we should be made acquainted with the unpleasant fact that our enjoyment has been purchased at the cost of some twenty thousand human lives.

Divested of all exaggeration, without a particle of romance, here are the plain hard truths which the Registrar-General sets before us in his Quarterly Return just published:—A very fine warm season, very dry weather, wheat cheap, in-

creased poverty, falling off of marriages, births very numerous, towns and country generally very unhealthy.

It needs no profundity of Medical knowledge to link cause and effect together so as to show that a result which we must all deplore is susceptible of a perfectly simple explanation. We began the year under influences apparently so favourable to human life that the ratio of mortality was much below the average both in the March and June quarters; in the succeeding three months we lost all the advantage thus gained, and have to lament a death-rate which has hardly any parallel in the registration annals for corresponding seasons.

As we observed last week, the additional burden of death has fallen much more heavily on the town than on the country districts, the ratio of increase being as 22½ to 26½ in towns, and 17½ to 20½ in the rural parts. We shall see, if we look into the meteorology of the quarter, reasons—very suggestive ones, by the way—for the prevalence of much of the disease, in country as well as in town, that has left its mark on the death registers. Of the air, Mr. Glaisher says that "there is no instance in ninety-eight years of so high a mean temperature in the corresponding quarter as in the present year." Air, water, and earth, of course with their respective inhabitants, were exposed to heat several degrees above the average. Cases of sunstroke were comparatively common, and the presence among us of mosquitoes further testified to the exceptional character of the summer. Then there was a dearth of water, which, as we know, proved a source of great trouble and direct danger to health in some districts, as it was indirectly almost everywhere. The deficiency of rain during the three months amounted to 2½ inches; and as an inch of rainfall is equivalent to 22,622 gallons per acre, we may estimate that over the 37,000,000 acres in England and Wales the total deficiency was about 2,110,908 millions of gallons. The effect of this upon the springs and watercourses was apparent in the diminished supply of some large towns, and in the daily complaints in the public press from water-bereft villagers. But not only for drinking and cooking purposes does "short-commons" in water imply inconvenience and discomfort; for cleansing, and for carrying away organic refuse, there is need that the supply should be additioual, rather than diminished, in hot weather. In towns with extensive ramifications of sewers, an abundant and frequent rainfall is essential to the safe working of the water system, for solid matters accumulate which in many cases would never get removed except by the flushing of a good downpour. The gratings of the sewers here in London were at times unbearable in July and August, as most of us can affirm; and if that was the case with our copious water supply, what must have been the state of things in towns where the supply is insufficient? And in country villages and hamlets the convenient ditch, which serves as the local open sewer, getting dried up, must have been a pestilent source of all kinds of abomination to health.

Thus, then, in the past summer we had the two elements of heat and drought, and, as the result of their combination, undue mortality. Dr. Rumsey reminded us in his Manchester address that the carbonic acid with which the atmosphere of our great towns is overcharged at the best of times is rendered much more injurious to the health of the inhabitants by increased temperature. And we need nothing beyond the evidence of our noses to testify to the increase of smells more or less obnoxious in most of the towns we are acquainted with, in dry hot weather. Under these circumstances the "fæcal contamination of air and water" of which Dr. Druitt has lately spoken goes on with accelerated force, the frame exhausted with excessive heat becomes more susceptible of zymotic influences, and diarrhœa, scarlatina, typhoid and other fevers find their victims an easy prey.

The mortality in some of the large manufacturing and commercial towns during the past summer appears in the Quarterly Return to have been so high that, were it not for the known trustworthiness of the Registrar-General's figures, we should hesitate to adopt them here. Thus, in Wigan and Walsall the quarter's deaths were in the proportion of 39 annually to every 1000 of their population, in Manchester 38, in Nottingham 37, in Salford 36; and, to speak summarily, out of a list of some fifty or sixty towns, the death-rate in what is reckoned the healthiest quarter of the year only fell below 20 per 1000 in three instances. The most fatal disease both in town and country was diarrhœa, and, in conjunction with scarlatina and fever, it caused in some cases a third or more of the entire mortality. How prevalent these three diseases were may be gathered from the following examples:—

	Diarrhœa.	Scarlatina.	Fever.	Deaths from all causes.
London (Division) .	3145	738	693	19,149
Liverpool (Borough) .	859	98	179	4,021
Manchester ,, .	869	354	185	3,457
Salford ,, .	297	107	64	1,051
Sheffield ,, .	407	37	71	1,882
Leeds ,, .	566	63	93	2,059
Birmingham ,, .	821	215	86	2,617
Bradford ,, .	205	53	57	1,028
Hull ,, .	226	?	?	916
Leicester ,, .	330	?	?	785
Nottingham ,, .	165	?	?	653

In Sheffield 132 deaths were caused by small-pox, chiefly among unvaccinated persons. Nearly half the deaths occurring in Leicester were caused by diarrhœa alone, and the Registrar-General suggests that this proportion can only be accounted for by the supposition that conditions exceptionally favourable to the diffusion of that disease are in existence at Leicester.

We have not space to go more minutely into the details of the Quarterly Return; but we may briefly say that the notes contributed by the local registrars on the health of their districts show clearly enough that the same causes produced analogous effects all over the kingdom, and that nothing is more certain than that, if we would avoid the recurrence of such a heavy bill of mortality in future, we must lay to heart the lessons which the past season has taught us, as described in the Registrar-General's own words:—

"The first lesson of the season is the urgency of providing ample storage for the flood waters about the river heads, and for the rain-fall on houses, so as to equalise the distribution over the days of the year. The second lesson is the necessity of measures for the removal and interment of every kind of fermenting impurity. The diarrhœas, choleras, and analogous diseases, which spoil the enjoyment of the finest summers, will then be as rare in those days as the early migrating birds; for, finding nothing to feed upon, they will infest our cities and villages no longer."

When Dr. Rumsey's cherished wishes are realised, and we have a department of State Medicine worthy of the name, we or our descendants will no doubt look back upon such an unsatisfactory chronicle as the last quarterly return with amazement and incredulity, or at least with similar feelings to those with which we now regard a wild Indian or the effigy of an extinct animal.

THE WEEK.

TOPICS OF THE DAY.

At the recent Comitia Majora held at the Royal College of Physicians it is reported that Dr. C. J. B. Williams's motion for altering the by-laws for the admission of Members to the Fellowship was so far accepted that it will henceforth be open to two or more Fellows to recommend to the Council the names of any Member or Members of a certain standing who may, if the Council see fit, be included in the list of Members to be proposed for the Fellowship. The latter part of Dr. Williams's proposal, which gave the Fellows power to add names to an unsatisfactory list, was

not accepted. We hope that the partial reformation thus promised may work satisfactorily, for there is no doubt that the sense of injustice which has been widely spread amongst the Members by recent elections, has seriously injured the popularity which the College was beginning to acquire.

As has been for some time expected, Mr. Lowe will be elected without opposition for the University of London, Mr. Quain, Q.C., his sole remaining opponent, having retired. In the Edinburgh and St. Andrews contest, Dr. Prosser James has retired in favour of Dr. Lyon Playfair, an event which has also not caused any surprise. Dr. Brewer, the Chairman of the Board of Management of the Metropolitan Asylum Districts, is contesting Colchester in the Liberal interest; Dr. Lees stands for Northampton, Mr. Vanderbyl for Bridgewater, Dr. Sandwith for Marylebone, Mr. Smee for Rochester, Mr. Clement for Shrewsbury, Dr. Brady for Leitrim, and Sir Dominic Corrigan for Dublin. These, we believe, are the principal competitors for seats in the new Parliament which the Profession has furnished.

A Medical candidate has just been started by a section of the Liberal party of Salisbury in the person of Mr. Lush, the resident Medical proprietor of Fisherton House Asylum. It is a proof of the estimation in which Mr. Lush is held by his fellow-citizens, that, after filling the offices of Alderman and Mayor, he has been invited by a large meeting held in the Council Chamber to represent Salisbury in Parliament. We trust that, independently of party politics, he will be supported by the Medical influence of the town.

Ratepayers in the London parishes are exclaiming against the enormous sums that are being spent on the maintenance of the poor, and with good reason. When each pauper child in a great parish like St. Pancras costs 11s. 3d. a week, a sum that keeps a whole family of agricultural labourers in Dorsetshire or Devonshire, and must represent a large moiety of the earnings of many a St. Pancras ratepayer who has to maintain a wife and children, it is not to be wondered at that resistance should be aroused. The expense of each child educated and maintained in the Central London Pauper School has varied during the past three years from £29 18s. 5d. to £24 10s. 1d. per annum. The children, in fact, cost quite as much, if not more than a country clergyman or a parish Doctor, with the average income of four hundred pounds a year, could possibly afford to spend on each of a family—say of eight children. Compared with the incomes of the class of City clerks, shopmen, and even of small shopkeepers, who form a large portion of ratepayers in St. Pancras, the sum is extravagantly large; but when it is remembered that many obliged to contribute to the rates are labourers who cannot earn more than the same amount per annum, the injustice of such an outlay becomes intolerable. The most astounding figures, however, have yet to be stated. A committee of the guardians of the City of London Union have been employed in investigating the accounts of the Central London District School at Hanwell, where, during the past year, each child has represented an outlay of £40 10s. 7d., and the cost for the present half-year ending at Christmas is going on at the rate of £50 per annum, or £10 a year more than is charged at the College at Epsom. The lowest rate of expense in the middle-class schools started by Mr. Woodard in the West of England, is thirteen guineas a year; for this boys are well fed, and receive an education fitting them for all the ordinary business of life. Is it not time that we had an Association for the defence of poor ratepayers?

The foundation-stone of the first of the new metropolitan district asylums for the insane and imbecile was laid on Saturday last at Leavesden, in Hertfordshire, by Dr. Brewer, the Chairman of the Board of Management of the Metropolitan Asylums. Leavesden is near the Watford Station on the North-Western line. Seventy-six acres of land have been purchased there for £7600, and an asylum, capable of accommodating 860 female and 700 male patients, is being erected. Another asylum of similar dimensions for the same class of inmates is to be built at Caterham, near Croydon, whilst sites for fever and small-pox Hospitals have been obtained by the Board at Haverstock-hill, Homerton, and Stockwell. The Board seem to be carrying out the provisions of Mr. Hardy's Bill with energy and good sense. The Leavesden site has been well chosen, and the asylum, which is to cost eighty or ninety thousand pounds, will afford all the accommodation which could be wished for the imbecile paupers of the north of London. The fever and small-pox Hospitals will, we suspect, be for the most part empty, except during epidemics; but when John Bull's feelings have been excited, bleeding is the readiest calmative remedy. The ceremony on Saturday was a sufficiently attractive one, for Dr. Brewer, the Chairman, was supported by a number of influential and official persons, amongst whom was Lord Devon, the President of the Poor-law Board, and the Bishop of Rochester.

Two additional Poor-law Inspectors have been appointed by the Earl of Devon: one is Mr. Reginald Courtenay, a barrister on the Western circuit; the other is Mr. James Flemming, also a barrister.

The show of hands at the recent meeting of the General Council of the University of Edinburgh for the election of a Chancellor in the place of Lord Brougham, is said to have been in favour of Lord Justice-General Inglis. Sir James Y. Simpson, who proposed Mr. Gladstone, however, has demanded a poll. The voting papers are now in circulation, and must all be returned by November 20. Under present circumstances the choice will certainly be made on political grounds, and will afford fair evidence of the respective strength of parties in the University. From another point of view Mr. Gladstone's position as a statesman, writer, and orator constitute a high claim for such an honour. But, on the other hand, Mr. Inglis has rendered special and invaluable services to the University, and he is not the author or supporter of a plan for reducing the Scottish Universities to the status of mere colleges. Mr. Gladstone's advocacy of such a scheme seems not likely to be forgiven or forgotten by our Northern friends.

The secretary of the Acclimatisation Society promises us a new kind of game—the *Tinamou*, from South America, a large bird the size of a pheasant, and very like a bustard, which breeds very quickly, and does not seem to care for the cold of our climate. A number of these birds have been turned out on the estate of Mr. Burr, of Aldermaston, near Reading, and the acclimatisers are very sanguine. We can only say that a new kind of food, digestible and palatable, will be most welcome to our Profession not less than to their patients. Eland and horse have disappointed us. Perhaps tinamou may turn out better.

The Coroner for East Surrey has lately held an inquest on the body of a man who died from eating poisonous mushrooms. The symptoms are said to have been vomiting of blood and of a brown fluid "like mushrooms," "fits," pain in the chest, and cold perspiration. The public would be benefited by some plain directions by which an edible mushroom may be at once recognised. No doubt the old diagnosis by the coloration of the under surface of the mushroom is of some value as far as it goes, but, at the same time, to follow it blindly would be to throw away a number of edible species.

Mr. James Dixon, who for twenty-five years has been Surgeon to the Royal London Ophthalmic Hospital, has retired from the active duties of Hospital practice, with the honorary and well-earned title of Consulting Surgeon. We are glad, however, to hear that this distinguished opthalmologist has no intention of relinquishing the private practice of his speciality; in fact, his resignation of the office of Senior Surgeon at Moorfields has been, we believe, the necessary consequence of the increasing demands of private practice,

and of the equally increasing work which year by year the Hospital has entailed.

The report which was current last week that Mr. Powell, the Surgeon implicated in the Chelsea tragedy, had committed suicide was founded on a mistake. One of the jury, who assisted at the inquest on the body of Lousia Thomas, has written to the *Times* to state "that the verdict given by him and the other jurymen was not one of wilful murder. They all agreed that the deceased died from disease of the heart, accelerated by John Powell, the Surgeon, attempting to procure abortion, but they found no other verdict than this."

On Friday, October 30, the Lord Advocate Gordon—who, it will be remembered, is contesting the Universities of Glasgow and Aberdeen with Mr. Moncrieff—received an influential deputation from the Medico-Psychological Association. The object in view was to represent to the Government the importance of instituting a scientific inquiry as to the best means of preventing the increase of lunacy and imbecility, and of protecting families and society from the injuries done by irresponsible lunatics. The deputation included Professor Laycock, Sir James Coxe, Dr. Brown, Professor Maclagan, Dr. Skae, and Dr. Alexander Wood. The Lord Advocate heartily concurred in the importance of the questions brought under his notice by the deputation, and in the course of a speech stated that in his own practice at the bar the fact of the weakness of intellect exhibited by many criminals had forced itself upon his notice—his observation to some extent confirming that of Mr. Bruce Thompson, Surgeon to the General Prison of Scotland, who stated that out of every nine prisoners one was more or less insane, and one out of every 140 irresponsibly so. He promised to take an early opportunity of bringing the matter under the notice of the Government.

The late eclipse of the sun has led to some scientific results of great importance. It will be known to most of our readers that in a total eclipse of the sun the whole of the sun's disc is rendered dark, with the exception of a bright margin which edges its circumference. In previous eclipses prominences, or protuberances, or processes of light, some of them extending thirty thousand miles into space, have been seen jutting from the bright rim. It is now proved, on the evidence of M. Janssen, confirmed by Captain Herschel and Major Tennant, all of whom observed the eclipse in India, that these solar prominences are composed of incandescent gas, inasmuch as their spectra consist of bright lines. It has, moreover, been discovered almost contemporaneously by Mr. Norman Lockyer and M. Janssen that these prominences can be spectroscopically examined at other times than on the rare occasions of a solar eclipse. Mr. Lockyer, by the aid of a spectroscope which, at the expense of the Royal Society, has been fitted to his telescope, has been able to examine a solar prominence, and to fix the position of three lines in its spectrum; one corresponding to C absolutely, one to F very nearly, and one being more refrangible than the most refrangible D line. M. Janssen's observations lead him to the belief that these vast masses of incandescent gas are principally composed of hydrogen. One of Mr. Lockyer's lines, however, does not correspond with any known dark line of the spectrum.

Mr. Flower, the magistrate of Bow-street, has lately cautioned chemists and other dealers in drugs against neglecting the regulations laid down in the Pharmacy and Sale of Poisons Act. Practically speaking, however, the Act comes into operation on December 31.

Two deaths are reported to have occurred from hydrophobia at Ovenden, near Halifax. As they both were caused by the bite of the same dog, the cases, were there no other on record, completely dispose of Mr. Coote's tetanus theory.

Fever is said to be rife at Falmouth. The drainage of the town is very defective, the local authorities are inert, and the inhabitants have therefore memorialised the Home Secretary on the subject.

THE OBSTETRICAL SOCIETY.

This Society met on Wednesday evening to resume the discussion started by the papers of Dr. Tilt and Dr. Meadows on uterine flexions with regard to the condition known as irritable uterus. The debate was a highly animated one, some of the principal obstetric Physicians of the day taking part in it, insomuch that, after a prolongation of the usual period of meeting by a quarter of an hour, the discussion was again adjourned. A full report of this important debate shall appear in our next.

THE LATE MR. JUMP, OF LITCHAM.

Subscriptions are earnestly requested on behalf of the widow and family of the late Mr. Jump, M.R.C.S., of Litcham, Norfolk. During the recent epidemic of typhoid fever Mr. Jump and three daughters were simultaneously attacked, and he unfortunately fell a victim to the disease, leaving a widow and eight children (five of whom are too young to do anything towards their own maintenance), with barely £20 per annum. Mr. Jump was for thirty-two years a most respectable and hard-worked parish Surgeon, and had no opportunity of providing for the future. It is hoped, therefore, that the present appeal will be responded to with that kindness which characterises the members of the Medical Profession. Subscriptions will be thankfully received by the Rev. G. W. Winter, Rector of Litcham, or Thomas Palmer, Esq., solicitor, Swaffham. The youngest child, aged 10 years, is a candidate for a Foundation Scholarship in the Medical Benevolent College.

THE HERBERT HOSPITAL, WOOLWICH.

The costly experiment which has for some time past been on its trial at Woolwich, of having a large general Hospital under a military governor for the treatment of the sick soldiers in the garrison, has resulted in such universal discontent among all concerned, both military and Medical, from the Major-General commanding the garrison and the principal Medical officer, through all gradations of rank in each department, that we are by no means surprised to hear of its having recently been subjected to considerable modifications. The general Hospital system is to be replaced by the regimental in so far that Medical officers are to have the treatment of the sick of their respective corps. But the anomaly of having the military control of the patients in Hospital—soldiers, be it remembered, whose own commanding officers are in the same garrison—as well as the supreme administrative authority, vested in a military governor resident in the Hospital, is for a little longer permitted to exist.

ACORNS AT MARK-LANE.

Acorns have been introduced into the London corn market at Mark-lane, and have been sold within the past fortnight at £4 per ton in the warehouse; a ton is about 5 qrs. = 40 bushels, at the estimated weight of 56 lbs. per bushel. In another case they were sold at 12s. per qr., to be delivered at the Great Western Railway terminus in London. Some kiln-dried acorns have been offered at £7 per ton, but that is not considered a paying price, as the waste in drying is so great. It is of interest to remember that the price of potatoes is not double that of acorns, and that these, when cooked, are good for all kinds of poultry, as well as for pigs. As for the absurd stories which have been told about their causing disease in pigs, they are refuted by the universal experience of mankind. Polybius, speaking of the plains of Lombardy, 200 years B.C., says "their forests, which are spread over the country, afford so large a number of acorns, that, though great numbers of swine are consumed by the inhabitants of Italy, as well in the use of private families as in their armies, yet are they chiefly furnished with them from these plains."

THE PHARMACY ACT AND GENERAL PRACTITIONERS.

We continue to receive numerous communications on this subject. It appears indisputable that the Act, if construed stringently and put in force, would be a cause of great annoyance to many respectable Medical Practitioners who are not apothecaries. In Scotland, where the "Apothecaries Act, 1815," has no force, and where Medical Practitioners have hitherto enjoyed unlimited freedom, this is felt to be a grievance—one, too, that is not altogether removed by the consciousness that it is not inflicted by the fault of the Pharmaceutical Society, whose Bill saved the rights of Medical Practitioners, and that it is not likely to be enforced by them. The real grievance is the process of modern legislation by which a clause compromising old-established rights, be they great or little, can be introduced and passed without the knowledge of the parties interested.

STATUS OF PHARMACY.

Mr. Powell, in an able letter to the *Pharmaceutical Journal*, contends with great justice that the remuneration of dispensing chemists is by no means adequate to the skill and responsibility involved in their calling, and contends that improved status can only follow abolition of the extra-pharmaceutical element in their business, and increased remuneration for the strictly professional part of it. He says:—

"The social status of an English parmaceutist is, without contradiction, abased by the trade he conducts in goods in no-wise to be regarded as accessories of pharmacy. This rule applies generally, but more particularly to the provinces. Years, long and many, will come and go before a country pharmacy will be able to support itself by a commerce purely Medical. Not until country Practitioners shall cease to dispense their own medicines, and no longer supply Surgical appliances, can this be effected."

Of the intrinsic desirableness of such a condition no one is more sensible than we are. We desire to see every Medical man thoroughly well educated, with a degree in Arts and a degree in Medicine, following his calling as a purely benevolent Profession—receiving liberal fees from grateful patients, and never dunning them in County Courts—and leaving all dispensing to the nearest pharmaceutical chemist, whom he gladly recognises as a scientific brother and professional ally. Alas! what is there to mar this happy picture? Want! *la misère! sæva necessitas!* law of supply and demand! or, in plain English, the fact that it *doesn't pay*. The public cannot give fees to the Doctor, and so he sends in a bill; they cannot afford to run two bills, so they insist on having medicine when they have advice, and paying for them in one lump, even if they will pay for advice, as such, at all: if he did not supply physic, he could not supply advice. The chemist is in the same dilemma—neither better nor worse; he would, if he could, be a calm scientific man; but he would starve; so he encroaches on the perfumer and grocer, and sells tea, coffee, *eau de Cologne*, and brushes; and if he did not he could not keep his shop open for drugs. Every man *draws a line* somewhere. Sir Henry Halford would not bleed; some Surgeons won't pull out teeth; some won't dispense; some dispense, but won't sell drugs; some sell drugs, but not perfumery; and one Medical man (an accomplished man, too), who kept an open surgery in a low neighbourhood, drew a line by refusing to sell hair oil on a Sunday morning. So the chemist draws a line—one sells tea, but not figs; another who sells figs pulls up at bacon and candles. All these things, however, are not regulated by any antecedent notions of fitness, but by the inexorable law of supply and demand, by the *plusquam* Darwinian struggle for life. Where the sap is scanty, some branches wither; where there is not cash enough to support Doctor and chemist and grocer, the Doctor usurps part of the chemist's trade, and the chemist that of the grocer, and the grocer's becomes a chandler's shop—the true type of all shops—which should be places where any one who has money can purchase for it whatever he wants. Let us suppose, as a supplement to the Pharmacy Act, a Grocery Act—"Be it enacted that no man shall sell bacon unless he knows the microscopical characters of trichinæ or coffee, unless he can demonstrate ground chicory and roast acorns." When will our friends begin to see that a higher law than Acts of Parliament governs all these matters? In great towns where they can live, the pure Physician, Surgeon, accoucheur, dentist and cupper, and the scientific pharmaceutist, can flourish, do flourish, and deserve to flourish, and they flourish without Acts of Parliament. At Hog's Norton, if any man were fool enough to set up as "a pure," he would starve, and deserve to starve; no Act of Parliament would help him. All these are questions of political economy which should be left to solve themselves.

LORD NAPIER OF MAGDALA AND ARMY MEDICAL OFFICERS.

Lord Napier of Magdala was entertained at a public banquet by the Mayor and Corporation of Portsmouth on the evening of Tuesday, the 26th ult. In his speech returning thanks for the honour conferred upon him, Lord Napier took advantage of the presence of Surgeon-Major Sinclair, of the 33rd Regiment, to pay a tribute of praise and kindly feeling to the Medical Department of the Army, as an admirable and faithful body of men. It had been a matter of some surprise to us that Lord Napier had not—so far as we had observed at any of the numerous public opportunities which he has had—previously expressed some acknowledgment of the services which, in his extensive and varied military experience, he must have known to have been performed by military Surgeons. We now have a clue to the cause of the omission; at none of the former receptions given to Lord Napier, so far as we can remember, was the Medical Department of the army represented at all. The Mayor of Portsmouth, by inviting Surgeon-Major Sinclair to partake of the hospitality of the Corporation on this occasion, not only gave Lord Napier the opportunity of repairing previous omissions on this subject, but has also set an example of courtesy towards a large and important scientific branch of the army, which we commend to the imitation of future organisers of public and professional ceremonials. It is hardly to be wondered at that, in consequence of the novelty of the situation, he should have to some extent deprived of its value the intended compliment to the Medical Department of the Army, by having omitted from his list of guests the representative head of that body at Portsmouth, in the person of the principal Medical officer of the station. In noticing this subject we cannot forget that metropolitan precedents have not hitherto given to the Medical Departments of the Army and Navy the degree of recognition to which their position as scientific branches of the public service fairly entitles them. Correspondents addressed us, after the laying of the foundation-stone of the new St. Thomas's Hospital, on the subject of invitations to that ceremony not having been sent to the Directors-General and some of the senior officers of the Army and Navy Medical Departments. We can hardly wonder at their being, as a rule, omitted from public ceremonies and entertainments when they were passed over on one occasion so closely connected with Professional interests, and we can fully sympathise with any chagrin our correspondents may have felt or expressed at the implied slight. We hope that future opportunities of making amends to both Medical services for past omissions—which, though unintentional, were not unfelt—may not be lost sight of.

FROM ABROAD.—L'ACADÉMIE DE MÉDECINE DE PARIS.

Several interesting subjects were brought forward at the last meeting of the Académie de Médecine. In the first place, on the occasion of M. Ricord's laying before the Academy, in the name of its inventor, a new "divulsor" for the treatment of

stricture of the urethra, M. Chassaignac expressed his surprise at the indulgence shown towards such instruments calculated to exert violence on the urethra. These plans of treatment are always revived every few years with the same hopes, to be followed by the same disappointments. For his part, he protested, in the name of true Surgery, against these panaceas for stricture, and he thought that M. Ricord should rather strive against their introduction than admit them from mere complaisance to their inventors. One author states that he has cured in this way 550 strictures, while Hospital Surgeons in the highest repute do not see a tenth of this number. All these sudden violences done to the urethra are dangerous, and resort to them is the more unjustifiable because strictures are so easily and effectually treated by slow and progressive dilatation. It is only in those very rare instances in which a bougie of the smallest size cannot be introduced, and where it has become necessary to empty the bladder, that such dangerous procedures should be allowed. M. Ricord, so far from objecting to M. Chassaignac's remarks, stated that he quite agreed in their justice. He merely presented the instrument out of politeness to the inventor. He had never tried it, and would fear to use it; yet to Mr. Holt's success in this kind of procedure we must add that of M. Voillemier and others. It much resembles the *coup de marteau* employed by Heurteloup, which, in a case to which M. Ricord was called, was followed by dangerous hæmorrhage.

M. Larrey and other members took the occasion of this discussion to recommend that a committee should be appointed to consider the propriety of laying before the Academy the various instruments presented to it. At present the number of these is becoming inconveniently great, and the fact of their presentation is often used by their presenters for advertising purposes.

M. Verneuil, one of the candidates for the vacancy in the Section of Surgical Pathology, read a case of "Spontaneous Popliteal Aneurism occurring in a diabetic subject, mechanical compression failing, and a cure being effected by means of forced flexion." The interest of the case consists in the coincidence of the diabetes, and in the fact of compression, which is usually so efficacious and so innocent, having failed and even produced local lesions of some importance. M. Verneuil terminated his narration with these propositions:— 1. The coincidence of spontaneous aneurisms with diabetes, although it has not before been remarked upon, demands serious attention, as it exerts great influence in the choice of the procedure, and raises new questions on the etiology of aneurisms, and the composition and properties of the blood in diabetic subjects. 2. It almost absolutely contraindicates the employment of the ligature, and renders the application of compression very difficult, in consequence of the ease with which eschars are formed under the pads of the apparatus. 3. In spite of the presence of glucose, the blood appears to preserve its plastic properties, or, in other words, its aptitude to deposit fibrinous layers in the sac or active coagula. 4. The antidiabetic regimen, so different from that ordinarily prescribed during the mechanical treatment of aneurism, does not destroy this aptitude. It would seem, then, prudent to institute such treatment when the general condition calls for it, and to persist in it even after the real or apparent disappearance of the glucose. 5. In popliteal aneurism, the forced flexion of the leg on the thigh is a very important procedure calling for renewed trials. It is harmless, of easy application, and little onerous, inasmuch as it requires neither costly apparatus nor numerous assistants. It demands on the part of the patient a little intelligence and perseverance, and on that of the Surgeon a surveillance easy of execution. 6. In some cases it has been attended with very rapid success in the hands of the English Surgeons; but in those in which its first trials prove fruitless, it may eventually succeed by employing short *séances* at long intervals. 7. Its efficacy doubtless depends upon certain conditions, which have as yet been little studied, such as the position and dimensions of the vascular fissure, the relations, dimensions, and consistency of the sac, etc. In the present case it has probably operated as indirect compression. 8. The prolonged unnatural direction imparted to the knee-joint has given rise to no serious inconvenience, the articular stiffness gradually disappearing, and the limb recovering all the amplitude of its movements. 9. The cure, it must be admitted, required a very long time; but then it must be recollected that without flexion it might have been altogether impossible, and most certainly would have been more painful and dangerous. 10. It is true that attitude has been aided by other accessory means, such as direct and indirect compression, but it is to it that recovery is chiefly due. It confirms the conclusion that, in difficult Surgical cases, the Practitioner, far from obstinately confining himself to a single means, should assemble, combine, and concentrate all the resources which science has placed in his hands.

M. Vernois read a report on a memoir by Dr. Gallard on "Gymnastics and Corporeal Exercises in the Lycées." He observes that the question is an important one, as it relates to more than 25,000 pupils under the charge of the University. M. Gallard recommends that gymnastics should be rendered as little distasteful and fatiguing as possible, and replaced whenever this can be done by the various games; also that for the lessons of the gymnasium, now so often sterile, should be substituted the exercise and management of the musket. M. Vernois approves some of these proposals; and in fact something requires to be done, as the elder pupils exhibit a great unwillingness to the forced practice of gymnastics as if they were part of their regular lessons; and doubtless the listless demeanour of many of the French schoolboys during their hours of leisure is owing to the absence of the free and vigorous games practised in the play hours of our English schools. M. Vernois states that in his late tour of inspection he found in nearly half of the Lycées the gymnasia were either absent or so imperfect as to be of little use, while no conformity as to their mode of employment prevailed. If, in fact, gymnastics are to be taught at all to lads of from 10 to 15, they must be rendered more attractive, and in the majority of cases, games, exercise, and riding should be substituted. As to the musket drill, M. Vernois thinks it a very poor substitute for healthy exercises, and that there is no occasion to make children into soldiers before their time. M. Larrey, however, soldier-like, is in favour of the musket exercise, but he protests against allowing very young boys to practise methodical gymnastics, which are highly detrimental to their development. He states also that gymnastics, as at present performed, are too artificial, and often dangerous, and that they require regulating in harmony with the simple and natural movements taught by instinct and reason.

We have so often occasion to refer to the proceedings of the Académie de Médecine that our readers may like to know a little more of its exact constitution. The Société Royale de Médecine and the famous Académie de Chirurgie having disappeared during the storm of the Revolution, and the want of a learned Medical body being felt at the Restoration, the present Academy was instituted by royal charter in 1820, although not formally opened until 1824. Of the 151 original foundation members, part nominated by the crown and part chosen by the Academy, only four now survive. The Academy now consists of 100 titular members, distributed into eleven sections—viz., Anatomy and Physiology, 10 members; Medical Pathology, 13; Surgical Pathology, 10; Therapeutics and Medical Natural History, 10; Operative Medicine, 7; Pathological Anatomy, 7; Obstetrics, 7; Public Hygiene, Legal Medicine, and Medical Police, 10; Veterinary Medicine, 6; Medical Physics and Chemistry, 10; Pharmacy, 10. There are also 9 "free associates," 12 "national associates," and 14 "foreign associates;" each of these may be increased to

20 members. Moreover, there are 120 "national correspondents" to be reduced to 100, and 61 "foreign correspondents" to be reduced to 50.

THE NEW WINTER COLONY AT AJACCIO, CORSICA.

It has for some winters past become an object of research to discover a climate for pulmonary complaints endowed with the dry, bracing, exhilarating qualities of that of the south-east coast of France and the Riviera of Genoa, and yet at the same time possessing an air more soft and sedative in its character. Such a climate has, during the last winter, been found in the new colony of Ajaccio, in Corsica, now fully established as a winter station, which during the present year I have been instrumental in bringing prominently into notice. In the search for such a climate I have had a personal interest. Myself an invalid, an exile from my country in search of health, broken down by the labours of former years, I was led naturally some winters since to the bright shores of the Corniche, bathed in constant sunshine while winter reigns behind the mountain barrier that shuts it out from the north. The change produced at first a marvellous effect, and I was enabled to enter into Medical business with almost pristine energy; but I soon discovered, what has of late years been the experience of many others—that there is a class of chest complaints for which the well-known dry cold air of that region, contrasting so forcibly with the bright sunshine, proves injuriously stimulating. Its constant inhalation soon produces an alteration of symptoms, and an attack of pulmonary inflammation, accompanied with violent excitation of the nervous system, was the result. Under such circumstances, I was visited one day by a most intelligent Physician—Dr. Peraldi, a native of Ajaccio, and now practising at Mentone. He observed, "Why do not your countrymen, who find the air of the Riviera too stimulating, try my country, where they would meet with a climate that would exactly suit them?" He pointed out so clearly the peculiar features of its insular climate, as contrasted with that of the mainland, that I was induced to visit Ajaccio by the very next steamer. The contrast was indeed wonderful. The sky was as bright and sunny; the air felt bracing and exhilarating; but the dry crisp air that peels off the cuticle and makes the nerves tingle was gone. It seemed as if the nervous system was relieved of a long-continued strain. I received a hospitable welcome from the leading functionaries of the city, and, finding the Corsicans most willing to welcome strangers to their island, I determined finally to make Corsica my home.

On my return to Mentone, I was consulted by an eminent German Physician, Dr. Biermann, of Hamburg, on the subject of Corsica. He was suffering from violent pulmonary inflammation, accompanied with profuse hæmoptysis, and had been advised to spend the winter on the Riviera of Genoa, where he became rapidly worse. I recommended him to try Ajaccio, which he did at once; and the improvement in his health was so marked and rapid that he induced about twenty of his countrymen, suffering from the same symptoms, to follow his example. He is now ready to support my testimony that, when he returned to his native country for the summer, his case was looked on as a perfect resurrection, and that, with the exception of, I believe, three old and hopeless cases, all the Germans who repaired to Ajaccio made a complete recovery; and, like me, he has adopted Corsica for his home.

Before leaving finally for Corsica, I received so many inquiries that I was induced to publish at Nice a small book, entitled "Corsica in 1868," in which I endeavoured to set forward the peculiarities of its insular climate as compared with that of the Riviera of Genoa; and the extensive circulation it met with proved how deep an interest was felt in the subject. I was scarcely settled in my new abode when such a crowd of English visitors came over as Ajaccio had never seen before; in every succeeding steamer throughout the spring, I welcomed a fresh importation of the well-known Anglo-Saxon features, and all left the island with expressions of marked satisfaction, promising either to return in the winter, or to send their friends. The result has been that Ajaccio, formerly only known to a few passing tourists as the birthplace of the most wonderful personage of modern history, has now risen to the rank of a first-class health station; a large number of English visitors are coming out to spend the winter. A clergyman has been appointed to the new colony by the Colonial Society, and everything promises a brilliant season.

I have been accused of seeking to praise Corsica at the expense of the older stations on the Riviera of Genoa, especially Mentone, and I am anxious to state emphatically that such has never been my object. On the contrary, it is my wish to point out, clearly and impartially, the advantages which each place affords. There can never be a rivalry between Ajaccio and Mentone, as each is suited to a perfectly different temperament; but as each station fills up what the other wants, I believe the two will go hand in hand together, and that in both united there will be found a perfect sanatorium for the various types of pulmonary disease. It is well known that, according to the modern treatment of consumption, regarded as a general wasting intimately connected with a derangement of the digestive powers and an interruption of the cutaneous functions, a dry, bracing, moderately cold atmosphere, that will stimulate the vital powers and promote the action of the skin, or rather by its dryness extract the insensible perspiration, is the most suitable. The air of Mentone possesses these qualities in a remarkable degree, and to it hundreds of phthisical patients owe their recovery. But where the pulmonary disorder is accompanied with nervous or inflammatory symptoms, neuralgia, inflammatory bronchitis, or hæmoptysis, the air of Mentone generally proves too stimulating. It is here that the climate of Corsica steps in to take its place. Owing to its peculiar position, insular yet surrounded by land, the air is abundantly dry enough to promote the cutaneous functions, yet there is just enough of moisture to deprive it of all irritating qualities, but not enough to render it sedative or relaxing, as that of Madeira, surrounded by a great ocean, is said to be. I may observe that the number of rainy days in the year is estimated at Ajaccio at 40, at Nice 60, and at Mentone 80, so that, although not so absolutely dry, there is much less actual rain than at the former. Experience has shown, then, that for chest complaints of the lymphatic type, for those who can bear cold moderately well and require a powerfully stimulating air, for those who have been debilitated by a residence in the tropics, and for the earlier stages of tuberculosis, Mentone is the station *par excellence;* but for all complaints of the nervous or irritable type, as well as for a more advanced stage of phthisis, the more soothing air of Ajaccio is better suited. For a detailed comparison of the respective characteristics of the two climates, I must refer visitors to my treatise already mentioned, which may be had at Visconti's, Nice, and at the principal bookshops of Ajaccio.

I feel called on to observe that the above facts did not escape the penetration of my esteemed friend and eminent colleague, Dr. Henry Bennet, the founder of Mentone. In his work entitled "Winter in the South of Europe," he, some years since, called public attention to the advantageous situation of Ajaccio for a winter station, and graphically described the resources and the magnificent scenery of Corsica; and I am aware that for several winters he has endeavoured to send over there such patients as required a more sedative climate than that of the Riviera. But who would go where there was neither an English Physician, a clergyman, nor even the necessaries of civilised life, not to say the luxuries that await the stranger at Cannes, Nice, or Mentone? Happily this state of things is now past; better accommodation has been provided; I have been enabled to introduce a number of friends of my own connexion; our clergyman is appointed; and Ajaccio bids fair in a short time to hold as high a rank as its older and more northern neighbours.

One great advantage which Corsica affords is that there are in its interior several beautiful summer stations for those who may wish to spend several winters in the south without returning home. Amongst these I may mention the chalybeate springs of Orezza, already beginning to be much resorted to from the Continent, as its waters have been proved by analysis to be richer in iron and carbonic acid than those of Vichy. Also Guagno, equally notorious for its sulphur springs, where there is already a large pension and establishment of baths. Then there is the Plateau of Foci, situated at a height of 4000 feet above the sea level, admirably suited for consumptive patients, and especially so on account of the vicinity of an immense pine forest, the balsamic odour of which fills the air, exercising the same specific influence on pulmonary complaints that has rendered Arcachon so famous. This fact has been so appreciated by French Physicians that they have already begun to send consumptive patients to Foci, and it is expected that a pension will be established there next summer. It would take

pages to describe the romantic Alpine beauty of Vico, from whence I write, close to the springs of Guagno; and there are many magnificent spots that bid fair, now that Corsica is made known to the world, to rival Spa, Vichy, or Bagnères de Luchon.

In conclusion, I must make an observation on a subject which has occasioned some uneasiness amongst intending visitors to Corsica—that of malarial fever. Intermittent fever exists in summer in certain parts of Corsica, as it does in certain parts of every country, and where it exists it is proportionally more severe than in cooler latitudes. But this need occasion no uneasiness to the invalid visitor. The unhealthy spots are limited to the mouths of the rivers and some marshy valleys and plains, chiefly on the eastern coast, and the traveller to the health stations need no more fear them than a visitor to Brighton or the Isle of Wight would have reason to dread the fens of Lincolnshire. I would not advise a consumptive patient to remain at Ajaccio in summer, on account of the heat, although it is much less than at Nice, but a summer may be spent there without any fear of fever. One testimony to its healthfulness is afforded by the fact that the French fleet comes there each year to spend the hottest part of the summer. I remained at Ajaccio until the month of August, on purpose to study the fever question, myself a good mark for its influence if it was going, having once nearly proved a victim to it at Rome. I discussed the subject with the oldest Medical men of the place, and had an opportunity, owing to peculiar circumstances, of seeing a great many cases. I found that every case of true marsh fever had been imported from a plain seven or eight miles away, and occurring exclusively amongst the labouring classes, who spend the night in the fields. There were, indeed, others that originated in Ajaccio, but they were febricula, associated with evident derangement of the digestive organs, and passing off without exhibiting any of the characteristics of marsh fever. It would not be possible in the present article to enter minutely into the question, but I am prepared, if called upon, to support by abundant evidence the statement that invalids intending to spend the winter at Ajaccio may come fearlessly in the beginning of October, or, indeed, sooner were it not for the heat; the latter is, however, not excessive, being less felt than at Nice, and very much less than at Marseilles.

I am, &c. H. P. Ribton.

Convent of Vico, Corsica, September 10.

REVIEWS.

A Manual of Elementary Chemistry, Theoretical and Practical. By George Fownes, F.R.S., late Professor of Practical Chemistry in University College, London. Tenth Edition. London: John Churchill and Sons. Pp. 1020.

Since the death of its accomplished author, this, the best and most popular of our manuals of chemistry, has appeared under various auspices. This edition makes its appearance under the distinguished editorship of Dr. Bence Jones and Mr. Watts. Nor do we think we are doing any injury to the former well-known and highly esteemed authority when we state that the real work of revision and of amplification has chiefly fallen to Mr. Watts, the editor of the now world-famous "Dictionary of Chemistry." Nothing, probably, better shows the value of this book than the interest taken in its successive editions. Some time ago, we remember, before the chemical world was so ripe for change as it now is, it was reported that the new edition of Fownes would appear with Gerhardt's notation. This unauthoritative announcement was received with widely spread regret—regret which was only allayed by the appearance of the work. So, only the other day, we heard from a well-known teacher of chemistry that the new edition of Fownes was to appear in Dr. Frankland's notation—a change which that gentleman sincerely deprecated as likely to lessen its value as a text-book; for, whatever are the merits of Dr. Frankland's system, and these are undoubtedly great in certain respects, it has not yet acquired that universal acceptance which would justify its adoption in a generally used text-book. This change has not taken place, and the notation adopted is in most essentials the same as that employed in the "Dictionary of Chemistry." Not exactly, however, and this is perhaps a matter for regret; it would have been better to have made that work the basis of the present one. Among the most noticeable changes are the modes of writing symbols; for instance, water is invariably written OH_2, and the same order is observed throughout the book, the metallic element always coming last. Another thing one remarks is the use of dashes to imply the quantivalence of a metal; as in the case of magnesium, which is sometimes written Mg″, and zinc as Zn″. In this new edition the metals are classified, according to their quantivalence, into monads, dyads, triads, tetrads, pentads, and hexads, whereby the sequence formerly observed is altered. So also in the portion treating of organic chemistry the classification is into hydrocarbons of various series, into the various atomic alcohols, ethers, and acids, and into ammonia compounds or amines. Of course others are treated of, but these constitute the principal groups. Among other alterations is one which we are inclined to regret, although it was inevitable—the size of the book has been increased by about 200 pages. This was no doubt necessary owing to the increase of material to be handled, and to the great state of condensation which already characterised the work. Altogether, we are satisfied with the result of Mr. Watts' labours, and we trust that the book will continue to obtain that wide-spread recognition it has hitherto obtained and now even more richly merits.

The Variation of Animals and Plants under Domestication. By Charles Darwin, M.A., F.R.S., etc. Two vols. 8vo. London. 1868.

Anthropologie. Cours de M. de Quatrefages. Reported in the *Revue des Cours Scientifiques.* 1868.

La Variabilité des Espèces et ses Limites. Par Ernest Faivre. 1868. Paris: Baillière. London: Williams and Norgate.

We entertain so profound a respect for Mr. Darwin's unrivalled powers as an observer, for his rigid truthfulness, and for the boldness with which he propounds doctrines that he well knows must be received with hostility by a large proportion of readers, that we shall not attempt to criticise the two volumes with which he has now presented us. We shall simply endeavour to lay before our readers a sketch of Mr. Darwin's views, and at the same time to notice the principal objections which have been brought forward against them. About ten years have now elapsed since the scientific world welcomed the appearance of "The Origin of Species," and ever since that time the author has devoted himself, so far as (we regret to say) ill-health would permit him, to the accumulation of further evidence in support of his theory of "natural selection," which is now universally known over the civilised world as "The Darwinian Theory." The present work treats of the whole subject of the variations of animals and plants under domestication. In a second work the author intends to discuss the variability of organic beings in a state of nature—namely, the individual differences presented by animals and plants, and those slightly greater and generally inherited differences which are ranked as varieties. In that work he will show the difficulty of distinguishing between races and sub-species, and between sub-species and true species, and will discuss the problem of the conversion of varieties into species.

"We shall therein see," he observes, "that all organic beings, without exception, tend to increase at so high a ratio that no district, no station, not even the whole surface of the land, or the whole ocean, would hold the progeny of a single pair after a certain number of generations. The inevitable result is an ever-recurrent struggle for existence. It has truly been said that all nature is at war; the strongest ultimately prevail, the weakest fail; and we well know that myriads of forms have disappeared from the face of the earth. If, then, organic beings in a state of nature vary in a slight degree, owing to changes in the surrounding conditions, of which we have abundant geological evidence; if, in the long course of ages, inheritable variations ever arise in any way advantageous to any being under its excessively complex and changing relations of life, and it would be a strange fact if beneficial variations did never arise, seeing how many have arisen which man has taken advantage of for his own profit or pleasure—if, then, these contingencies ever occur, and I do not see how the probability of their occurrence can be doubted—then the severe and often-recurrent struggle for existence will determine that those variations, however slight, which are favourable shall be preserved or selected, and those which are unfavourable shall be destroyed."—Pp. 5-6.

In the chapter on "Natural Selection" in that work, the author intends to show, from experiment and from a multitude of facts, that the greatest amount of life can be supported on

each spot by great diversification or divergence in the structure and constitution of its inhabitants. In a third work, after treating of the variation of organisms in a state of nature, of the struggle for existence, and the principle of natural selection, he will discuss the difficulties which are opposed to his theory, such as "the apparent impossibility in some cases of a very simple organ graduating by small steps into a highly perfect organ; the marvellous facts of instinct; the whole question of hybridity; and lastly, the absence at the present time and in our geological formations of innumerable links connecting all allied species;" while, in a fourth work, which will complete the series, he will try the principle of natural selection, by seeing how far it will give a fair explanation of such classes of facts as the geological succession of organic beings, their distribution in past and present times, and their mutual affinities and homologies. We heartily trust that our author may live to realise his gigantic plan, and to see the Darwinian theory established on an imperishable basis; but, even if this great work never attains completion, he has already done enough in advancing biological science to insure for himself a lasting reputation as one of the greatest intellectual athletes of the nineteenth century.

We now proceed to attempt to give those of our readers who have not time to study these volumes for themselves some idea of their nature and plan. The first eight chapters treat of domestic dogs, cats, horses, apes, pigs, cattle, sheep, goats, rabbits, pigeons, fowls, ducks, geese, peacocks, turkeys, guinea fowls, canary birds, gold fish, hive bees, and silk-moths. There are perhaps none of our domestic animals that are more quickly and directly affected by the conditions of life than horses. The horses of Chili, which have lived under nearly the same conditions as their Spanish progenitors, remain unaltered, while the Pampas horses and the Puno ponies are considerably modified. There is no doubt that horses become greatly reduced in size and altered in appearance by living on mountains and islands, and this is apparently due to want of proper food. In the Falkland Islands the offspring of the horses imported in 1764 have already (in a single century) so much deteriorated in size and strength that they are unfitted for catching wild cattle with the lasso. The reduced size of the horses in those islands or in Iceland cannot be due to cold, for wild horses live and thrive in Iceland, and aboriginally the horse must have inhabited countries annually covered with snow, which he must instinctively have scraped away to get at the herbage. The horses which have run wild in the Falkland Islands have this habit, which is the more remarkable because their immediate progenitors could not have followed this instinct. Wild cattle, on the other hand, on these islands never scrape away the snow, and perish when the ground is long covered with it.

The breeds of pigs, and the effects of cultivation in modifying the habits and the bodily shape of these animals, have of late years been carefully studied by von Nathusius and Rütemeyer. From their researches it appears that all the known breeds may be divided into two great groups, one represented by the common wild boar, which may be called the *Sus scrofa* group, while the other group is somewhat unfortunately named *Sus Indica*, as the wild aboriginal does not inhabit India, and the best known domesticated breeds come from Siam and China. Different breeds of the first group still exist in various parts of central and northern Europe, but these are now rapidly disappearing by being crossed with improved Indian breeds, especially the Chinese. It is believed that the Chinese have studied the domestication and breeding of their pigs for 4900 years; and hence, as might be expected, the pigs of that country display in an eminent degree the characters of a highly cultivated race. Nathusius tells us that the infusion of $\frac{1}{32}$nd or even of $\frac{1}{64}$th of the blood of *S. Indica* into a breed of *S. scrofa* modifies the form of the skull of the latter. The modifications which the skull is capable of undergoing by cultivation are so remarkable that we shall quote Mr. Darwin's paragraph on this subject, which contains a condensation of the views of Nathusius—"The whole of the exterior of the skull in all its parts has been altered; the hinder surface, instead of sloping backwards, is directed forwards, entailing many changes in other parts; the front of the head is deeply concave; the orbits have a different shape; the auditory meatus has a different direction and shape; the incisors of the upper and lower jaws do not touch each other, and they stand in both jaws above the plane of the molars; the canines of the upper jaw stand in front of those of the lower jaw, and this is a remarkable anomaly; the articular surfaces of the occipital condyles are so greatly changed in shape that no naturalist, seeing this important part of the skull by itself, would suppose that it belonged to the genus *Sus*. The whole head is much shortened; thus, whilst in common breeds its length to that of the body is as 1 to 6 in the 'cultur-races,' the proportion is as 1 to 9, and even recently as 1 to 11." (P. 71.) Mr. Darwin gives excellent portraits of the head of a wild boar and that of a highly cultivated Yorkshire pig (copied from Sidney's edition of "The Pig," by Youatt), which show at a glance the results of cultivation in modifying the shape of the skull. The influence of food in effecting these changes is clearly brought out by Nathusius, who finds, both by common experience and his own experiments, that rich and abundant food given during youth tends to make the head broader and shorter, and *vice versâ*. He shows, moreover, that the manner of obtaining the food, independently of the nature of the food itself, influences the form of the skull. All wild and semi-domesticated pigs begin in early life to plough up the ground with their muzzles, and thus to call into action the powerful muscles fixed to the back of the head, while in cultivated well-fed pigs this habit is not followed; and hence with each generation the back of the skull deviates more widely from the original form. It is doubtful how far such a change of habits will suffice to account for the great reduction in the length of the skull and for its concave front, although its influence to a certain degree is unquestionable; and Mr. Darwin points out that in many domestic animals—in bull- and pug-dogs, in certain breeds of cattle and sheep, in Polish fowls, etc.—there is a strong tendency for the bones of the face to become greatly shortened. Again, the nature of the food in the course of many generations seems to modify the length of the intestinal canal; for while in the wild boar its length is to that of the body as 9 to 1, in the common domestic boar it is as 13·5 to 1, and in the Siam breed as 16 to 1. Moreover, the number of mammæ, the period of gestation, and the age at which the teeth are developed vary with cultivation.

In his remarks on cattle and their different breeds, he notices a monstrous breed called niatas or natas, of which he saw two small herds on the north bank of the Plata. This breed bears the same relation to other breeds as bull- or pug-dogs do to other dogs, or as improved pigs do to common pigs. "The forehead is very short and broad, with the nasal end of the skull, together with the whole plane of the upper molar teeth, curved upwards. The lower jaw projects beyond the upper, and has a corresponding upward curvature. It is an interesting fact that an almost similar conformation characterises the extinct and gigantic Sivatherium of India, and is not known in any other ruminant." Professor Owen, who has described a skull of this breed which was presented to him by Mr. Darwin, points out its great deviations from the normal types. The nasals are so stunted in their development as to be only one-third the ordinary length, while they retain almost their normal breadth. The fore part of the lower jaw is also stunted and curved upwards so as to come in contact with the premaxillaries. The lachrymal bone articulates with the premaxillary, and thus prevents any junction between the maxillary bones and the nasal; and various other differences might be added. "In fact, on comparison with the skull of a common ox, scarcely a bone presents the same exact shape, and the whole skull has a wonderfully different appearance." (P. 90.) It is known that this breed existed about 1760 near Buenos Ayres, and that they must have originated subsequently to 1552, when cattle were first introduced, so that this variation must have developed itself in less than two centuries. The breed may be regarded as permanently established, for it has now lasted for more than a century, and a niata bull and cow invariably produce niata calves. It would seem that in disposition, as well as in anatomical characteristics, these animals were relapsing to the Sivatherium type, for even at the present day they show their less civilised nature in being fiercer than common cattle, and in the cow, if visited too often, deserting her first calf. When the pasture is tolerably long, these cattle feed in the ordinary manner, but in the great droughts not very common in the district of La Plata they would, if not attended to, become extinct; for, while the common cattle, like horses, etc., can just keep alive by browsing on the twigs of trees and on reeds with their lips, the niatas starve before the common cattle, in consequence of their lips not joining. We have entered into these particulars because, as Mr. Darwin observes, we have here "a good illustration of how little we are able to judge from the ordinary habits of an animal on what circumstances, occurring only at long intervals of time, its rarity or extinction may depend. It shows us, also, how natural selection would have determined the rejec

tion of the niata modification had it arisen in a state of nature." (P. 91.)

Mr. Darwin also describes in less detail other breeds of cattle which must have originated through variation, independently of descent from distinct species—as, for example, *pelones* and *calongos*, occurring in Columbia, S.A., the former having very thin and fine hair, while the latter is absolutely naked—breeds with reversed hair, with peculiar horns, etc.

During the last twenty years much light has been thrown on the apparent descent of living domestic races (or races that were known to have lived in historic times) from races found fossil in the most recent tertiary deposits of Europe. Thus, according to Rütemeyer, *Bos primigenius* was domesticated in Switzerland as early as the neo-lithic period, existed as a wild animal in Cæsar's time, and is now found in a semi-wild state and degenerated in size in Lord Tankerville's park at Chillingham. *Bos longifrons* (or *brachyceros*) was domesticated in England during the Roman period, and Professor Owen thinks that the Welsh and Highland cattle are descended from this form. Mr. Darwin concludes this section with a few remarks on the probable causes through which each separate district in Great Britain came to possess in former times its own peculiar breed of cattle. This may be referred partly to descent from the distinct species which have just been noticed, and perhaps from others; but this cause will not suffice, and he arrives at the conclusion "that, although slight differences in the nature of the climate, food, etc., as well as changed habits of life, aided by correlation of growth, and the occasional appearance from unknown causes of considerable deviations of structure, have all probably played their parts, yet that the occasional preservation in each district of those individual animals which were most valued by each owner has, perhaps, been even more effective in the production of the several British breeds."

Sheep afford more striking instances of new breeds suddenly originating than perhaps any other animal. The history of the *otter* or *ancon* breed was so universally quoted in the reviews of Mr. Darwin's original work nine or ten years ago, that it is probably still in the recollection of many of our readers, and we will, therefore, merely state regarding it that in 1791 a ram-lamb was born in Massachusetts, having short crooked legs, and a long back like a turnspit-dog. From this one lamb the new breed was raised, retaining all their ancestor's peculiarities. As they could not leap over fences it was thought that they would be preferable to common sheep; but after a time they were supplanted by the merinos, and then exterminated. The following equally interesting case is less generally known:—A merino ram-lamb was born on the Mauchamp farm (in France) in 1828, which was remarkable for its long, smooth, straight, and silky wool. By 1833 the new breed was fairly established; and so valuable is the wool, that it sells at 25 per cent. above the best merino wool. Even the fleeces of half-bred animals are valuable, and are known as the "Mauchamp-merino." "It is interesting," Mr. Darwin observes, "as showing how generally any marked deviation of structure is accompanied by other deviations, that the first ram and his immediate offspring were of small size, with large heads, long necks, narrow chests, and long flanks; but these blemishes were removed by judicious crosses and selections. The long smooth wool was also correlated with smooth horns; and as hair and horns are homologous structures, we can understand the meaning of this correlation."—Vol. i., p. 101.

A chapter, of twenty-eight pages, is devoted to the subject of domestic rabbits. It abounds in interesting details, from which we have only space to quote one or two isolated points, and to give the author's summary of the modifications which these animals have undergone when domesticated. It is almost universally believed that the several breeds of domestic rabbits are descended from the common wild species, which has been tamed and cultivated from the earliest times. The origin of the Himalayan breed (sometimes called Chinese, or Polish, or Russian) is so singular that Mr. Darwin gives it in detail. They are white, except their ears, noses, and fore feet, and the upper side of the tail, which are all of a brownish-black, and they have red eyes. From these symmetrical marks they were regarded as a distinct species; but a writer in 1857 described the following method of producing them. It must be premised that there are two breeds known as silver-greys or silver-sprigs and chinchillas or tame silver-greys, the former of which have black heads and legs and fine grey fur, which is interspersed with long black and white hairs, while the latter have short paler fur interspersed with similar hairs. Mr. Bartlett, of the Zoological Gardens, has found that by simply crossing silver-greys with chinchillas he could always produce some few Himalayans, which, notwithstanding their sudden origin, if kept separate, bred perfectly true, as is also the case with both silver-greys and chinchillas. When first born they are quite white, and it is only after they are a few months old that the parts mentioned become coloured. Silver greys and chinchillas, on the other hand, are born perfectly black, but soon assume their characteristic tints. A similar change occurs in grey horses, which as long as they are foals are nearly black, but soon become grey, and gradually get whiter as they grow older. In a later part of his work Mr. Darwin endeavours to prove by a large mass of facts that when two varieties are crossed, both of which differ in colour from their parent-stock, there is a strong tendency in the young to revert to the original colour, this reversion occasionally supervening during the growth of the animal, instead of before its birth, as might have been anticipated. If in the present case it could be shown that silver-greys and chinchillas were the offspring of a cross between a black and albino variety, which is, according to Mr. Darwin, by no means impossible, and is supported by certain observations, then all these paradoxical facts on the changes of colour in these breeds would fall under "the law of reversion."

Our author discusses at considerable length the effects of use and disuse of parts in reference to this animal, but we have only space for an abstract of his summing up of the most important modifications which the domestic rabbit has undergone. By the supply of abundant food, combined with little exercise, and by the continued selection of the heaviest animals, the weight of the larger breeds has been more than doubled. (An English lop-eared rabbit weighing 18 lbs. has been exhibited, and a weight of 10 lbs. is not uncommon, while a full-sized wild rabbit weighs 3¼ lbs.) The bones of the limbs have increased in weight in due proportion to the increased weight of the body; but they have not duly increased in length, in consequence probably of insufficient exercise. With the increased size, the third cervical vertebra assumes the ordinary characters of the fourth, and corresponding changes are stamped on the eighth and ninth dorsal vertebræ. The skull is slightly but not proportionally enlarged, and the brain has not duly increased, or has actually diminished; and this might have been expected when we remember that domesticated rabbits that have been domesticated and closely confined for many generations have little or no demand on their intellectual functions or even on the exercise of their senses; and hence the law of decrease in size from disuse acts on their brains. Hence the bony case containing the encephalon remains narrow, and by correlation affects the bones of the face and the entire length of the skull. From unknown causes, the supraorbital processes of the frontal bones and the free ends of the malar bones have increased; and the ears, which have been enormously increased by selection, have materially altered the size, form, and direction of the bony meatus. This influence is better shown in the plate of the skull of a Half-lop rabbit given in vol. i. p. 119, than by any verbal description. This change of the meatus by correlation affects, to a certain degree, the position of almost every bone in the upper part of the skull.

(To be continued.)

GENERAL CORRESPONDENCE.

A HOSPITAL FOR OLDHAM.

LETTER FROM MR. A. T. THOMSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—The town of Oldham, distant about six miles from Manchester, though virtually a suburb of that city, contains a population of about 90,000. It has hitherto been without a charitable Medical institution of any description. Its numerous workshops and cotton factories have supplied a fertile field for the treatment of acute Surgical cases, and these, with the exception of a comparatively small number sent to the Manchester Infirmary, have been treated, through the liberality of the employers of labour, at their own homes. The comfortable circumstances and, as a rule, the excellent condition of the dwellings of the working population have enabled this to be done not only without disadvantage, but, I am persuaded, from the favourable results almost uniformly seen after capital

operations, with positive benefit to those unfortunate enough to suffer accidents by machinery.(a)

Now, however, infected by the movement in Wigan, Blackburn, and other towns, it is intended to build an Infirmary and Dispensary for the reception and treatment of these and other cases. The Mansion-house Committee, out of the surplus fund subscribed some years ago for the relief of the operatives during the cotton famine, have apportioned to Oldham, under an order of the Court of Chancery, £1000, and, with this as a nucleus, it is proposed to raise £9000 additional for the above purpose.

I, in common with my Professional brethren here, hold a firm conviction, formed after some experience in other places, that of all the charitable institutions in the country none are more liable to abuse than those to which the Medical Profession are called upon to minister. The debates in the Social Science Congress at Birmingham a few weeks ago sufficiently attest this. We are therefore desirous, whilst the institution here is in a nascent state, to use our influence for the purpose of correcting or mitigating some of the evils most grievously complained of—evils tending to the demoralisation of the working classes themselves, and certainly most injurious to the interests of the junior members of our Profession.

It occurs to me, that this may perhaps be best attained by insisting on the adoption of such measures, whether by a paid officer or otherwise, as may be necessary for the rigid exclusion of all but the necessitous; and by advocating payment for the services of the Medical staff on the ground, irrespective of the question of bare justice, that, from our proximity to a large county Hospital, no status will be conferred on those holding its appointments.

In my opinion, the Profession in this country ought long ago to have resisted the burdens imposed upon it by the public. Want of union amongst ourselves is undoubtedly the one potent reason why year after year these burdens have gone on accumulating, until at last they have culminated in the recent disgraceful Vaccination Act.

If any of your numerous readers, either privately or through your columns, feel disposed to assist, by their suggestions, in placing matters on a better footing in this town, he will confer a benefit on the Profession generally. I am, &c.

A. Thom Thomson.

Rhodes House, Oldham, November 3.

MEDICAL ELECTRICITY AT QUEEN'S-SQUARE.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your report on the Hospital for the Paralysed and Epileptic in Queen's-square, some very extraordinary statements have been made concerning Medical electricity, which should not be allowed to pass uncontradicted. It would take up too much of your valuable space to mention and refute all the errors which have been made in the paper with regard to this particular; but the following passage is so glaringly incorrect that I beg you will allow me to state the real facts of the case:—

"One of the most important discoveries connected with this kind of electricity," says your reporter, p. 480, "was simultaneously made some time ago in this country by Mr. J. N. Radcliffe, and in America by Dr. Hammond—viz., that when muscles were so atrophied, and when their electromotility was so far gone, that no response could be got to an induced current of such strength that its passage through a sound part would give intense pain, yet a few cells with a direct current would procure an instant response in the affected part. What the value of this fact may prove is not yet known, but the Medical officers of this institution are zealously directing their attention to an elucidation of the question."

Now, Sir, I will not advert here to the great looseness of language employed in calling the continuous current the "direct" one; for the primary induced current is direct, and the continuous current may be direct as well as inverse; but I will only say that the fact which is mentioned here as a new discovery made in Queen's-square was known years before the Hospital in Queen's-square and its electrical department were in existence. The first who directed attention to it was Dr. Baierlacher, of Nürnberg, whose paper in the Bavarian *Aerztliches Intelligenzblatt* appeared as far back as 1859. Since then a number of papers have been published on the same subject by Dr. Schulz, M. Meyer, Professor Ziemssen, Dr. Althaus, Dr. Eulenberg, and Messrs. Landois and Mosler, in which the question has been treated in the fullest and most comprehensive manner. I may also say that it is perfectly well known "what the value of this fact may prove," and it is this—that, in the cases alluded to, the continuous current is superior to the induced current as a therapeutical agent, and should therefore be employed in preference wherever that condition of the nerves and muscles is discovered.

I am, &c. M.D.

(a) I hope to put on record at some future time the result of operations performed under such circumstances, with the view of comparison with that obtaining in large Hospitals.

FILARIA MEDINENSIS.

Letter from Assistant-Surgeon Nathan.

[To the Editor of the Medical Times and Gazette.

Sir,—Will you permit me to make known, through the medium of your widely circulated journal, the possibility of contracting this disease on the Mediterranean station, as I find that Medical authors invariably describe it as essentially a tropical disease? Two cases were under treatment in the Royal Naval Hospital, Malta, in 1866, having been received from H.M.S. *Cossack*, which had been cruising on the coast of Syria for three successive summers. One case proved fatal from exhaustion; the other was sent home invalided. The subjects were both young men belonging to the corps of Royal Marines, and had never served on any other station, nor had they previously suffered from similar symptoms. I carefully examined the statements of both men, and feel convinced that the disease was contracted as follows:—During the second summer of their cruise, both men belonged to a watering party which went on shore to procure water from a stagnant pool situated on the confines of Scanderoon Bay (about 37° N. latitude). They were in the habit of standing in this water for long periods with their feet bare, both when on shore and subsequently when going off in the boat. The water was very bad, and could not be drunk after having been conveyed on board. I am, &c.

Henry Frederick Nathan,
Assistant-Surgeon to the R.N. Hospital at Malta.

October 23.

SEXUAL MALFORMATION.

Letter from Mr. Albert W. Wallis.

[To the Editor of the Medical Times and Gazette.]

Sir,—The following remarkable case of sexual malformation came under my observation; if you think the particulars worth recording, I shall be obliged by your inserting them in your columns. I attended Mrs. P. during the latter part of a long illness—ulceration of the stomach followed by perforation, from the effects of which she died in March, 1867. The facts of the case are briefly these:—Anne P., 44 years of age, married 18 years, husband living and residing with her. Her general configuration that of a plain somewhat ungainly-looking person, about 5 ft. 2 in. in stature. During my attendance she informed me she had, until the commencement of her present illness, always enjoyed tolerably good health, but had never menstruated in her life. Upon questioning her mother—who was nursing her—on this point, she said she believed such was the case, and further stated that when her daughter was a child she had taken her to a Medical man to be examined, thinking, to use her own expression, that she was not "properly made," and she was told that an operation would have to be performed when the child grew older. No Medical man, however, was subsequently consulted on the subject. On examination, the following remarkable condition of the parts was revealed. The mons Veneris covered with hair in the usual manner. The labia externa imperfectly developed. On separating them the labia minora were deficient. There was no vagina, simply a slight depression, but without aperture or inlet. There was a small rudimentary clitoris, and the urethra occupied the usual situation in the female. On the left side, occupying the situation of an inguinal hernia, was a small tumour, reducible, and having the characteristic impulse on coughing of a hernia, and for which a truss was worn. Her death taking place not long from this time, I obtained permission to make a *post-mortem* examination. On opening the abdomen, I could find not a vestige of either uterus or

ovaries. The swelling which I have described as resembling a hernia proved to be a testicle with spermatic cord, as in the male. In the right lumbar region was found a small shrivelled glandular-looking body, about the size of an almond, but without a cord; I imagined it to be a rudimentary testicle undeveloped. There was no unusual development of hair on the face or upper lip; that of the head about as usual with females. The body was much emaciated generally from disease; but the mammæ, I was informed, had never been much developed. The pelvis was proportioned as in the male. For convenience of description I have spoken of the subject of this communication as a female; obviously, however, she (?) is not entitled to that distinction. Although the habits and disposition of this being appear from early life to have inclined to those of the female, so far as I can ascertain there seems to have been an absence of all sexual feelings. It would be interesting to know how an analogous case to the above would be regarded by law on the question of sex.

I am, &c.

Albert W. Wallis, M.R.C.S., &c.

Brentwood, September.

REPORTS OF SOCIETIES.

THE CLINICAL SOCIETY.

Friday, October 23.

Dr. C. J. B. Williams, Vice-President, in the Chair.

Dr. Drage was elected a Member of the Society.

Mr. Callender brought under the notice of the Society a case of double amputation, the boy having been under the care of Mr. Brook, of Lincoln. The case was referred to for the purpose of showing how well the patient could walk with knee- and ankle-joint movements, provided by Mr. Gillingham's artificial limbs, and to point out the practical difficulties which had resulted from the temporary fixing of the thighs in flexion upon the abdomen.

Dr. Julius Pollock exhibited a case of chronic disease of the right lung, with contraction of the right side of the chest, exhibiting the characters of "fibroid phthisis," and a report on the same case by Drs. Symes Thompson and Douglas Powell was read. The reporters concluded that, although the case resembled those described by Dr. Clark in respect of its slow progress and more obvious characters, it did not possess such distinctive features as to justify separate classification. This opinion was based on the phthisical aspect and constitutional state of the patient, the existence of physical signs of a cavity at the right apex, and of disease in the opposite lung, and the absence of evidence of fibroid disease in the organs.

Dr. Thompson further remarked that, without reference to the question whether or not fibroid phthisis is to be recognised as a distinct species of disease, the case was not a characteristic example of the kind so designated by Dr. Clark, at the same time stating that he had not in his own experience met with a case which in its whole course of development corresponded to Dr. Clark's definition.

Dr. Powell recalled the attention of the Society to the leading features of the case related by him at the last meeting, pointing out some important differences between it and the case now under consideration.

Dr. Wilks thought that no objection could be offered to comprising within the term phthisis all cases in which the lungs are progressively disintegrated, just in the same way as Bright's disease is made to include a great variety of morbid conditions of the kidney. He thought, although cases in which fibroid change is associated with the more common post-mortem results of phthisis occur frequently, that cases in which it existed independently of those lesions were extremely rare. He had met with such cases, and therefore thought it important that they should be recognised, and saw no objection to the term applied to them by Dr. Clark.

The President then called upon Dr. Clark, who, after some complimentary observations, said that he felt bound to justify himself against the charge which had been preferred against him of revolutionary tendencies, and he could not do this better than by giving to the Society once more a summary of his views. By the word phthisis he meant a progressional consolidation of the lung, with subsequent progressional destruction of the consolidated parts. So far all would agree with him. What he maintained in opposition to those whom he termed "thorough-going limitarians" was that this process was not always of the same pathological nature, and that the common notion that it resulted invariably from the deposit in the diseased organ of a foreign body called tubercle, which must work itself out, was a false one. His object was to show that cases of phthisis may be classified into groups which, although not separated from each other by abrupt lines, are, nevertheless, tolerably distinct, and that with every such group a characteristic anatomical change is associated. He proceeded to point, out in the same terms as on previous occasions, the distinctions between tubercular, pneumonic, and hæmorrhagic phthisis; and finally stated the affection to which he desired to apply the term fibroid phthisis is distinguished by its definite mode of origin, its slow progress, its more febrile character, its affecting one lung only, its producing retraction and displacement of neighbouring organs, its affecting organs by preference in persons of middle age, and its being associated with similar changes in the skin and internal organs, and even in the nervous tissue. By giving a name, he said, to this affection, all that we do is to label a certain class of cases as forming are cognisable group, and we do not necessarily commit ourselves to any theory. Dr. Clark concluded by replying to the objections to his views by previous speakers.

Mr. Maunder reported a case of

WOUNDED SUPERFICIAL FEMORAL ARTERY, REQUIRING LIGATURE OF THE VESSEL.

He referred to the fact that dark venous blood was seen to escape from the distal portion of the vessel, and he stated that this occurred in all such cases if examined before the circulation had time to right itself by anastomotic streams—a condition scarcely to be looked for when an aneurism is the cause of the vessels being ligatured, because in all such instances there is a sort of anastomotic circulation established around the aneurism during the progress of the disease, and thus arterial blood is directed into the vessel below the site of its aneurismal affection. Mr. Maunder further expressed an opinion that ligature of the femoral artery was not so severe an operation when practised on a patient free from arterial disease, and referred to the ligature of this vessel in cases of wound of the knee-joint attended with alarming symptoms, and of disease of the joint giving rise to conditions which threaten life or, as at present, necessitate amputation.

Dr. Anstie and Mr. Callender referred to the importance of the question raised by Mr. Maunder; and Mr. Hulke, after noticing a case in which the spermatic artery had been tied by Mr. Moose for a fungoid protrusion of the testicle, drew attention to the difference between ligaturing an artery and the troubles connected with compression of the vessel, by reason of the injury at the same time inflicted upon the vein.

Dr. Williams also referred to the applicability of compression, and regretted time did not admit of further discussion of the subject.

WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON.

Friday, October 16, 1868.

Mr. J. R. Lane, President, in the Chair.

The President read a paper

ON THE PREVENTION OF CONTAGIOUS VENEREAL DISEASES.

The subject was one which had attracted a good deal of attention of late, and he took this opportunity of bringing it before the Society for the purpose of initiating a discussion on a question which he believed to be one of the most urgent of the sanitary problems of the day. It appeared that at Sheerness, where the necessary conditions had been complied with, and which was besides an isolated station, the disease had been almost stamped out. At Plymouth also the results had been good, while at Portsmouth, Woolwich, and Chatham, it had been less satisfactory, in consequence of an insufficiency of Hospital accommodation and the consequent impossibility of carrying out the periodical inspection. In these places, and also at Aldershot, there was a serious disturbing cause in the constant influx of fresh troops bringing disease with them, accompanied as they always were by a number of

prostitutes, many of whom are diseased. Many diseased women also came from a distance and took up their residence at the inspected stations for the purpose of getting sent to Hospital for treatment. Notwithstanding these drawbacks, the statistical returns (which were quoted) from all these places showed a very decided diminution, not only in the amount, but also in the virulence, of the disease. During the quarter ending June 30, 1868, taking all the inspected stations together, and out of a total force of 51,300 soldiers, sailors, and marines, 2383 men were admitted into Hospital for venereal disease; but it is worthy of notice that of these only 1345 contracted their disease within the inspected district —that is to say, as many as 44 per cent. of the cases were caused by women who were not under the operation of the Act. For this force of 51,300, the average number of men under treatment is 587, or 1·1 per cent. The general result obtained may be thus expressed:—In 1864, before any legislation was attempted, the annual ratio of admissions for venereal disease throughout the whole army was 290 per 1000. This has been reduced at the inspected stations, taken collectively, to 185 per 1000. But it must be remembered that nearly half of this is owing to disease contracted out of the districts. The annual ratio of men contracting disease within the district where they are stationed is not more than 104 per 1000. With respect to the women, it appeared that during the same quarter the number brought under the operation of the Act at all the stations was 2542. Of these 2542, 1094 were found diseased, and were sent to Hospital for treatment —that is to say, two out of every five women were found to be diseased. The number of beds provided for them at all stations is 484. The evidence from all quarters is remarkable that, both as regards the women and the men, not only has the quantity of disease been diminished, but its quality has been modified in the most marked manner. Not only has the proportion of syphilitic disease to milder affections been much diminished, but the syphilis which has occurred has been of a mitigated character, and secondary affections have been rare.

OBITUARY.

SAMUEL LITTLE HARDY, M.D., F.R.C.S.I.,

President of the Dublin Obstetrical Society.

With deep regret we have to record the death of Dr. Samuel L. Hardy, of Merrion-square, Dublin, aged 53, which event took place on the 29th ultimo, and resulted from the bursting of an aneurism of the abdominal aorta. Though not seeming very well for some time past, he nevertheless was actively engaged in laborious Professional duties up to a couple of days before his death.

Dr. Hardy was an M.D. of Glasgow, a Licentiate and Fellow of the R.C.S.I., and a Licentiate of the K.Q.C.P. Within the past month he had been elected a Fellow of this last College, but did not live to be sworn in. He became an Assistant at the Lying-in Hospital in 1842, Dr. Charles Johnson then being Master of the Institution. An able paper on the use of ergot of rye in labour, and a well-known work on practical midwifery (of which Dr. M'Clintock was co-author), were some of the fruits of his industry and observation whilst an Assistant at the Rotunda. He was one of the first, if not the first, to recommend the application of chloroform vapour as a local anæsthetic, and he invented a very simple instrument for the purpose. Besides these he published some other papers on subjects connected with the diseases of women and children. Since his decease a paper has appeared from his pen in the *Dublin Quarterly Journal*, on scarlatina during pregnancy and the puerperal state. For several years Dr. Hardy had been Physician to the Pitt-street Institution for Diseases of Children, and Physician-Accoucheur to Steevens' Hospital; and on the establishment of a Medical school in connexion with this Hospital he was appointed lecturer on midwifery. At the commencement of last session the Dublin Obstetrical Society elected him its President for the year.

As an obstetrician Dr. Hardy had large business, and no Practitioner more thoroughly possessed the confidence and esteem of his patients as well as the good opinion and regard of all his Professional brethren. In addition to large experience, he was most painstaking and assiduous in his attentions to the patients under his care, and displayed much resource of mind in devising remedies suitable to the varying conditions of a case. But the main features in his character, and what gained for him the attachment of so many friends, were his sterling moral worth and his steadfast honesty of purpose and action. Dr. Hardy was a man of sincere unostentatious piety, and endeavoured through life to regulate his conduct and actions by the Christian principles he professed.

LEGAL INTELLIGENCE.

COURT OF COMMON PLEAS, Westminster, Nov. 4.

(*Sittings in Banco, Michaelmas Term, before Lord Chief Justice* Bovill, *and Justices* Byles, Keating, *and* Brett.)

SPEAR *v.* DOIDGE.

This was an action tried at Exeter before Mr. Baron Channell, when the plaintiff had a verdict for £162.

Mr. Coleridge, Q.C., now moved for a new trial, on the ground that the verdict was against the evidence. The plaintiff, it appeared, had got his arm caught in the machinery of a threshing machine, which broke and dislocated his arm. The defendant, a Surgeon, attended him and set the arm, but the plaintiff, being of an irritable and sensitive temperament, could not bear pain, and in consequence of his complaints and state the splints were taken off, but he was cautioned not to move his arm, but to keep it in a bent position. He did not follow that caution, and the bones of the arm did not properly set in consequence. The action was brought against the Surgeon for malpractice, and the jury gave their verdict against him. It was now contended that the Surgeon had acted rightly; that the plaintiff's life might have been endangered with his sensitive impatience of pain if the splints had not been removed. The question was one of character, and therefore the defendant moved.

The Court said they would consult Mr. Baron Channell upon it.

NEW BOOKS, WITH SHORT CRITIQUES.

On the Artificial Production of Tubercle in the Lower Animals. A Lecture delivered at the Royal College of Physicians, May 15, 1868. By Wilson Fox, M.D, F.R.C.P., Holme Professor of Clinical Medicine at University College, London. London: Macmillian and Co. Pp. 31.

*** When this valuable and instructive lecture was delivered, such a full abstract appeared in our columns that we may be excused now from doing more than pointing out its republication in a separate form. This notice it amply deserves. Several most beautiful drawings of tubercular deposits and their microscopical structure add greatly to its value as a contribution to the literature of this vexed question in pathology.

*** We have received two convenient appendages to the clinical apparatus of the Physician—one, a set of tables for the registration of temperatures, from Messrs. Harvey and Reynolds, of Leeds; the other, a nursing schedule, by Dr. Dobell. In the former, which have been drawn up by Edward Casey, M.B., we have the means of registering temperatures to the fifth of a degree Fahrenheit by little dots between each line on the sheet marking a degree of temperature, whilst at its bottom are divisions for the registration of the conditions of the pulse, respiration, motions, quantity of urine, with its specific gravity, its reaction, the quantity of its chlorides, and the presence or absence of albumen. Each day has a division set apart for itself, which is further subdivided into a morning and evening compartment. The range of temperature is from 96° to 106° F. These sheets may be procured either separately or in the form of a book at a considerably smaller cost than those issued by Casella, of Hatton-garden. Dr. Dobell's nursing schedule is intended to enable the Physician to give more accuracy to his orders, and at the same time to enable the nurse to give him a more distinct account of the progress of the patient. The times for nourishment and wine are to be marked down by the Physician, the condition of the patient by the nurse. Each sheet is divided into spaces corresponding with the twenty-four hours of the day, and as both sides are utilised, each will serve forty eight hours, or two days.

The Royal Academy.—The annual course of lectures on anatomy to the students and Royal Academicians will be commenced by Professor Partridge, F.R.S., late President of the College of Surgeons, on Monday next, and be continued every succeeding Monday up to the 14th proximo inclusive.

Death of Professor Griesinger.—We regret to learn from a private source that Professor Griesinger, of Berlin, died on the 28th ult. His work on mental diseases has been translated into most European languages, and has gone through many editions in the original. It forms one of our own New Sydenham Society's series. Its author was an indefatigable worker, and had been transferred to his Professorship at Berlin within the last ten years. He was past middle life. His last illness, which was caused by an iliac abscess, had extended over several months. His death is a real loss to scientific Medicine, and especially to his own department.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Thursday, October 29, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Dickson, John Thompson, M.B. Cantab., 33, Harley-street.
Heyn, Julius C. W., M.D. Heidelberg, the Hague.
Potter, John Baptiste, M.D. Edin., 2, Hertford-street, Mayfair.
Stocker, John Sherwood, M.D. Lond., 2, Montagu-square.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 29, 1868:—

Booth, Edward Johnson Hardy, Huddersfield.
Fox, James Thornilcy, Millman-street, Mecklenburgh-square.
Higgins, Charles, Hambledon, Hants.
Smith, Thomas, Crawley, Sussex.
Stevens, George, Nayland, Suffolk.

The following gentlemen also, on the same day, passed their First Examination:—

Anderson, R. B., St. Mary's Hospital.
Burroughs, J. E. B., Guy's Hospital.
Haynes, Horace E., St. Bartholomew's Hospital.
Pedler, George Henry, King's College, London.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, given annually to Medical students by the Society of Apothecaries, the successful candidates were—

First.—Herbert Alder Smith, of St. Bartholomew's Hospital, a gold medal.
Second.—Richard Benjamin Anderson, of St. Mary's Hospital, a silver medal and a book.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

ANDERSON, WILLIAM, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., late House-Surgeon at St. Thomas's Hospital.—House-Surgeon to the Derbyshire General Infirmary.

HAYARD, J., M.R.C.S.—District Medical Officer to the Mitford and Launditch Union, and Registrar of Births and Deaths.

STREATFEILD, J. F., F.R.C.S. (Exam.)—Surgeon to the Royal London Ophthalmic Hospital, Moorfields, *vice* Mr. Dixon, resigned.

TAYLOR, JAMES, L.R.C.P. Lond., M.R.C.S. Eng., Honorary Surgeon to the Chester General Infirmary, *vice* Thomas Brittain, F.R.C.S. Eng., resigned.

BIRTH.

AUSTIN.—On October 27, at Lingfield, East Grinstead, the wife of Sydney C. Austin, Surgeon, of a daughter.

MARRIAGES.

CALDECOTT—WORTS.—On October 28, at Neuchatel, William Watson Caldecott, of Basingstoke, Hants, to Susan Emily, only surviving daughter of William Worts, Esq., Surgeon, of Colchester, Essex.

COOKE—LOWE.—On October 28, at St. Michael's Church, Stamford, John Cooke, M.B., of Tettenhall, Wolverhampton, to Emily, second daughter of C. Lowe, Esq., J.B., of Stamford. No cards.

GROVES—SEARS.—On October 29, at Dartford Church, Edward Groves, M.R.C.S., L.R.C.P., L.M., late House-Surgeon at St. Bartholomew's Hospital, to Isabel Ann, youngest daughter of the late T. H. Sears, Esq., of Fulwick house, Dartford, Kent. No cards.

JAEGERSCHMID—CLARKE.—On October 23, at Freiburg, Grand Duchy of Baden, Dr. Edward Jaegerschmid, of St. Georgen, to Mary Roe, eldest daughter of the late Peter Roe Clarke, Esq., of Dublin.

JONES—WHITE.—On October 31, at Hove Church, Brighton, John Day Jones, eldest son of Charles Richard Jones, M.D., of Castle House, Great Torrington, Devonshire, to Rose Emily, the only surviving daughter of the late Thomas White, Esq., of the Audit Office.

LEES—DRAWBRIDGE.—On October 22, at St. Margarets, Rochester, Joseph Lees, Esq., of Holly Bank, Knutsford, Cheshire, to Amelia Mercia, daughter of G. H. Drawbridge, Esq., M.B., of Rochester.

MORRIS—HUGHES.—On October 27, at Trefnant Church, near Denbigh, Price Morris, of Plas Clough, to Catherine Anne, the only daughter of Dr. Hughes, M.D., Regent-street, Llangollen. No cards.

O'MALEY—JONES.—On October 29, at the church of St. Peter Martin, Bedford, Michael Rowland O'Maley, Manager of the Colonial Bank, St. Thomas, and son of the late Thomas De Burgh O'Maley, Esq., Staff-Surgeon of the First-class, to Gertrude Bertha, sixth daughter of Alfred Jones, Esq., of Bedford-terrace, Bedford.

SPEARMAN—RALSTON.—On July 4, at the residence of the bride's mother, Rutland Cottage, Richmond, Melbourne, George Spearman, L.R.C.P., M.R.C.S., etc., of Lennox-street, Richmond, Melbourne, to Alice, youngest daughter of Gavin Ralston, Esq., late of South Yarra, Melbourne, and sister to Alexander J. Ralston, Esq., of Sydney. No cards.

DEATHS.

BIRD, EDWARD GORDON, Esq., youngest son of the late Dr. James Bird, F.R.C.P., Physician-General of Bombay, at Durrant's-hotel, 1, George-street, Portman-square, on October 30, aged 21.

BOWEN, FRANCIS NATHANIEL BURTON, M.D., of Upper Berkeley-street, on October 29, aged 40.

BURROWS, MARY, relict of the late William Burrows, M.R.C.S., of Islington, at Brompton, on October 20, aged 67.

FINCHAM, EMMA MARY ANGELA, fourth surviving child of George T. Fincham, M.D., at 13, Belgrave-road, on October 31, aged 10 years.

NEALE, MELVILLE, M.D., Deputy Inspector-General of Hospitals, late of the 18th Hussars and the Military College, Sandhurst, at Bath, on November 1.

SIMS, ALICE, widow of the late Robert Samuel Sims, M.D., at 1, Milbourne-grove, Brompton, on October 29, in the 61st year of her age.

SWAINE, W. E., M.D., F.R.C.P., at his residence, St. Leonard's, York, on November 1, aged 64.

WILLIAMS, FLORENCE MARY GWEN, eldest daughter of D. W. Williams, M.D., at Menai Bridge, North Wales, on October 22, in her ninth year.

YOUNG, EDWARD NEWELL, eldest son of Dr. Edward Young, of Salisbury, at Madras, on September 23, in his 19th year.

POOR-LAW MEDICAL SERVICE.

******* The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Blything Union.—Mr. J. S. Harris has resigned the First District; area 12,181; population 2859; salary £54 per annum. Also the Workhouse, salary £50 per annum.

APPOINTMENTS.

Aylsham Union.—James W. Saunders, M.R.C.S.E., L.S.A., to the Fourth District.

Castle Ward Union.—John F. W. Tatham, L.R.C.P. Edin., L.F.P. and S. Glas., to the Ponteland District and the Workhouse.

Crickhowell Union.—James E. Peirce, M.R.C.S.E., L.S.A., to the Hill District.

Dudley Union.—James Brown, M.R.C.S.E., L.S.A., to the Tipton Western District.

Lewes Union.—John George Braden, M.R.C.S.E., L.S.A., to the Upper District.

LORD NAPIER OF MAGDALA made an unofficial inspection of the Royal Victoria Hospital, Netley, last week.

DR. GRIFFITH, of St. Anne's, Blarney, Co. Cork, has been fined 10s. and costs for refusing to allow his child to be vaccinated.

THE LONDON HOSPITAL.—Two new ophthalmic wards, and a new additional venereal ward, were opened at this Hospital on Wednesday last.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting on the 2nd inst., W. Pole, Esq., F.R.S., in the chair, Musgrave Brisco, Esq., was elected a member of the Royal Institution.

MANCHESTER ROYAL SCHOOL OF MEDICINE.—The number of students at this, the oldest, provincial school is unusually large. Thirty-one new men have entered this winter session.

DR. RICHARDSON'S next lecture will be delivered on Tuesday next. The subject will be the "Separation of Fibrine from the Blood during Life."

"HOSPITAL SUNDAY," BIRMINGHAM.—On Sunday week last the noble sum of nearly £4000 was collected in the various places of worship for the benefit of the General Hospital.

GENERAL HOSPITAL, BIRMINGHAM.—Election of Surgeon in the room of Mr. Crompton.—Mr. Bracey has retired from the contest. Mr. Goodall will, therefore, be duly appointed.

THE OBSTETRICAL SOCIETY.—The time is now approaching for the election of a President for this Society. Various names are mentioned as likely to be raised to this distinguished position—among others, Dr. Braxton Hicks, of Guy's, Dr. Graily Hewitt, of University College, Dr. Gream, and Mr. Seymour Haden.

MIDDLESEX HOSPITAL MEDICAL SOCIETY.—The opening meeting of this Society was held on Thursday, October 29; the President, Dr. John Murray, in the chair. After a short address by the President, Mr. Henry Arnott read an able paper on the value of instruments in the diagnosis of disease.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Mr. Dixon, who has been connected with this Hospital many years, has resigned his appointment. At the meeting of the Board of Managers last Monday his resignation was accepted, and Mr. Streatfeild was elected for the vacant office. On account of the increased number of patients, for which the new wing will be opened in the ensuing spring, it was decided that two new appointments should be made, and that Mr. Hulke and Mr. Lawson should be elected Surgeons of the Institution.

THE BRITISH ASSOCIATION.—The accounts of the local committee for conducting the Norwich meeting of the British Association for the Advancement of Science have just been

made up, and show a balance of £332. This sum is to be applied as follows:—£50 for the purchase of elementary scientific books for the Norwich Free Public Library, the selection to be left to the Rev. Hinds Howell; £100 to be granted to three trustees for the purchase of meteorological instruments for Norwich; and the balance to be granted to the Norfolk and Norwich Museum unconditionally.

UNIVERSITY OF EDINBURGH.—On Tuesday, at a meeting of the Senatus Academicus, Professor Christison presiding, Sir Alexander Grant was formally installed into the office of Principal of the University. A meeting of students of the University was held on Tuesday evening for the purpose of nominating candidates for the Lord Rectorship, Mr. Thomas Carlyle's term of office having expired. The gentlemen nominated were:—Lord Stanley, M.P., Mr. Robert Lowe, M.P., Mr. James Moncreiff, M.P., Mr. Alfred Tennyson, Poet Laureate, Sir William Ferguson, Mr. Ruskin, Dr. George Macdonald, and the Rev. Dr. Cairns, Berwick. Dr. Macdonald's nomination was not seconded. The chairman decided that the show of hands was in favour of Mr. Tennyson. A poll was demanded on behalf of Lord Stanley and Dr. Cairns.

PROVINCIAL MEDICAL SCHOOLS.—In the return published in the *Medical Times and Gazette* of the 24th ult. of the number of students pursuing their Professional studies in our eleven metropolitan Hospitals during the present session, a considerable increase over the number of the preceding year was observed. The additions since allowed by the President have augmented the total, inclusive also of those studying for the dental profession, to 1194. In the return just compiled for Dr. Cursham, the Government Inspector of Provincial Anatomical Schools, there also appears a considerable increase over the number of last year, as will be seen from the undermentioned—viz., that there are at the

Birmingham Royal School of Medicine	72	pupils
Manchester Royal School of Medicine and Surgery	63	,,
Leeds School of Medicine	32	,,
Liverpool Infirmary School of Medicine	30	,,
Newcastle-upon-Tyne College of Medicine	27	,,
Bristol Old Park Medical School	20	,,
Cambridge University School	17	,,
Sheffield Medical Institution	13	,,
Hull and East Riding School of Medicine	10	,,
Making a total of	284	,,

against 257 last year. In the above list the Cambridge University School now for the first time makes its appearance. There are, of course, a great number of students attending only the *Medical* and *Surgical* practice of other provincial Hospitals to which no schools are at present attached, although recognised for this particular subject. The following comparative table will no doubt be read with considerable interest not only by the metropolitan and provincial teachers, but by the Profession generally. It has been compiled with great care, and may be relied on as a fairly correct statement. Commencing, then, with 1860, the *annus mirabilis* at both metropolitan and provincial schools, it appears that the total number of gentlemen pursuing their professional studies in eleven metropolitan and nine provincial schools was as follows:

	Metropolitan Schools.	Provincial Schools.	Total.
1860	1228	333	1561
1861	1116	258	1374
1862	1045	248	1293
1863(a)	1020	214	1234
1864	995	247	1242
1865	1013	249	1262
1866	1027	258	1285
1867	1125	257	1382
1868	1194	284	1478

It will therefore be seen that at our eleven metropolitan Hospitals there is an increase of 69 students over the number of last year. At the provincial schools the addition to the classes is also remarkable, as the gross number now pursuing their studies amounts to 284, being an excess of 27 over those of last session.

EXCISION OF THE MEDIAN NERVE.—Some similar cases having been recently published in Europe, Dr. Nott republishes a case which first appeared in 1866 in his pamphlet having the repulsive title—"Bone and Nerve Surgery." When the patient, aged 50, came to consult Dr. Nott, a tumour had been growing on the front of the forearm for fifteen years, never having, however, interfered with the functions of the extremity or caused any pain until two or three months previously. It had reached the size of a cocoanut, and was extirpated. During its removal it was found that the upper part of the trunk of the median nerve entered it, and immediately expanded its fibres over the whole anterior surface of the sac. At the lower end of the tumour the fibres were again collected into a trunk. The nerve was divided above and below the tumour, and, although at least five inches were thus removed, its functions were not in the least interfered with, the neuralgic pains also, which had occurred during two or three months prior to the operation, disappearing. Seen frequently during twelve months afterwards, the patient stated that the functions of all the fingers remained perfect.—*New York Journal*, August.

(a) In this year the Grosvenor-place School of Medicine was finally closed.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The continuation of Dr. B. Ball's interesting paper on Diseases of the Joints connected with Locomotor Ataxy is unavoidably postponed till next week.

S. M. A.—Consult Mr. Quain, the President of the Royal College of Surgeons.

Dr. Poggio.—Your money order has arrived safely.

Advertisements of Pancreatic Emulsion.—In our last number we noticed some advertisements of this substance in a Hastings paper, in which the name of a Physician was brought into very great prominence. We learn from private sources that the advertisements were inserted without the knowledge or concurrence of Messrs. Savory and Moore, of New Bond-street, the eminent chemists and manufacturers of the pancreatic emulsion.

L.A.—We cannot insert that criticism, because it is not, in our opinion, justified by the passages impugned. We have applied to the author of the address in question, who tells us that any disrespect to the Americans, whether general or Medical, was the last thing in his thoughts in penning the passage in question. He further sends us the following passage, quoted from "The Surgeon's Vade Mecum," by R. Druitt, eighth edition, published 1859:—

"VESICO-VAGINAL FISTULA.

"With the improvement of midwifery, and with less cowardice and delay in resorting to the forceps, this accident ought to disappear. Midwifery lecturers are to blame for the absurd overcaution which they inculcate with regard to the forceps. It is, by the bye, curious to remark that, out of nineteen cases related in 'Remarks on the Urethro-vaginal and Vesico-vaginal Fistules, by N. Bozeman, M.D., of Montgomery, Ala, 1857,' fourteen occurred in coloured girls or negresses."

Let us say, in conclusion, that if "L. A." will favour us with any remarks on the neglect of parturient women by guardians or any one else in England, we shall be glad to insert them, and shall not think them an insult to Englishmen.

St. George's.—The primary examination commences this day, Saturday. There will be examinations on the 14th, 21st, and 28th inst.

Dr. Le F.—On application, by your enclosing the recommendation from the Fellow mentioned, you will receive a ticket of admission to the library for six months.

A Constant Reader is referred to the Students' Number of the *Medical Times and Gazette* for the desired information.

Dr. Colchester.—You will find a short notice of the trial of Bransby Cooper *versus* Wakley in the "Laws relating to the Medical Profession," by Willcock, where you will also find references in full to different reports of the same trial.

Thirty Years of Age.—Your apprenticeship to a chemist and druggist will not be recognised by the College of Surgeons. In the case you mention there must have been some imposition on the authorities, for which the culprit could, and no doubt would, be severely punished if discovered.

Associate King's College.—An application to Professor Partridge will no doubt obtain you admission to his course of lectures before the Royal Academicians; they are given every Monday evening at 8 o'clock, commencing on the 9th inst.

A Candidate.—You are in error in supposing that the Diploma of the College of Surgeons will henceforth give you the double qualification in consequence of undergoing an examination in Medicine to obtain it; the public will perhaps appreciate its increased value. The L.R.C.P. or the L.S.A. will exempt you from the additional examination.

Conservator.—The attempt to obtain the very interesting specimen at present lost to science would be an infringement of the Anatomy Act: it was decided by Blackstone that, "though the heir has a property in the monuments and escutcheons of his ancestors, yet he has none in their bodies or ashes; nor can he bring any civil action against such as, indecently at least, if not impiously, violate and disturb their remains when buried."

Look at Home.—In a report of the St. Giles-in-the-Fields National School Building Fund, we find the handsome donation of one hundred pounds from the Council of the Royal College of Surgeons of England, and on making inquiry we fail to discover that even one guinea has been subscribed to those excellent institutions the Medical College, the Medical Benevolent Fund, or the Society for the Relief of the Widows and Orphans of Medical Men.

Dr. Williams, the Oculist.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Some time in the beginning of the century, a Mr. Williams—whether an M.R.C.S. or not I cannot ascertain—resided in Red Lion-square. He had some particular receipt for an eye-water, and his practice consisted mainly in treating ophthalmic diseases. His renown at last became so great that, on Louis XVIII. being attacked with some disorder of the eyes, Dr. Williams was summoned to Paris, and, as it is reported, on effecting a cure, was rewarded with the Legion of Honour. Is anything more known of this person? He is said to have come from Cornwall.

I am, &c. G. C. B.

Latent Insanity.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I send you an illustration of legal notions of insanity and the boundless self-confidence of some officials. A lad from my neighbourhood was lately convicted of stealing a trifling sum, and sentenced justly, had he been sane, to sixty days with hard labour. The father of the lad is a highly respectable man, a gamekeeper, and knew nothing of the affair till it happened (it was in a neighbouring county), and in his despair asked the parson of the parish if he could help him. The parson is not a man of brains; he kindly enough wrote to the Procurator-Fiscal that the lad was insane. His opinion, of course, and rightly, was worth nothing; but here is the Procurator-Fiscal's reply to him, equally valuable:—"The lad presented no sign, no trace of insanity; had he done so, it would have been my duty to," etc., etc.—all true enough, and no one can question that he would. But, I ask, how on earth can a country writer, or my lord on the Bench even, diagnose physical disease, and what are the forerunners of insanity? In this case they are clear and undoubted. Had I known of the lad's trial, I should have spoken to my knowledge of physical facts only in my possession, and only told to me as a Professional inquirer. I notice a Scotch Law Amendment Society, and such names as Christison's are peculiarly conspicuous by their absence from its organisation.

I am, &c. A. L. Mackaye, L.R.C.S.E.

The late Mr. Jump.

The following subscriptions have already been promised for the family of the late Mr. Jump:

	£	s.	d.
Rev. G. W. Winter, Litchsm	5	0	0
M. Johnstone, Esq., Renton, Cromer	5	0	0
F. Manby, Esq., Rudham	2	0	0
T. M. Kendall, Esq, Lynn	1	1	0
Litcham Lodge of Odd Fellows	10	0	0
Rev. K. Digby, Tittleshall	2	0	0
Rev. C. B. Barnewell, Mileham	2	0	0
Rev. A. Langton, Fransham	1	0	0
Miss E. E. Winter, Hastings	5	0	0
Miss Eliza Winter, Kingston	2	0	0
Sudlow Roots, Esq, Kingston	2	0	0
D. Lynes, Esq., Litcham	5	0	0
Miss Lynes, Litcham	1	0	0
Dr. Lowe, Lynn	3	3	0
Rev. R. Blakelock, Norwich	1	1	0

Spear *v.* Doidge.

It has been suggested that a subscription should be made for the purpose of helping to defray the heavy expenses (about £500) incurred by Mr. J. G. Doidge, of Lifton, in the defence of this action, in July last, for alleged maltreatment in a most difficult Surgical case. A verdict was given against the defendant, but the general opinion of the Profession is that Mr. Doidge has been unfairly treated, and that there was no evidence to show that the most skilful Surgical treatment would have resulted differently.

A local committee has been formed for carrying out the suggestion, and as the case is one that might happen to any member of the Profession, it is hoped that a generous response will be given to the appeal now made.

The Profession are hereby reminded of the nature of the accident which befell the plaintiff; his right arm got entangled in a threshing machine worked by three horses, the result being a comminuted fracture of the ulna a little below the elbow, a dislocation of the radius forwards, with probable fracture of that bone, severe contusion of the soft parts above and below the elbow, and a punctured wound in front of the elbow, involving the median vein; the amount of inflammation and swelling which soon arose endangered the patient's life, and being of an excessively irritable habit, he insisted on the removal of all splints and bandages, by which the limb had been kept in position.

The plaintiff eventually recovered with a straight arm, and the radius dislocated, a condition for which the jury considered the defendant responsible.

The great difficulty experienced by all Surgeons in the management of severe injuries of the elbow joint, especially when of a comminuted character and attended by considerable swelling, increased as in this case by the irritable habit of the patient, makes the position of Mr. Doidge one calling the more strongly on the sympathy and support of the Profession. If in every case of extreme difficulty, after a Surgeon has done his best (and probably the best that skill and attention could do under the circumstances), he is to be subjected to an action, and, like Mr. Doidge, to such heavy expenses, then the position of the Profession in relation to Surgical patients becomes one requiring the careful consideration of every country Practitioner.

Appended are some of the opinions of the Medical press on the subject.

"Of Mr. Doidge personally we know nothing—we were not aware of his very existence till we read this trial in the *Western Morning News*. But we do not think he has met with fair treatment."—*Medical Times and Gazette.*

"After completely reading through the evidence in various reports of the case—in one at great length—and submitting it to highly skilled criticism, we are lost in astonishment at a verdict which seems to us contrary to the facts and in opposition to every principle of equity. On the face of the facts as reported, we cannot but warmly sympathise with Mr. Doidge, who seems to suffer under a singular hardship."—*British Medical Journal.*

The Committee hope to be allowed to add your name to the list of subscribers.

Subscriptions may be paid at the Offices of the *Medical Times and Gazette* and *British Medical Journal;* to Edward Pethybridge, Esq., Treasurer, Launceston Bank; or to

Mr. G. M. Gifford,
Oct. 22. Bellevue, Launceston, Honorary Secretary.

Committee: J. Kempthorne, Esq., Callington; J. H. Willis, Esq., Lewdown; D. Thompson, Esq., Launceston.

Treasurer: E. Pethybridge, Esq., Launceston Bank.

Honorary Secretary: Mr. G. M. Gifford, Bellevue, Launceston.

To either of whom, or to the publishers of the *Medical Times and Gazette*, 11, New Burlington-street, and the *British Medical Journal*, 37, Great Queen-street, subscriptions may be paid.

Subscription List.

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W. Babbage, Esq., London	5	0	0
R. Willis, Esq., Horrabridge	5	5	0
J. H. Willis, Esq., Lewdown	5	5	0
E. Pethybridge, Esq., Launceston	5	5	0
Messrs. Thompson and Wilson, Launceston	5	5	0
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Dr. Dalby, H M.S. *Implacable*, Devonport	1	1	0

The Pharmacy Act.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Am I to understand by your article on the new Pharmacy Act that any one practising as a general Practitioner is disqualified from dispensing or compounding the drugs specified in the poisons list unless he be an "apothecary?" How will it affect such as myself, who have always avoided taking the L.S.A. diploma, and who have private surgeries (not open shops) for dispensing, and who either charge for "medicine and attendance," or, as in my own case, for "attendance with medicine?" How are we fixed as regards supplying club patients or union appointments with such drugs? Can we not, under the new Act, and without being "apothecaries," make up a mixture of ergot at a miscarriage or confinement—perhaps in the night, and miles away from a registered chemist—or give some pil. opii which we may have in our pockets, or prescribe a chloroform mixture or liniment for urgent pain under similar circumstances, and charge for them, without becoming liable under the Act? Can we keep a supply of such poisons and administer them when and where we like, provided we charge for the attendance, and not for the drugs?

I am, &c.
Nov. 2. A Club and Union Surgeon, M.B., L.R.C.P., M.R.C.S.

*** We advise our correspondent to go on as usual until he is interfered with.

Uniform, etc., of Military Medical Officers.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the spirit which has always characterised your journal, an effort has again been made in this week's impression to draw attention to the uniform of Medical officers in the army. There is one thing I should like to point out, and that is, that so long as the Medical officers belong to different branches of the army, the uniform or parts of uniform which might be suitable for one corps or regiment would very likely be unsuitable for another. Suppose, for instance, that a belt is invented very suitable for the blue jacket of the Royal Horse Artillery, that selfsame belt may be quite out of keeping with the red infantry tunic. At present, what makes a Medical officer's uniform so grotesquely ugly, in many cases, is the fact that his hideous belt is rendered still more hideous by being completely out of all harmony with the rest of his uniform. See a combatant officer of the Royal Horse Artillery or of an hussar regiment come on parade or enter a ball-room with his gold belt over the gold lace of his jacket or tunic, and then see a Medical officer in similar circumstances, with the selfsame belt that he would put on over the scarlet tunic of Infantry, and say, if you can, that anything uglier was ever invented. Imagine a piece of carriage harness, mounted with brass, strapped over a coat loaded with gold lace, and you have the picture. I cannot see why Medical officers, if they must be got up in soldiers' kit, should not be dressed exactly like the other officers of any regiment to which they may happen to belong, wearing, if necessary, in time of war the badge agreed on at Geneva. Adjutants and riding masters wear the uniform of the corps to which they belong. Why should Medical officers have half the uniform—a combination of staff and regimental? In time of war, the unfortunate wearer of a cocked hat would probably be taken for a general, and become a mark for the enemy's sharpshooters. In conclusion I can only say that, although a change of uniform would be popular in the Medical Department, no real content will ever exist until the question of promotion is settled, either by doing away with the rank of Assistant-Surgeon altogether, or by greatly accelerating promotion. An Assistant-Surgeon enters the army knowing his Profession, and is more under his Surgeon, and for a longer period, than a combatant officer who enters as an ensign, and has his profession to learn, is under his captain. There are a quantity of men at present who have completed their twenty-five years' service, who will not go abroad, who have no chance of promotion, who can get no more pension by remaining on, and yet stick to the army at home for years, and cause discontent to all beneath them. If all Medical officers who were not promoted to the rank of deputy-inspector by the time they had completed twenty-five years' service were obliged to retire,

one of the grievances of the department would be considerably mitigated. At present Assistant-Surgeons go about the country and give the army such a name that no one will enter it who can possibly do anything else.

October 31. I am, &c. REFORM.

The New Pharmacy Act.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I trust you will excuse my intruding on your valuable space in stating what must constitute a serious grievance to many who have commenced their career as chemists' assistants, having subsequently been engaged as dispensers to public institutions.

It appears under the New Pharmacy Act that provision has not been made for their case, since it requires that every one purposing to follow the business of a chemist, not engaged as chemists' assistants during the last three years, shall not be eligible for the modified examination to which those who have been thus engaged are admitted.

I would instance my own case as forcibly illustrating the said grievance. I was apprenticed some sixteen years ago to a chemist, with whom I resided four years. From the time that I had completed the term of my apprenticeship, I have constantly been occupied as a chemist's assistant up to the last four years. Since that I have been Dispenser to the Stockport Infirmary. However, on stating my case to the Registrar, requesting to be admitted to the modified examination, I was informed that, because I was not engaged immediately before the passing of the Pharmacy Act as a chemist's assistant, I should have to pass the full examination required of those not in connexion with the business previous to the passing of the Act. Now, Sir, I cannot but think it a very hard case that, after being actually engaged in dispensing Physicians' prescriptions for the last sixteen years, I should be required, at the age of 32, to go through a second school curriculum to enable me to pass a classical examination before being allowed to commence the business of a chemist. I trust that this letter may induce others labouring under a similar hardship to come forward and state their case, in order to bring about a revision of a very unjust clause in the Pharmacy Act. I am, &c.

Infirmary, Stockport, November 2. WILLIAM W. LEES.

COMMUNICATIONS have been received from—

Dr. A. L. MACKAYE; Mr. D. STONE; Mr. J. F. COLLINGWOOD; J. M. A.; Dr. FRANKLAND; G. C. B.; Mr. H. F. NATHAN; Dr. T. P. HESLOP; Dr. LAYCOCK; Mr. W. W. LEES; Dr. J. B. BOND; A CLUB AND UNION SURGEON; Dr. R. G. BROWN; Mr. THOMAS VOSPER; Mr. G. M. GIFFORD; Mr. A. T. THOMSON; Dr. JOHN LOWE; Dr. JAMES TAYLOR; Dr. KENDRICK; Mr. JOHN P. COLDSTREAM; Dr. J. HUGHLINGS-JACKSON; Mr. J. HUTCHINSON; Mr. J. CHATTO; Dr. WILKS; Dr. LIONEL S. BEALE; Dr. KIDD; Mr. JAMES ROBERTSON; Dr. EDWARD WATERS; Mr. C. ROITER; Mr VACY ASH; Dr. JOSEPH ROGERS; A PRACTITIONER; Mr. A. W. WALLIS; Dr. LETHEBY; Mr. A. POLAND.

BOOKS RECEIVED—

Child's Essays on Physiological Subjects—Rigby's Obstetric Memoranda, 4th edition—Report of the Health of the Navy for the year 1866—Fownes' Chemistry, 10th edition—Wood's Bible Animals, part ii.—Pharmaceutical Journal, No. 113—Wilson Fox on the Artificial Production of Tubercle—The Practitioner, No. 5—American Journal of the Medical Sciences, No. 112—Edinburgh Medical Journal, No. 161—Quarterly Journal of Psychological Medicine, October, 1868—Stable's Medical Life in the Navy—Garrett on Irritative Dyspepsia and Irritative Congestion of the Windpipe—Report of the Winchester County Hospital—Philipson's Health and Meteorology of Newcastle and Gateshead—Contributions à la Chirurgie, 2 vols., by Dr. Sédillot—Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, edited by Dr. Jaccoud—Guthrie's Elements of Heat and of Non-metallic Chemistry.

NEWSPAPERS RECEIVED—

Malvern Advertiser—Edinburgh Evening Courant—Scotsman—Liverpool Daily Post—Aberdeen Journal—Banner of Ulster—Medical Press and Circular—Scientific Opinion.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 31, 1868.

BIRTHS.

Births of Boys, 1180; Girls, 1162; Total, 2342.
Average of 10 corresponding weeks, 1858-67, 1955·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	777	744	1521
Average of the ten years 1858-67	639·1	606·6	1245·7
Average corrected to increased population..	..	..	1370
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	6	26	3	2	5	2	..
North ..	618,210	1	13	27	2	7	16	7	..
Central	378,058	..	3	19	2	2	7	..	..
East ..	571,158	1	3	19	2	9	13	5	..
South ..	773,175	3	6	18	2	14	9	6	2
Total ..	2,803,989	6	31	109	11	34	50	20	2

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·920 in.
Mean temperature	46·8
Highest point of thermometer	59·3
Lowest point of thermometer	34·8
Mean dew-point temperature	43·1
General direction of wind	W.S.W.
Whole amount of rain in the week	1·06

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 31, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Oct. 31.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Oct. 31.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2342	1441	1521	59·3	34·8	46·8	1·06	107
Bristol (City) .	167487	35·7	121	75	*65	..	..	..	..	..
Birmingham (Boro')	352296	45·0	221	171	138	57·0	39·9	46·6	0·55	56
Liverpool (Borough)	500676	98·0	384	290	283	59·1	42·8	48·4	0·70	71
Manchester (City) .	356835	81·8	212	208	*214	58·0	36·0	45·4	1·41	142
Salford (Borough) .	117162	22·7	81	59	60	58·0	35·6	45·9	1·33	134
Sheffield (Borough).	232362	10·2	167	122	92	58·0	30·0	46·4	1·16	117
Bradford (Borough)	103019	16·4	61	55	64	..	..	..	..	..
Leeds (Borough) .	236746	11·0	246	120	130	59·0	38·0	46·3	0·60	61
Hull (Borough) .	108269	30·4	81	50	60	57·0	32·0	44·1	0·47	47
Newtl-on-Tyne, do.	127701	23·9	114	68	64	57·0	33·0	42·8	0·33	33
Edinburgh (City) .	177039	40·0	144	85	84	57·7	36·0	44·6	0·50	51
Glasgow (City) .	449868	88·9	381	262	297	56·4	35·9	48·8	1·31	132
Dublin (City and some suburbs) .	319933	32·8	177	157	148	62·9	34·8	47·3	0·20	20
Total of 14 large Towns . . .	6391080	34·7	4732	3163	3220	62·9	32·0	46·2	0·80	81
					Week ending Oct. 24.	Week ending Oct. 24.				
Vienna (City) . .	(1863) 560000	..	..	..	268	..	..	59·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·920 in. The barometrical reading increased from 29·42 in. at the beginning of the week to 30·24 in. on Wednesday, Oct. 28. The general direction of the wind was W.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

November 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

9. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Mr. Adams, "A New Operation for the Removal of Contractions produced by the Cicatrices of Burns."

10. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ETHNOLOGICAL SOCIETY OF LONDON, 8 p.m. Dr. Blanc, "On the Abyssinians." Mr. R. A. Cole, "On the Discovery of Cromlechs in India." Lieutenant Steel, "On the Khasia Tribes."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Meeting.

11. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

HUNTERIAN SOCIETY, 8 p.m. Dr. Peacock, "On some Forms of Disease prevalent during the late Hot Weather."

12. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

13. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

CLINICAL SOCIETY, 8½ p.m. Dr. Bristowe, "Treatment of Ascites by Tonics." Mr. C. Heath, "Case of Subclavian Aneurism, under Treatment." Mr. Maunder, "On Tying the Femoral Artery for Inflammation of the Knee-joint" (Case by Mr. Little).

ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XVIII.—Part III.

CRANIOTOMY CONTINUED: DELIVERY BY THE CEPHALOTRIBE—POWERS OF THE CEPHALOTRIBE — COMPARISON WITH CRANIOTOMY FORCEPS—THE OPERATION—DR. D. DAVIS'S OSTEOTOMIST—VAN HUEVEL'S FORCEPS-SAW—INJURIES THAT MAY RESULT FROM CRANIOTOMY.

By *cephalotripsy*.—What are the relative powers of cephalotripsy and of craniotomy as just described? I doubt much whether cephalotripsy can carry the possibility of safe delivery at all beyond the point attained by craniotomy. It nevertheless possesses considerable independent advantages under many circumstances, and may lend much help to other proceedings.

The Powers of the Cephalotribe.—The all-essential point is that it shall be able to compress and even crush down the base of the skull. A secondary property which it is desirable to possess is that of holding during extraction. The crushing power can be attained in sufficient perfection, and with a gain in the facility of handling, if the instrument be made much less formidable in bulk than are most of the Continental cephalotribes. Three good modifications have been constructed here. Sir James Simpson's is the best known. He insists upon a pelvic curve in the blades as being less likely to slip than straight blades. Dr. Kidd's, of Dublin,(a) is the best type of a straight-bladed cephalotribe. Dr. Kidd insists strongly upon the advantages of long straight blades on the following three grounds:—First, straight blades admit better of the head being rotated whilst in the grasp; secondly, they are easier to introduce; and lastly, they hold more securely. Dr. Braxton Hicks has modified Sir James Simpson's cephalotribe, producing a very handy and efficient instrument. He preserves a moderate pelvic curve, and adapts a very convenient screw to the handles as a crushing power. I believe that to seize a head above the brim, as is necessarily the case where crushing is required, the blades should be curved; but this curve should be moderate, otherwise the inconvenience in rotating or shifting the relation of the instrument to the pelvis referred to by Dr. Kidd will be felt.

When the instrument is applied to the perforated head, it may be made to completely crush the base, flattening the head sideways, or doubling up the base; or, by the slipping of one of the blades inwards a little, the base is tilted edgewise, and the skull is flattened by the pressing inwards on to the base of the squamous and parietal bones. Under either of these proceedings the head can be so flattened as to allow the blades to meet, and, as the instrument then measures only 1·50″, the obstacle is reduced to that degree. It is generally desirable to repeat the crushing, which is done by taking a fresh hold in a different direction, and then compressing again. Two crushings will generally be enough.

A distinctive advantage of the cephalotribe was pointed out by Curchod (Berlin, 1842). It is that the plasticity effected by crushing so modified the form of the head that it was easily moulded to the form of the pelvic brim.

1. What are the limits of application of the cephalotribe? The maximum, of course, is not difficult to determine. It may be usefully employed in almost any case of minor disproportion. But what is the least amount of space admitting of its use? This must depend somewhat upon the form and size of the particular model adopted. In a discussion held at Berlin the majority of the speakers thought a minimum of 54 mm. = 2·0″ conjugate diameter, was necessary. Lauth (b) says the application begins at 8 mm., or about 3 inches, at which point the forceps and turning are not available, and ends at 5·0 mm., or a little under 2·0″. But Pajot goes beyond this, and contends that it ought to be applied where there is only 1·25″ conjugate diameter. Credé thinks it should be used if only there is room enough to apply it. In this I am disposed to coincide.

Other conditions are—

2. The os uteri must be sufficiently dilated, but this can be readily effected by the caoutchouc water-bags.

3. The head must be previously perforated. Abroad sometimes the ordinary forceps is put on to hold the head during perforation; but this is sometimes not feasible for want of room, and is never necessary, since, by means of external pressure and a good perforator, this operation is not difficult.

Position.—The patient may lie on her left side, as in other obstetric operations.

Operation.—The rules laid down for the long forceps will generally apply to the application of the blades, and it is equally unnecessary in either case to have an assistant or a "third hand." The lower or posterior blade is passed first, guided by the left hand passed well into the pelvis if possible. This blade is passed along the hollow of the sacrum until the point approaches the brim and touches the head-globe, when the handle is raised, and the point, turning into the left ilium or to the left sacro-iliac synchondrosis, travels over the head. It is passed high up, for the point of the instrument must get beyond the base of the skull. This being *in situ*, the second or anterior blade is introduced also at first in the hollow of the sacrum crossing the handle of the first blade. When the point approaches the brim, the handle is lowered and carried backwards, and the point rises over the head-globe into the right ilium, or opposite the right cotyloid cavity, when it falls into opposition with the first blade. Being locked, the screw is turned slowly and steadily, the hand in the vagina taking note of the work done. If spicula crop out of the scalp, they should be picked away by the fingers. When the base is crushed in the direction first seized, you may, if the instrument hold, use it as a tractor. If there be any marked resistance, it is better to take off the blades, to reapply them in the opposite oblique diameter and repeat the crushing; then, by rotating the head by turning the handles, you may find that the head is better adapted to the brim, and will come through. But you must be prepared to find the cephalotribe fail as a tractor. It is made to crush, and if it has done this well, it has done good service. I have, however, found Dr. Hicks's instrument hold perfectly. Extraction may be completed by the crotchet- or by the craniotomy-forceps, or by

Fig. 85.



Fig. 85.—Dr. Hicks's cephalotribe seizing the perforated head.

turning. The late Professor Davis did not use the cephalotribe, but in extreme cases he cut away the head piecemeal by his osteotomists, and seized and extracted the trunk by a double sharp body-crotchet.

Pajot, of Paris,(c) has practised a method analogous to that formerly employed in this country in craniotomy. He performs what he describes as "céphalotripsie répétée sans tractions"—that is, he first crushes the base by one operation; he then gently tries to effect a slight rotation of the

(a) See *British Medical Journal*, October, 1867.
(b) "De la Céphalotripsie." Par J. F. Ed. Lauth. Strasbourg. 1863.
(c) *Archives Gén. de Méd.*, 1863.

instrument so as to bring the crushed sides of the head into relation with the contracted diameter. If there is any resistance, he desists, and leaves the case for two or three hours for the uterus to mould the crushed head to the brim. He then repeats the crushing, and again gives two or three hours to Nature. One or two crushings suffice for the trunk. (See also "Osservazioni di Cefalotrissia," by Dr. Chiara, Turin, 1867, for a good case in illustration.) Pajot places this method in distinct competition with the Cæsarian section. The cases related by Pajot lend weight to his recommendation; but I cannot help thinking that the operation may and ought to be finished at one sitting.

When the head is extracted, there may be some trouble with the shoulders and trunk. The shoulders will generally be disposed obliquely in the brim—that is, one will be anterior to the other. By keeping up traction on the head backwards, this anterior shoulder will be brought a little down, so that a finger or the blunt hook or crotchet can be fixed in the axilla to pull it through. When this is done, the head is dragged down forwards, so as to enable the same manœuvre to be repeated with the posterior arm. If this cannot be readily done, it is a good plan to crush in with the cephalotribe. Dr. Davis seized the trunk with his double body-crotchet. If turning had been practised after perforating or cephalotripsy, the arms fall in upon the crushed head and offer no obstruction.

To save the assistants the ghastly sight of the mangled head, wrap a napkin round it as soon as it is born. If traction is necessary in delivering the trunk, it is easier to hold when so treated.

By the *forceps-saw*. This instrument, introduced by Van Huevel in 1842, may be said to be the distinctive feature of the Belgian school. It is figured in the Obstetrical Society's Catalogue of Instruments, 1867. Dr. Hyernaux, who had been assistant to Dr. Van Huevel at the Maternité of Brussels, in his "Manuel Pratique de l'Art des Accouchements" (Bruxelles, 1857), rejects in its favour all crotchets and cephalotribes as comparatively dangerous and inefficient. It is therefore used in all cases where embryotomy is indicated. It consists of a powerful long forceps with the pelvic curve, the blades of which are grooved along the inner aspect in order to carry a chain-saw. When the head or other part of the child is seized by the forceps, this chain-saw is worked up from the point whence the blades spring, by means of cross handles attached to the two ends. Thus travelling up the grooves, the saw crosses the head and cuts through it. For extraction Van Huevel contrived a pair of forceps toothed on one blade to seize the most convenient part of the child. Notwithstanding the formidable and complex appearance of the forceps-saw, it seems to have steadily made its way into use. Professor Faye, of Christiania, a man of singular judgment and ability, says it is the only instrument fitted to cut through any part of the fœtus. He has simplified the instrument considerably, and extols it as safe, easy, and effectual. It is also used in Germany; and in Italy Dr. Billi has modified it and introduced it into practice. We cannot refuse to lend favourable consideration to an instrument so recommended. It is certainly a new power; and its claims to compete with or to displace other methods of facilitating delivery by embryotomy should be tested in practice. It appears to me, however, who have not yet used it, that it is more especially adapted for those minor degrees of pelvic contraction which can be dealt with satisfactorily by perforation and the craniotomy forceps; and that in extreme cases, where the conjugate diameter is 2″ or less, where the craniotomy-forceps is still available, and in which the cephalotribe can do good service, the forceps-saw could hardly answer, owing to the size of the blades and the necessity of getting them to lock accurately in order to work the chain. It is capable of being most useful in dividing the neck or other part of the body in cases of impaction of shoulder-presentation.

Certain dangers attend the operation of craniotomy. What are these? Certain injuries may be inflicted upon or result to the mother.

1. The perforator has been known to strike the promontory of the sacrum, or to lacerate the cervix uteri.

2. Spicula of cranial bones resulting from perforation may scratch or tear the soft parts.

3. The crotchet may slip, and lacerate the soft parts.

The above, of course, may be avoided with care.

4. But serious evil is likely to result from deferring the operation too long—*i.e.*, until after exhaustion has set in—and under a too protracted operation in an unsuitable case. Long-continued dragging of the head upon a brim which it cannot pass, jamming the soft parts more especially at the two points of greatest projection, the promontory and the symphysis, ends by stopping the circulation in the parts compressed, bruising them, actually grinding through them. In this way, after severe operations, it has been found that a large hole has been made through the posterior cervix uteri. Such injury, added to the shock and exhaustion of the system, may be fatal.

5. If the immediate injury above described do not occur, the long-continued pressure may cause mortification of a limited portion of the neck of the uterus. Thus, in the course of a few days, a slough is formed between the vagina and bladder, resulting in vesico-vaginal fistula. Dr. F. H. Ramsbotham said (*Medical Times and Gazette*, 1862) that, "in almost all the cases which he had seen of a fistulous opening into the neck of the bladder consequent on labour, the child had been putrid; and he attributed the slough more to contact with the putrid head than to simple pressure on the part." However this may be, I am very certain that simple pressure, especially if bearing upon a limited spot, is enough to cause the accident; and I have quite recently seen a case of recto-vaginal fistula ensuing on the birth of a living child delivered by the natural powers.

In the possibility of attendant danger, craniotomy differs essentially from the forceps. Whilst under craniotomy mischief or death may ensue, the forceps, if used rightly and in suitable cases, is an innocuous instrument. Statistics, professing to show that the mortality from the use of the forceps is at the rate of 1 in 20, are flagrant examples of the fallacy of arguing "post hoc, ergo propter hoc." Properly speaking, the mortality from the forceps is *nil*. Women die because the instrument is used too late.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

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LECTURE I.

OF VERY MINUTE LIVING PARTICLES—GENERAL STRUCTURE OF THE PARTICLES—PROCESS OF INVESTIGATION—THE CELL OR ELEMENTARY PART—GENERAL CHARACTERS OF GERMINAL OR LIVING MATTER—THE AMŒBA—THE MUCUS CORPUSCLE—OF THE GROWTH OF GERMINAL MATTER AND PRODUCTION OF FORMED MATERIAL—OF A SIMPLE FUNGUS.

(*Continued from page* 524.)

THE CELL OR ELEMENTARY PART.

THE living matter, with the formed matter upon its surface, whatever may be the structure, properties, and consistence of the latter, is *the anatomical elementary part or cell*. This forms the entire organism in some cases, and must then be regarded as a complete individual. Millions of such elementary parts or cells are combined to form every tissue and organ of man and the higher animals. However much organisms and tissues in their fully formed state may vary in character, in properties, and in composition, all were first in the condition of *clear, transparent, structureless, formless* living matter.

Every growing cell, and every cell capable of growth, contains germinal matter. The young cell seems to consist almost entirely of this living material—a fact well observed in the specimen of cuticle from the young frog, which may be contrasted with more advanced cuticle from the same animal mounted with it. In the mature cells only a small mass of germinal matter, usually termed the nucleus, remains. In the fully formed fat cell there is so little germinal matter left, that it may easily be overlooked. In disease, however, it may increase to three or four times its ordinary dimensions, when it becomes a very striking object. The ovum at an early period of its development is but a cell consisting of a mass of germinal matter, with a new centre and often with numerous new centres (known as germinal spots or nuclei) embedded in it, enclosed in a capsule of formed material. In the ovary

of the common stickleback, bodies exhibiting every stage in the transition from mere cells to fully formed ova may be seen very clearly.

All that is essential to the cell or elementary part is *matter that is in the living* state, germinal matter, and matter that *was* in the living state, formed material. With these is usually associated a certain proportion of matter about to become living, the pabulum or food. So that we may say that in every living thing we have matter in three different states—matter about to become living, matter actually living, and matter that has lived. The last, like the first, is non-living, but unlike this it has been in the living state, and has impressed upon it certain characters which it could not have acquired in any other way. By these characters we know that it lived, for we can no more cause matter artificially to exhibit the characters of the dried leaf, the lifeless wood, shell, bone, hair, or other tissue, than we can make living matter itself in our laboratories.

Cells forming a tissue have been compared to bricks in a wall, but the cells are not like bricks, having the same constitution in every part, nor are they made first and then embedded in the mortar. Each brick of the natural wall grows of itself, places itself in position, forms and embeds itself in the mortar of its own making. The whole wall grows in every part, and while growing may throw out bastions which grow and adapt themselves perfectly to the altering structure. Even now it is argued by some that because things, like fully formed cells, may be made artificially, the actual cells are formed in the same sort of way—an argument as forcible as that of a person who after a visit to Madame Tussaud's exhibition seriously maintained that our textures were constructed upon the same plan as the lifelike wax figures.(a)

Every one who really studies the elementary parts of tissues and investigates the changes which occur as the germinal matter passes through various stages of change until the fully developed structure results, will be careful not to accept without due consideration the vague generalisations of those who persist in authoritatively declaring the dogma that the changes occuring in cell growth are merely mechanical and chemical, although they are unable to produce by any means at their disposal a particle of fibrine, a piece of cartilage, or even a fragment of coral. They avoid the difficulty as regards the germinal matter by ignoring its existence, and attribute to a "molecular machinery" which the mind cannot conceive, and which cannot be rendered evident to the senses, all those wonderful phenomena which are really due to vital power.

We may now discuss what goes on during the nutrition of a cell when it is in a living state. I need not repeat that the active changes are exclusively confined to the germinal matter, and that the formed material is passive, though it may act like a filter, permitting some things to pass and interfering with the passage of others. Well, then, in nutrition, pabulum becomes germinal matter to compensate for the germinal matter which has been converted into formed material. Now let us consider the order of these changes, and endeavour to express them in the simplest possible manner. Let the germinal matter which *came from pre-existing germinal matter* be called *a*; the non-living pabulum, some of the elements of which are about to be converted into germinal matter, shall be *b*; and the non-living formed material resulting from changes in the germinal matter *c*. It is to be remarked that *b* does not contain *c* in solution, neither can *c* be made out of *b* unless *b* first passes through the condition *a*, and *a* cannot be formed artificially, but must come from pre-existing *a*. In all cases *b* is transformed by *a* into *a*, and *a* undergoes conversion into *c*. Can anything be more unlike chemical and physical change? Neither *a*, nor *b*, nor *c* can be made by the chemist; nor if you give him *b* can he make *a* or *c* out of it; nor can he tell you anything about the "molecular condition" or chemical composition of *a*, for the instant he commences his analysis *a* has ceased to be *a*, and he is merely dealing with products resulting from the death of *a*, not with the actual living *a* itself. No wonder, then, that chemists and physicists should ignore *a*.

[Professor Huxley delivered a lecture "On the Bases of Physical Life," on November 8, at Edinburgh. This is reported in the *Scotsman* of November 9. The movements of living "protoplasm," as seen in the basis of the nettle, the white blood-corpuscles, the corpuscles in the saliva and in the tissues, are referred to. Professor Huxley speaks of the chemical composition of "protoplasm" as if it were possible for the chemist to make an analysis of this substance. Obviously it is not the living "protoplasm," but the substances formed after its death, of which an analysis is made. Further on Huxley remarked that he was then wasting his stock of "protoplasm," but that he would make it up again by drawing upon the protoplasm of mutton. "When a man ate mutton, his internal organisation had the power of extracting that protoplasm and converting it into protoplasm endowed with the full powers and faculties of man."

To say nothing of the confusion here made between "protoplasm" and "tissue," it is to be remarked that living "protoplasm" manifests phenomena essentially different from those manifested by "protoplasm" after its death. But it is indeed remarkable that Huxley does not draw a distinction between the living protoplasm of his own body and roast mutton. Surely he will admit that there is some essential difference between his living protoplasm and that? How comes he to confuse together things so very different as his own active living protoplasm and the non-living passive substances he takes as food? Does not his protoplasm make more protoplasm out of the mutton he consumes? But can the latter make "protoplasm" or anything else? Mutton does not contain protoplasm, as Huxley affirms, but simply the materials resulting from its death. If mutton contained protoplasm, like that of a living moving blood corpuscle, it would grow and multiply, and make more mutton out of non-living matter.]

General Characters of Germinal Matter.

The characters of germinal matter may be studied in the lowest organisms in existence, and in plants as well as in man and the higher animals. We shall have many opportunities of studying it, but it may be well to repeat that germinal or living matter is always transparent, colourless, and, as far as can be ascertained by examination with the highest powers, perfectly structureless, and it exhibits these same characters at every period of existence. The germinal matter of the thallus of the growing sugar fungus exists in considerable quantity, and is well adapted for examination. The growing extremity of the branch is rounded, and here the process of growth is going on with great activity. When the operation of staining has been conducted successfully, these growing extremities are more deeply stained than the rest of the germinal matter. A similar fact is observed if the placental tuft of man be submitted to examination. At the extreme end of each tuft is a mass of germinal matter which is darkly stained by the carmine fluid. Behind this, and growing towards it, is the vascular loop; but as the tufts grow, the mass of formless, structureless germinal matter at the end of each moves onwards, the vessels being developed in its wake. This formless living matter moves forwards and burrows, as it were, into the nutrient pabulum, some of which it takes up as it moves on. It is not pushed from behind, but it moves forward of its own accord. In a similar manner the advancing fungus bores its way into the material upon which it feeds, and the root filament extends itself into the soil; while, in the hair, the germinal matter grows and multiplies at the base, pushing the firm and already formed tissue before it. In the first case the germinal matter is increasing at the extremity of a filament which it spins behind it as it moves on; in the last the tissue already formed is pushed on by the production of new texture in its rear. The extremity of the hair is its oldest part, and that nearest to the root the tissue which was most recently formed. But whether germinal matter moves on in its entirety, or, advancing from a fixed point, forms a filament, a tube, or other structure which accumulates behind it, or itself remains stationary while the products of formation are forced onwards in one direction, or outwards in all, the nature of the force exerted is the same, and due to the marvellous power which one part of a living mass possesses of moving in advance of another portion of the same, as may be actually seen to occur in the humble amœba, in the mucus, or in the white blood corpuscle from man's organism, as well as in the pus corpuscle formed in disease.

Amœba.—Among the simplest living things known to us

(a) On the last page of the last number of the *Proceedings of the Royal Society*, vol. xvii. No. 105, Professor Tyndall describes the changes resulting from the influence of light on the vapour of an aqueous solution of hydriodic acid. His poetical description, which extends over an entire page, contains the following curious allusions and comparisons:—A cloud was developed like an organism from a formless mass to a marvellously complex structure; spectral cones with filmy drapery; exquisite vases with the faintest clouds, like spectral sheets of liquid, falling over their edges; clouds like roses, tulips, sunflowers, and bottles one within the other; a cloud like a fish, with eyes, gills, and feelers, and like a jelly fish, with the internal economy of a highly complex organism, exhibiting the woness of the animal form as perfect as if it had been turned in a athe, and likely to prove exceedingly valuable to pattern designers!

are the amœbæ, which might be almost described as animate masses of perfectly transparent moving matter. Amœbæ can be obtained for examination by placing a small fragment of animal or vegetable matter in a little water in a wineglass, and leaving it in the light part of a warm room for a few days. I have found it convenient to introduce a few filaments of the best cotton wool into the water. The amœbæ collect amongst the fibres, which prevent them from being crushed by the pressure of the thin glass cover.

The delicate material of which these simple creatures are composed exhibits no indications of actual structure, although it is darker and more granular in some parts than in others. We need only now refer to the material which exhibits movement, and it is better to study young than fully formed amœbæ.

I have been able to watch the movements of small amœbæ, which multiplied freely without first reaching the size of the ordinary individuals. I have represented the appearance under a magnifying power of 5000 diameters of some of the most minute amœbæ I have been able to discover. Several of these were less than $\frac{1}{10000}$th of an inch in diameter, and yet were in a state of most active movement. The alteration in form was very rapid, and the different tints in the different parts of the moving mass, resulting from alterations in thickness, were most distinctly observed. The living bodies might, in fact, be described as consisting of minute portions of very transparent material, exhibiting the most active movements in every direction, in every part, and capable of absorbing nutrient materials from the surrounding medium. A portion which was at one moment at the lowest point of the mass would pass in an instant to the highest portion. In these movements one part seemed, as it were, to pass through other parts, while the whole mass moved now in one, now in another direction, and movements in different parts of the mass occurred in directions different from that in which the whole was moving.

The movements above described continue as long as the external conditions remain favourable; but, if these alter and the amœba be exposed to the influence of unfavourable circumstances—as altered pabulum, cold, etc.—the movements become very slow, and then completely stop. The organism becomes spherical, and the trace of soft formed material upon the surface increases until a firm protective covering, envelope, or cell-wall results. In this way the life of the germinal matter is preserved until the return of favourable conditions, when the living matter emerges from its prison, grows, and soon gives rise to a colony of new amœbæ, which exhibit the characteristic movements.

Mucus Corpuscle.—Every one knows that upon the surface of the mucous membrane of the air-passages, even in health, there is a small quantity of a soft viscid matter generally termed *mucus*. This mucus, said to be *secreted* by the mucous membrane, contains certain oval or spherical bodies or corpuscles, which are transparent and granular. From the changes of form which take place in them, it is certain that the matter of which they are composed is almost diffluent. These corpuscles or cells are *mucous corpuscles*, but they have no cell wall. They are embedded in and separated from each other by a more or less transparent, viscid, tenacious substance termed *mucus*.

No language could convey a correct idea of the changes which take place in the form of the living mucus corpuscle; every part of the surface of a corpuscle may be seen to change within a few seconds. The material which was in one part may move to another part. Not only does the position of the component particles alter with respect to one another, but it never remains the same. There is no *alternation* of movements. Were it possible to take hundreds of photographs at the briefest intervals, no two would be exactly alike, nor would they exhibit different gradations of the same change; nor is it possible to represent the movements with any degree of accuracy by drawings, because the outline is changing in many parts at the same moment. I have seen an entire corpuscle move onwards in one definite direction for a distance equal to its own length or more. Protrusions would occur principally at one end, and the general mass would gradually follow. Again, protrusions would take place in the same direction, and slowly the remainder of the corpuscle would be drawn onwards, until the whole had been removed from the place it originally occupied, and advance onward for a short distance in the mucus in which it was embedded. From the first protrusions smaller protrusions very often occur, and these gradually become spherical, but remain attached by a narrow stem, and in a few seconds perhaps again become absorbed into the general mass. From time to time, however, some of the small spherical portions are detached from the parent mass, and become independent masses of germinal matter, which grow until they become ordinary mucus corpuscles.

And now to account for these movements. The component particles evidently alter their positions in a most remarkable manner. One particle may move in advance of another, or round another. A portion may move into or round another portion. A bulging may occur at one point of the circumference, or at ten or twenty different points at the same moment. The moving power evidently resides in every particle of a very transparent, invariably colourless, and structureless material. By the very highest powers only an indication of minute spherical particles can be discerned. Because molecules have been seen in some of the masses of moving matter, the motion has been attributed to these. It is true the molecules do move, but the living transparent material in which they are placed *moves first*, and these flow into the extended portion. The movements cannot, therefore, be ordinary *molecular movements*. It has been said that the movements may result from diffusion, but what diffusion or other movement with which we are acquainted at all resembles these? Observers have ascribed them to a difference in density of different parts, but who has been able to produce such movements by preparing fluids of different density? But, further, these supposed fluids of different density make themselves and retain their differences in density.

Nor is it any explanation of the movements to attribute them to inherent "irritability," unless we can show in what irritability essentially consists. It is usual to dismiss the matter by saying that the movements depend upon the property of "contractility," but the movements of germinal matter are totally distinct from contractility, as manifested by muscular tissue, since they take place in every direction, and every movement differs from the rest, while in muscular contraction there is a constant repetition of changes taking place alternately in directions at right angles to one another; and hence, if the movements in question be due to contractility, it is necessary to assume two very different kinds of contractile property.

The movements in the mucus corpuscle just described closely accord with those taking place in the *amœba*, and are of the same nature as those which occur in the germinal matter of many plants, easily observed in the cells of the leaves in the vallisneria or the anacharis, in the chara and in the hairs of the flower of Tradescantia; and the appearance of the living matter under very high powers is precisely the same in all cases. Similar movements certainly occur in pus, and probably in cancer, and in every kind of living matter in health and in disease. In some instances the movements continue for some time after the living matter has been removed from the surface upon which it grew. In other cases, and we shall not be surprised that this should be so in the higher animals, death occurs the instant the conditions under which the living matter exists are but slightly modified.

I have often tried to persuade the physicist, who has so long prophesied the existence of "molecular machinery" in living beings, to seek for it in the germinal matter. With the vast means of observation and of demonstration at his disposal, it would be strange if he did not soon succeed in proving that the machinery he has announced so positively does indeed exist. With the aid of the lantern he ought to be able to throw the image of the mechanical apparatus on the screen, and show it to us in active movement.

(To be continued.)

PRESERVATION OF DRUGS FROM DAMP.—In pharmacies where any dampness prevails and there is danger of the drugs becoming mouldy or spoiling, M. Stanislas Martin recommends the following simple and effectual procedure:—Small wooden or tin boxes full of quick lime, and having their lid perforated with holes, are to be placed in every box or drawer containing drugs liable to be injured by damp. The air of these receptacles soon becomes dried, and when the oxide of calcium has become hydrated it must be replaced by new quick lime. In the same way a great number of deliquescent salts may be preserved—as, for example, the chloride of gold, which is now so much used in the arts. The phial containing the salt is to be placed inside another of double its capacity, filling the space with lime and corking hermetically.—*Bull. de Thérapeutique*, October 15.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.(a)

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON SEPARATION OF FIBRINE FROM THE BLOOD WITHIN THE CIRCULATION.

Gentlemen,—I propose in this lecture to revert to an old study in experimental and practical Medicine. I do so for special reasons, which may be briefly named.

I return to the study because of its vast practical importance. As an ultimate cause of death, as the determining cause of death, separation of fibrine in blood may still be considered as amongst the most frequent of causes. As ever, the fibrine mass is the determining fatal cause in a majority of cases of acute inflammatory disorder—in croup, in scarlet fever, in malarial fever, in puerperal fever, in all the phlegmasiæ. As ever, this separation is a frequent cause of death, insidious in its approach, in cases where only very slight series of symptoms precede the sudden and fatal catastrophe; and, as ever, the separation is a common cause of death in cases of lingering disease and senile decay, the last and definite reason why life shall come to an end. Moreover, it is now felt that the separation of fibrine from blood is a terrible sequence to some cases of Surgical operation. We are on this point much indebted to the observations of Mr. Spencer Wells, who has detected that, in many instances of ovarian dropsy where the operation of ovariotomy has been performed, the patient would have lived throughout all the chances against recovery, had not separation of fibrine in the right side of the heart rendered the recovery, according to our present knowledge of treatment, impossible; for, in truth, and the truth adds to the importance of the study, our knowledge how to treat a patient in whose circulating system the separation has occurred is as limited as though the fact of such separation and the signs of it were unknown.

These practical considerations, of such vast and direct moment, are sufficient to proclaim the necessity of the continued or often renewed study of the subject now in hand; but there is more even than what has been said. The subject is a base in science. Difficult at first to understand logically, it must in the end be mastered, and once mastered, though it take a century for the task and much conflict, it will be found at last simple as A B C to read, while upon it will be seen resting a whole natural book of pathological fact, plain also to read, and decisive. The reason of plastic exudations, of fluid exudations, of transformations of structure, fibrous so called, will be plain, with many other, at present, obscure phenomena not calculated upon in this day as connected with the matter, whenever the physical meaning of separation of fibrine is comprehended in its completeness.

I take up the study again for a second reason. I can but feel that, in the fluctuations of Medical thought and opinion, the phenomenon of separation of fibrine is beginning to be viewed with obscurity, and possibly with inaccuracy. Twice in the course of its history the study has been cursed by the introduction into it of senseless words. In its first phase of history, before observers had determined that the white mass found often in the circulation is a separation of a constituent of the blood, the mass had assigned to it a special name; it was called "a polypus." Afterwards, under better knowledge, the name was revived with the effect of leading the mind from the phenomenon as a natural fact to a word which described an appearance without reference to the reason or true nature of the thing seen. In like manner, in its second phase of history, the error has been repeated. The white mass of fibrine found in the circulation is now called "an embolus," and by a barbaric perversion of language the phenomena attending or proceeding are called phenomena of "embolism." I have heard it said a patient died of embolism, as if it were possible first to change "embolus" into a verb, and say, "I embolise, thou embolisest, he embolises;" and then to construct a verb-noun upon the change. The result is pitiable. In the ready twang of the word embolism are now confounded two distinct series of facts—the fact of the floating of a mass from one part of the circulating system to another part, and the fact of the separation and fixation of a mass at the very point where it is found after death. Worse than all, the word has led the mind from the simple exposition of the nature and cause of the separation of the mass, and the symptoms incident, to the mere name of "embolus," and to the gross perversion embolism. I trust that in England at least, where the study of the blood has been the greatest of works in Medical science, where the circulation of the blood was discovered, where the first classical and philosophical view of the practical meaning of separation of fibrine was put forth—viz., by Dr. Gould in 1684—and where practical common sense, as apart from jargon, is so boasted of, we shall give up the use of a term which means nothing, save obscurity, and that, recasting the study of the subject of separation of fibrine in the circulating canals, we shall return to the true and simple idea of such separation, its causes, its results, without attaching names to the substances found, or contenting ourselves with the delusion that by the invention of foolish words we have settled a problem as difficult to solve and as momentous as any problem of nature that lies before mankind for solution.

I take up the study again for a third reason—for the reason that there seems to be new ground to be broken in it and promise of new truth. During the past few years fresh light has been thrown on the physical relationships existing between the substances in organic nature to which fibrine and its allies belong, and those substances which we class as salines and as water. I have tried to bring this new light to bear, in some measure, on the subject of separation of fibrine in blood, and in proper time and place I shall speak upon it. I think also that some new truths lie at hand in relation to separation of fibrine within the organs of the circulation and without those organs —*i.e.*, between separation of fibrine in the vessels, and in the tissues in the form of plastic exudations—and although in the present lecture I shall not be able to follow out these last-named topics, they deserve notice.

On Fibrine as it is separated within the Organs of the Circulation.

Pursuing for the present the single study of separation of fibrine in the chambers of the heart and in the vessels, let me first ask your attention to the different kinds of separation as they are found in nature and to the positions in which the separation occurs. The most common place for the separation is in the right side of the heart, and, in the right side of the heart, the spot where the separation most frequently commences is the auricula of the auricle. The next point in frequency on the right side is the ventricle, the filaments of fibrine taking a hold on the chordæ tendineæ of the tricuspid valve. The last part is in the infundibulum leading to the pulmonary artery, with extension of cords of fibrine into the smaller divisions of the artery.

In most cases there is a line of connexion of fibrine from the auricula of the auricle through the ventricle into the pulmonary artery, the separation seeming to have started from the auricula and to have extended by addition of new matter onwards in the line of the blood. The separation appears to commence at some point of resistance in the course of the blood and to travel with the stream, terminating in a continued line of simple coagulated red blood. The character of the mass of fibrine varies greatly in regard to its form and construction. The simplest form is that of a striated concretion filling the auricle, extending into the ventricle as a continuous band, and ascending into the pulmonary artery in a similar manner. Thus extending, the clot is marked or impressed by the parts of the heart which enclose it, as by the musculi pectinati in the auricle, and by the segments of the semilunar valves at the origin of the pulmonary artery. In passing through the cords of the tricuspid, this form of separated fibrine entwines itself in fibrils around the chordæ tendineæ with great closeness. In one case, of which I show a drawing, the cords were looped up by the bands of fibrine. In another case, of which I also show a drawing, the fibrine filled the auricle and ventricle, fixing the tricuspid in the firmest degree.

When the fibrine mass is of smaller dimensions, it may be covered with a layer of red coagulated blood. This layer will envelope the mass at all points, except where it is adherent to the structure of the heart. In other examples, the separation of the fibrine being slow, the mass may be grooved, the grooves being filled with red coagulated blood, and indicating the course which the blood continued to take until death followed from the obstruction. When the groove is marked on a mass of fibrine filling one of the cavities, as the auricle, it is straight; but when it is marked on a cylinder of fibrine filling the pulmonary artery, it is spiral, running round the cylinder. Here is a drawing taken for me direct from nature, in the year 1850; it is an excellent representation of a spiral or corkscrew concretion.

(a) Lecture delivered on November 10.

In other and rarer cases the mass of fibrine, instead of being grooved externally, is laid down in an even layer over the inner surface of the cavities of the heart, producing in effect a new and false endocardial lining. In this case the layer of fibrine, forming as it were a sac, encloses a clot of coagulated red blood. I have once seen a perfect sac of this kind, but it is rare. Partial separations on to the endocardial surface are less rare.

The fibrine, in instances rarer still than those just cited, is separated in the form of a firm band having one point of adhesion, and a loose or free end. Such a band of fibrine was once found in the heart of a patient under the care of my friend Mr. M'Nab, of Epping. The band was a white tape-like concretion attached by its base to the anterior wall of the ventricle, and continuing upwards into the pulmonary artery.

Finally, in respect to the right side of the heart, I have twice seen a short truncated mass of fibrine projecting from the auricula of the auricle towards the ventricle, but not entering the ventricle. In both these examples the mass was grooved at its lower surface from the passage of blood.

In the left side of the heart fibrine does not, as a rule, separate in the same masses as on the right side. In the left auricle the separation is rather in the form of particles than masses, adhesion, at the same time, being moderately firm. A continuous large column of fibrine extending from the auricle into the ventricle, and thence progressing into the aorta, I have not seen in any dissection. Sometimes in the ventricle a moderately large and firm concretion is met with; but here, too, the mass is often broken, and almost detached into separate parts. From the infundibulum into the aorta there extends not unfrequently a line or thin band of separated fibrine, bearing the mark of the pressure of the aortic valves. Thin layers of fibrine, like false endocardial membrane, coating the endocardium itself, are as common on the left as on the right side. Grooved and hollow cylinders of fibrine are rare on the left side in the heart itself.

The adhesion of a mass of separated fibrine is mostly mechanical in character, and it is, I think, matter of demonstration that such adhesion between a concretion and the structures of the heart may exist for a long time without any more definite connexion. I have had before me specimens where it was supposed that an actual adhesion of structure had taken place, with blood-vessel as a bond of union; but on careful dissection I have found it possible to separate the interwoven fibres or tendrils of fibrine from the muscular or fibrous cords of the heart, and to show that the interlacement, however firm, was purely mechanical. Once, and once only, I met with a separation of fibrine which had a true vascular connexion. The concretion in this case was globular in shape, and was attached by a pedicle to the posterior curtain of the mitral valve. A small artery passed through the pedicle, and there was free distribution of vessel in the mass itself.

In the arteries fibrine separates in different ways. In the dilated and roughened artery it usually goes down, as in aneurism, layer upon layer, like a false lining of the artery, until at last it makes a true tube with a column of red blood running through it. In the aorta these tubes of separated fibrine occasionally attain such large dimensions that the Doctors of old were wont to consider such mass to be a serpent. I have republished, in one of my works, the report of a mistake of this kind by one Dr. May, who practised in this city in the time of the First Charles. The story of the surprise of this good man at finding a serpent in the aorta of a youth, and the description he supplies of the anatomy of the thing, its "thighes and haunches," and vein or artery which ran through its body "to serve the monster for uses naturall," would furnish, if rendered in detail, an amusing diversion, had we time to indulge in learned sport. I have not myself seen a tube of this kind running the whole length of the aorta and extending into the iliacs, but in one case I met with a tube which commenced in the infundibulum of the left ventricle, extended over the arch of the aorta, and some inches downwards. The true tubular character of this separation is very well shown in a drawing upon the table. Tubular separations of fibrine are found sometimes in the smaller arteries, where they may be mistaken for masses of solid matter that have been carried from remote parts of the circulation. I had a basilar artery once brought to me filled with a fine, short tubular separation of fibrine. It was presented as an instance of floating fibrine, and was supposed, because the symptoms it produced were sudden in development, to have been carried bodily from the heart into the basilar. I disposed of this view by showing that, to get from the heart into the basilar artery, the fibrine tube must have passed through one of the vertebral arteries, whereas it was much larger than either. The tube, in fact, had been laid down in the basilar artery itself; it was formed where it was found.

In the minuter divisions of the arterial system fibrine separates usually in the form of the solid cylinder, the pressure of the blood preventing the clear tubular arrangement. The separation takes place in the same mechanical way as in an artery that is tied. A particle of fibrine is laid down at the extremest point, and then more is laid down layer upon layer, giving a shape to the plug like to the shape of the vessel itself—a tapering or cone-shape. It is remarkable with what rapidity this kind of separation will take place, and how quickly, under the steady contraction of the occluded artery, the serum and red-colouring matter of the blood are given back to the general volume of the blood, the fibrine remaining only with water.

In the minuter divisions of the arterial system, and, indeed, occasionally in the larger trunks of arteries, we meet in certain cases with masses of concrete matter which have floated from some central point, as from the chambers of the heart, or from one of the larger vessels. These floating or detached bodies are usually different from the portions of fibrine which separate at the spots in which they are found. The mass is more friable in character, less regular in form, and more easily detached from the structures surrounding it. The most satisfactory recognition of these floating masses is when, at a part remote from the place where they exist, another mass can be found which is in structure like to themselves, and from which they have been detached.

In the veins fibrine may be found separated in the tubular form, as a solid cylinder, or as a pellet. From the sinuses of the brain I have twice removed very distinct hollow cylinders of fibrine, with red coagulated blood lying within. In the inflamed vein the fibrine will form a moderately firm solid mass, which, as is well known, may break up, become detached, and float into the chambers of the heart or into the pulmonary system of vessels. This subject of detachment has been so fully discussed and expounded during the past years, it is unnecessary to follow it further. In rare cases the large veins have been discovered filled with separated fibrine; cases have also been recorded in which small shot-like masses of fibrine have been separated in the veins. I had once a case under my care in which these masses were separated in the veins of the upper extremity, the fingers undergoing a kind of dry gangrene. In this instance the little masses could be felt in the superficial veins, and could be moved by gentle pressure behind them in the course of the vein. This patient ultimately recovered, the fibrine, I presume, undergoing re-solution, for with the recovery the veins assumed their natural character, and no symptoms of secondary deposit supervened.

One other subject in regard to the separation of fibrine within the organs of the circulation demands yet further elucidation than it has received. I mean the direct separation of fibrine within the capillary system of vessels. I regret I must defer the consideration of this matter until I have more satisfactory data respecting it than at present lie before me.

(*To be continued.*)

SOUTHAMPTON.—The Quarterly Report of the Medical Officer of Health for Southampton, from August 5 to November 4, 1868, represents the deaths for the quarter as 350, which, divided by 13 (the population being 52,000), gives an average of 26·92 per 1000 per annum. The deaths from epidemic and contagious diseases, compared with previous quarters, present an unfavourable appearance; the mortality, however, says Dr. MacCormack, has been principally among children under 2 years of age, which, let us say, gives but poor consolation. Twenty houses have been brought under the beneficial effects of the Sanitary Act of 1866 as regards the number of inmates allowed to occupy each house, cleansing and ventilation of the rooms, etc. Now that the drainage works of the Shirley Board of Health are approaching completion, Dr. MacCormack expects soon to have the sewage of that district discharging itself into the Southampton Water, and believes that there is not a sufficient scour to carry it further than the end of the pier before meeting the tide; hence will result a deposit of sewage on the mud, which, when exposed to the sun's rays, will give off most offensive and unhealthy gases, and be another example of the blessed effects of modern "sanitary improvements" carried out in the usual childish makeshift fashion.

ORIGINAL COMMUNICATIONS.

FURTHER EXPERIMENTS ON THE USE OF THE ALKALINE HYPOPHOSPHITES IN CONSUMPTION.

By RICHARD PAYNE COTTON, M.D., F.R.C.P.,
Senior Physician to the Hospital for Consumption, Brompton.

Some time back I published in detail a series of observations upon the action of the hypophosphites of lime and soda in tubercular diseases of the lungs (*Lancet*, April 25 and May 2, 1863), and came to the conclusion that these substances were nothing more than neutral salts, suited, just as many other neutral salts are, to certain cases of phthisis in which there is a complication of acid dyspepsia, and that they had not, as alleged, any claim to specific action. Finding, however, that they are still regarded by certain Medical Practitioners as remedies of great value, and that they are still advertised "for the prevention and cure of consumption," I considered it right to give them another trial. The following is an abstract of twelve Hospital cases in which they were administered.

Case 1.—Eleanor H., aged 22. Phthisis, first stage. Hypophosphite of soda was taken for three weeks, with decided improvement and a gain of 1 lb. in weight. The hypophosphite was then changed for the carbonate of soda, the patient being unaware of the alteration. This was continued for four weeks, the general improvement continuing, one pound more being added to the weight, and the patient ultimately leaving the Hospital greatly benefited both in the physical signs and general symptoms.

Case 2.—Emma B., aged 25. Phthisis, third stage. Took hypophosphite of soda for four weeks. The disease gradually advanced. The patient lost two pounds in weight, and left the Hospital considerably worse than on her admission.

Case 3.—Mary A., aged 32. Phthisis, second stage. First took phosphate and subsequently perchloride of iron for three weeks without improvement. These medicines were then changed for the hypophosphite of soda, which was continued for the same length of time, but without any amendment, the patient afterwards leaving the Hospital with every symptom gradually advancing.

Case 4.—William G., aged 23. Phthisis, second stage. Took hypophosphite of soda for three weeks with marked improvement and slight gain in weight. The hypophosphite was then changed for the carbonate of soda without the patient detecting the alteration. This was continued for the same period, during which, although the weight did not increase, there was a very marked general improvement. The patient expressed himself as "feeling better whilst taking the carbonate of soda;" but, in reality, he seemed to benefit equally under each treatment.

Case 5.—Thomas T., aged 16. Phthisis, first stage. Took hypophosphite of soda for two weeks, without improvement, and lost one pound in weight during that time. Quinine and subsequently phosphate of iron were then given for six weeks, during which period the patient gained six pounds in weight, and very greatly improved in every particular.

Case 6.—John G., aged 22. Phthisis, first stage. Took hypophosphite of lime for three weeks, and improved considerably. Carbonate of soda was then given for four weeks, and subsequently quinine for four weeks; after which the patient left the Hospital greatly benefited, and weighing seven pounds more than on admission. Both the general improvement and the increase of weight advanced equally under each kind of treatment.

Case 7.—Eliza F., aged 25. Phthisis, first stage. Hypophosphite of lime was given in this case for three weeks, during which time there was a gain of one pound in the weight, but no general progress. Perchloride of iron was then prescribed, and taken for five weeks with very great advantage, the patient gaining only one pound more, but improving very manifestly, and expressing herself as having done "much better under the new medicine."

Case 8.—Rosa K, aged 16. Phthisis, third stage. Took hypophosphite of lime for three weeks without any improvement, and with a loss of three pounds in weight. Quinine was then given for four weeks, the patient still getting worse and losing three pounds more. Perchloride of iron was then prescribed and continued for three weeks, during which time five pounds were added to the weight, and there was a general improvement in all the symptoms.

Case 9.—Alfred S., aged 26. Phthisis, third stage. Took hypophosphite of lime for three weeks; improved considerably, and gained two pounds in weight. The hypophosphite was then changed for carbonate of soda, without the patient discovering the alteration. This was continued for eight weeks, during which there was a great improvement in all the symptoms, and three pounds more were added to the weight. The patient ultimately left the Hospital much benefited in every respect.

Case 10.—Louisa P., aged 20, phthisis, third stage. In this case hypophosphite of lime was taken for three weeks without improvement. Quinine was then given, and subsequently gentian with soda and hydrocyanic acid, but still without benefit. The patient ultimately left the Hospital much worse than when admitted.

Case 11.—Charles B., aged 26. Phthisis, second stage. Took hypophosphite of lime for two weeks without benefit, and subsequently bark with nitric acid, and afterwards perchloride of iron. No improvement followed any of these forms of treatment, and the patient ultimately died.

Case 12.—James T., aged 40. Phthisis, third stage. In this case the treatment was commenced with iron and phosphoric acid, without evidence of improvement or any material increase of weight. Hypophosphite of soda was then given for a fortnight without any alteration of symptoms, and the patient ultimately left the Hospital much in the same condition as when admitted.

In each of these cases the hypophosphite was given in ten-grain doses, in water sweetened with a little syrup, three times a day. A careful and impartial analysis of these cases will be found to give the following results:—

Of the twelve patients, four (Nos. 1, 4, 6, and 9) improved, and the rest derived no benefit. Of the four improved cases, each one, without exception, still continued to improve, and in the same ratio, after the hypophosphite had been changed for carbonate of soda. Of the eight unimproved cases, No. 2 gradually became worse, and left the Hospital without affording the opportunity for any experimental change of medicine. In Nos. 3, 10, 11, and 12, other remedies were equally unsuccessful with the hypophosphite, whilst in Nos. 5, 7, and 8 there was a manifest improvement in every respect after the hypophosphite had given place to steel and quinine.

The following are the legitimate conclusions from these results:—1. That the alkaline hypophosphites have no claim whatever to a specific action upon phthisis. 2. That the good they may sometimes effect is altogether due to their alkaline character, and is equally shared by the alkaline carbonates. 3. That, except in cases requiring alkaline treatment, their employment is absolutely harmful, by excluding the use of positive and appropriate tonics.

Hygiene and hope are most important auxiliaries in the treatment of disease, more especially in such a chronic one as consumption; and it is because we cannot, or at all events we do not, properly separate the effect of these two agents from that of physic proper, that we arrive at such different conclusions upon the action of medicine. A vast number of consumptive cases seem to improve directly they enter the Consumption Hospital, no matter what medicines are prescribed for them. They have exchanged the troubles of want and anxiety for the comforts of plenty and repose; they breathe a pure, warm, and healthy atmosphere, to which they have been hitherto strangers; and their minds become suddenly occupied with happy and hopeful anticipations. Others, again, scarcely improve until some dyspeptic complication has been successfully combated, some of these manifestly deriving benefit from alkaline, others from the mineral acid treatment. Some are at once improved by steel; others by quinine, or some other form of general tonic; but if amongst all this uncertainty there be anything certain, it is that there is no real specific for consumption.

If in cases associated with acid dyspepsia, and requiring alkaline treatment, the hypophosphites of lime and soda are often successful, the same may be said of other alkaline salts; and if it be contended that in such cases the hypophosphurous acid is a specific, I maintain that, upon similar evidence, carbonic acid is equally so; it is in each case the base, and not the acid, which is effective.

Some Practitioners are in the habit of employing the hypophosphites of iron and of quinine, and doubtless with advantage. The citrates of iron and of quinine also are well-known remedies, and are very often useful in the treatment of phthisis,

but it is to the base, and not to the acid, that their good effect is attributable. It would be as reasonable to give the due in the one case to the citric acid, as in the other to the hypophosphurous acid.

The hypophosphites of lime and soda are, I repeat, nothing more than simple unirritating antacid salts, suited, just as many other salts of the same class very frequently are, to certain cases of phthisis requiring alkaline remedies, and they have not even the shadow of a claim to special or specific action in any form of consumptive disease.(a)

Clarges-street.

ON DISEASES OF THE JOINTS CONNECTED WITH LOCOMOTOR ATAXY.

By BENJAMIN BALL, M.D.,
Professeur-Agrégé at the Paris Faculty of Medicine.

(*Continued from page* 501.)

Case 4.—*Locomotor Ataxy—Spinal Arthritis of the Right Shoulder.*(b)

V. P., aged 56, the wife of a concierge, was admitted into the Salpêtrière on April 10, 1851. The first symptoms of locomotor ataxy made their appearance in this patient's case twenty-three years ago. Shooting and circular pains were first observed; then came anæsthesia and weakness of the lower limbs, principally on the right side. Shortly after, the right arm became affected, the left one remaining sound, so that the disease assumed at first the hemiplegic form. After residing for many years at the Salpêtrière, she became suddenly worse in January, 1866, and the left arm was affected in its turn. One morning, on waking after a good night's sleep, she found her right shoulder grown to an enormous size: it was about as large as a child's head. Nothing particular had attracted her notice the day before, and she felt no pain in the diseased member.

State of the Joints.—February 11, 1866: The right shoulder is enormously large. A round globular tumour lies under the deltoid muscle; it is more prominent in front than behind. The arm and forearm are swollen. The skin is in a normal state. Voluntary movements, though not painful, are difficult, and there exists a great deal of crepitation in the diseased joint. Fluctuation is distinctly felt in some points of the tumour, which in other parts is hard and elastic. It is next to impossible to feel the head of the humerus and the extremities of the other bones which form part of the shoulder-joint.

15th.—Dr. Labbé, Surgeon to the Salpêtrière, punctures the tumour with a small trocar. The instrument, although plunged two inches deep, allows no fluid to escape; but when the canula has almost entirely been drawn out, a yellowish serous liquid flows out. It is neither oily nor viscid, and contains neither pus nor blood. About an ounce and a half of this fluid being collected in a glass, a thin fibrinous pellicle is soon formed upon its surface. No pain has been occasioned by the operation, and the joint appears to work better.

24th.—The tumour is punctured a second time, and four ounces of a thin serous fluid, containing a few blood-cells, are collected.

On February 26 and March 5, the tumour is tapped again, and about three ounces of fluid are evacuated each time.

March 25.—The tumour is punctured twice, but no fluid escapes. The shoulder is swollen, hard, and painful.

April 10.—The tumefaction of the joint has visibly diminished, and the patient feels much better. All pain has vanished.

The patient is discharged from the Infirmary on May 4, 1866, remaining of course in the establishment.

State of the Joints, October, 1868.—On comparing the two shoulders, it is quite evident that the right one is partially atrophied. It exhibits a square instead of a round shape. The acromium is very prominent; the deltoid muscle is considerably stretched; and an irregular tumour, which follows the movements of the arm, is felt above the clavicle. This tumour is nothing but the head of the humerus, as can easily be ascertained by placing the fingers in the axilla. There exists, therefore, a dislocation of the shoulder. The head of the humerus appears much smaller than in the natural state. The dislocation can easily be set, but as soon as the arm moves the shoulder gets out of joint again. Notwithstanding this, the patient uses her arm without difficulty, and manages to put on her clothes without assistance; but all movements in the joint are attended with crepitation.

This case closely resembles the preceding one. It would seem that, after a period of acute disease, the joint has relapsed into its ordinary state, and that, although the disorders produced by this sudden attack are permanent for life, no further morbid process has been taking place in the joints for the last two years.

In the following case we shall find the disease adopting an entirely different course.

Case 5.—Progressive Locomotor Ataxy, ending in Paraplegia—Intense Spinal Arthritis in the Right Knee—Symptoms of less Intensity in the Left one.

L. C., aged 43, commercial traveller, entered Professor Béhier's clinical wards at La Pitié, Salle St. Paul, No. 24, on October 25, 1868. This patient, a man of high stature and powerful appearance, but who is at present in a state of great debility and anæmia, declares that up to the age of 40 he enjoyed perfect health, and was never tainted with syphilis In consequence of excessive fatigue, an inflammatory process took place in the right foot, and ultimately led to partial resection of the great toe. Since that time he has never been able to walk properly. Some months after the operation, he began to feel shooting pains in both legs. He compares them to shocks from an electric battery. Shortly after this his sight began to fail, and the usual symptoms of locomotor ataxy made their appearance.

Having entered the Pitié in January, 1867, he took iodide of potassium during two months, and left the Hospital considerably improved. During the course of the year he continued to attend to his occupations, although his movements gradually became more and more unsteady, and he was totally unable to walk in the dark.

Towards the beginning of October, 1867, his right knee suddenly became swollen without any known cause. Shortly afterwards the whole limb began to increase in size, and his gait became more irregular than ever.

In the course of November he had rheumatic pains in the knees and ankle-joints, which led him to enter the Hospital again. He left it on January 6 of the present year, and returned to business again.

Towards the end of February he fell downstairs; but this accident did not increase the local symptoms, which at that moment were not strongly marked. He is quite positive on this point. During several months he was kept busily engaged in his trade, and, in spite of the unsteadiness of his movements, he yet managed to disguise his infirmity tolerably well. He could walk quite straight on a flat and even surface, but when the ground was rough he had some difficulty in getting along.

Such was the state of things when, on August 29, he was suddenly seized with violent pains in the lower limbs, and the right leg became enormously swollen.

On September 2 he entered the service of Dr. Proust at La Pitié. A considerable degree of hydrarthrosis was found to exist in the right knee, and for several weeks the whole limb continued to increase in size. On being punctured below the knee with a small trocar, it gave issue to a large quantity of serous fluid, but the wound never healed, and is still open at the present moment; nay, more, a few days later a spontaneous aperture was formed near the ankle, and gave issue to a considerable amount of pus and serum. Under these conditions it was thought advisable to transfer the patient to Dr. Meunier's Surgical wards. Amputation of the right leg above the knee had already been resolved upon, when Dr. Proust requested me to examine the patient (October 17). Having ascertained that a slight degree of hydrarthrosis was beginning to appear without pain or inflammation in the left knee, I at once pronounced the case to be another instance of spinal arthritis, and begged Dr. Meunier to transfer the patient into my service, which he entered on October 25.

General Condition.—The patient lies on his back, leaning slightly towards the right side. He cannot move in bed on account of his bad knee. The bladder and rectum are para-

(a) The following is the substance of a note from Mr. Gill, Resident Clinical Assistant at the Hospital for Consumption, Brompton:—

"Dear Dr. Cotton,—As you have asked me to give my opinion of the action of the hypophosphites of soda and lime upon tubercular diseases, I beg to state that I have taken careful notes of the twelve cases in this Hospital which were under your charge, and my decided opinion is that they are useless so far as specific effect is concerned; but that in some cases benefit has been derived from their local action as alkaline salts on the dyspepsias to which some of these patients were subject, exactly the same benefit being derived from small doses of the bicarbonate of soda.

"Yours truly, "H. C. Gill, M.R.C.S."

(b) Communicated by M. Bourneville, Dr. Charcot's Interne.

lysed, and both the urine and fæces escape involuntarily. He moves his left leg without difficulty, the movements of the right one being, of course, very limited. Sensibility in the lower limbs is tolerably well preserved on both sides. The face is pale and thin. The patient has no appetite, and feels exceedingly weak. A small proportion of albumen is discovered in the urine. There is a slight tendency to diarrhœa. The heart and lungs are not the seat of disease, although a slight anæmic murmur is found to exist.

State of the Joints.—The right knee is slightly bent, and cannot be completely straightened; its movements in every direction are considerably limited. The femur is slightly inclined on the pelvis, and the whole limb rests upon the bed by its external side. The left leg is straight, and slightly parted from the other limb. Its motions are free. The right leg, as a whole, seems much larger than the left one. The whole limb is tumefied, but the regions in which the swelling chiefly exists are the knee and the calf of the leg. The skin which covers these parts is sound over the knee; under this point it is rough, dry, scaly, and of a dark colour. Two openings, which secrete a considerable quantity of ichor, exist at the upper and lower parts of the tibia. The following are the dimensions of both limbs:—

Circumference of right knee . . .	20 inches
Diameter (measured across the condyles) .	6 ,,
Circumference of left knee . . .	17 ,,
Diameter	4½ ,,

By palpation it is easy to ascertain that considerable hypertrophy of the lower extremity of the femur exists on the right side. The swelling of the bone is principally found in its anterior region, and does not extend beyond the synovial bursæ. The shaft of the femur seems to be sound. On the right side it is difficult to ascertain how far the knee can bend, on account of the pain experienced by the patient, but a sort of fluctuation inside the joint is felt when the patient moves. Violent pains have existed in the limb for the last ten days. The left knee is evidently affected with hydrarthrosis, and the leg easily swings from side to side. There is, however, no pain in this joint. A little soft œdema exists on this side; it may be viewed as a consequence of albuminuria.

November 3.—The patient continues to suffer from his bad knee, and is not able to sleep at night. Two grains of opium daily are prescribed to relieve him. His strength appears to be rapidly sinking.

In this patient the disorganisation of the joint, and the morbid condition of the whole corresponding limb, seem to have reached the highest degree which they can possibly attain; and such is the extent of the disorder that it might be questioned at first whether this is really a case of spinal arthritis. Let us, however, bear in mind the insidious and gradual progress of the disease; the total absence of pain, except within the last fortnight; the total absence of fever and inflammatory symptoms; the presence of hydrarthrosis in the left side, arising spontaneously and without any pain; and, lastly, the close resemblance which the local alterations bear to those described in Case 2. When all these circumstances are duly considered, we think that no doubt can possibly remain as to the nature of the complaint. It must, however, be acknowledged that some of the features of the case are singular; but spinal arthritis is a disease the precise characteristics of which have not yet been fully ascertained, and a wide field of investigation still lies open in this direction to future observers.

As to the excessive hypertrophy of the extremities of the femur and tibia, it is, in fact, only a higher degree of a symptom already noticed in two of the preceding cases (1 and 2). The difference is, no doubt, mainly attributable to the greater duration of the disease in this latter patient. It would seem that the progress of the local affection may sometimes be definitively checked, as in Case 4, while, under less favourable circumstances, it constantly follows an onward course.

The five cases which we have just reported have not before appeared in print. We will now give a short abstract of the analogous cases which have already been laid before the public.

Case 6.—*Locomotor Ataxy—Spinal Arthritis of Left Knee.*(c)

A commercial clerk, 35 years of age, entered Dr. Viardin's service, at the Hospital of Troyes, on September 9, 1867. The first symptoms of locomotor ataxy, in this case, began in 1862. In the course of the year 1866 he suddenly became affected with a considerable swelling of the left knee, which made its appearance in a single night without any known cause. No pain, no fever, no signs of inflammation. The movements were perfectly free. When admitted into Dr. Viardin's ward, his knee was found to be considerably swollen, and crepitation was met with in the joint. The right leg also appeared larger than the left one. These symptoms still persisted in December, 1867. The ultimate result remains unknown.

The four following cases are extracted from Dr. Charcot's paper.(d)

Case 7.—*Locomotor Ataxy—Spinal Arthritis of the Left Elbow-joint.*

Mrs. B., aged 56, had been affected with locomotor ataxy during ten years, when, in the spring of 1865, she complained one morning of difficulty in bending the left arm. The elbow was considerably swollen, and the whole limb participated, in a certain measure, in this abnormal swelling. The tumefied parts were hard, not pitting on pressure. There was no pain, no fever, no inflammation. These symptoms, after persisting some time, gradually subsided; but the left arm remains larger than the other, and there is some crepitation in the elbow-joint.

Case 8.—*Locomotor Ataxy—Spinal Arthritis of the Right Knee.*

Dr. L. was sent to Dr. Charcot by some of his Medical friends, in October, 1866. This patient, himself a Physician, had been affected with locomotor ataxy for some years, without being aware of the fact. He was much astonished one morning to find his right knee considerably swollen. No pain, no general symptoms had attended this unexpected hydrarthrosis. The movements of the limb were seriously impeded. The synovial cavity was distended by a large amount of fluid. The tumefaction occupied the whole leg, especially above and under the knee. When Dr. Charcot saw the patient, the local disease had very much diminished, although the right leg was still tumefied, and a large quantity of fluid still existed in the knee-joint.

Case 9.—*Locomotor Ataxy—Spinal Arthritis of the Right Knee.*

L. L., aged 56, was admitted into the Salpêtrière on February 15, 1867. She has been affected with locomotor ataxy for the last eight years. Towards the end of 1865, after going down to the Seine to wash her linen, and kneeling on the stones for some time, she saw with astonishment her right leg swollen from the knee down to the ankle. No pain or fever appeared. The swelling rapidly increased, and she was confined to her bed for three months. The swelling gradually diminished, and she was again able to walk; but when she was admitted into the Salpêtrière she was quite bedridden. The right knee was much larger than the left one, but there existed no fluid in the joint. The ligaments were very loose, and the leg was bent outwards. When the knee was moved, crepitation was found to exist. The lower part of the right limb was still swollen. The diseased joint was not painful.

Case 10.—*Locomotor Ataxy—Spinal Arthritis of Left Knee.*

Mr. B., aged 45, had been affected with locomotor ataxy since the year 1860. In July, 1866, he was astonished to find, while undressing, his left knee and leg very much tumefied. No pain or general symptoms. The next morning the swelling had increased. After being placed under treatment, the diseased joint resumed its former appearance; but the ligaments are, even now, relaxed, and there is some crepitation in the joint.

Case 11.—*Locomotor Ataxy—Spinal Arthritis of Left Knee.*

C. G., a widow, entered Professor Béhier's wards at La Pitié (Salle St. Charles, No. 36) on September 3, 1867. This patient has been affected with locomotor ataxy during the last six years. Five years after the beginning of the disease her left knee cracked under her one morning without any known cause. Pain and inflammation soon made their appearance, and the patient was treated by leeches, etc. The leg remained swollen for a few days only, but the knee remained large and rather painful for about six weeks; it is at the present moment larger than the right one, and in all its movements crepitation is felt.(e)

We have now drawn up a full list of all the cases of spinal arthritis connected with locomotor ataxy which have been recorded up to the present time. Their number will no doubt be increased by future observers; but we certainly possess the materials for a regular description of the disease, which we will now attempt to give.

(To be continued.)

(c) Hervey, *Gazette des Hôpitaux*, March 19, 1868.

(d) *Archives de Physiologie*, No. I., p. 162.

(e) This case has appeared in Dr. Paul Dubois' thesis "Etudes sur quelques Points de l'Ataxie Locomotrice Progressive," Paris, 1868.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

ON THE TREATMENT OF AMPUTATION WOUNDS BY CONTINUOUS IRRIGATION.

(Under the care of Mr. HAYNES WALTON.)

The following two cases of amputation at the wrist-joint, for the notes of which we are indebted to Mr. Milner M. Moore, Registrar to the Hospital, afford good examples of the success that frequently attends endeavours made to preserve as much as possible of an injured extremity, even at the risk of including bruised and disorganised tissues in the substance of the flaps. In both instances the injury consisted in extensive laceration and crushing of the hand from machinery, and necessitated immediate removal. Amputation at the wrist-joint was chosen in preference to an operation in the middle of the forearm; in one case semicircular flaps were formed out of injured tissue; in the second, no even and regular incisions were made, but as much of the wounded and jagged integument as could be brought over to cover the ends of the bones was saved, and its edges were trimmed here and there at points where there was great irregularity and the soft tissue much contused. Sloughing action, a common occurrence after proceedings of this kind, was subsequently manifested in both patients, and then Mr. Walton applied a plan of local treatment which had previously been attended in several cases of a like character with very great success. This consisted in what is commonly known as the irrigation treatment, which was first recommended by Dr. Macartney for the purpose of applying continuous cold and moisture to inflamed surfaces, and is now employed by Mr. Walton as a means of preserving the surface of a wound clean and moist, and removing from granulations all putrid and ill-smelling material. In the two reported cases a stream of cold water was allowed to trickle slowly on to a piece of lint placed over the end of each stump. For the first ninety-six hours, whilst the wounds were still sloughy, the irrigation was kept up both by day and night, and subsequently, until cicatrisation was completed, only during the day. By the employment of this method the neeessity for poultices and fomentations, the efficacy of which depends very much upon frequent changing, was obviated, and the surfaces of the wounds were kept perfectly clean and free from accumulations of decomposing secretions. According to the experience of Mr. Walton, the sloughing process is speedily arrested by irrigation; and, as a further and very important advantage, cicatrisation is perfected more rapidly, and the stay of the patient in the Hospital thus shortened.

The treatment carried out in these two cases resulted in quick recovery and the formation of excellent stumps, both of which were capable of the movements of pronation and supination, and were covered at their ends by lax, soft, and healthy integument. Firm pressure could be tolerated over the seat of amputation by both patients at the time of their discharge—six weeks after the operation—and the stumps in appearance and utility were fully equal to any we have observed after the formation of perfect and healthy flaps. The history of these cases and the state of the parts after amputation seem to be of peculiar interest in many respects. Great improvement resulted from the employment of the irrigation; in spite of disadvantages the whole of the forearm was preserved, and that variety of amputation performed which was strongly advocated by Liston on the ground that "it is an advantage to a working man to be able to make a long arm and possess the full rotatory movements of the limb;" stumps, the osseous elements of which remained covered with articular cartilage, healed rapidly, and remained capable of bearing considerable pressure; finally, that amputation wounds closing by the retraction of broad granulating surfaces formed extremities closely resembling and fully equal in utility to those formed by the intimate adaptation of perfect lateral or circular flaps.

Case 1.—Extensive Laceration of Right Hand—Amputation at Wrist-joint—Recovery.

Arthur B., aged 18, was admitted into St. Mary's Hospital, under the care of Mr. Haynes Walton, on September 24, 1868, in consequence of a severe injury caused by his right hand having been compressed by the end of the shaft of a steam planing machine. The hand was completely mashed, the bones fractured and comminuted, and the skin and soft parts extensively lacerated.

Amputation was performed at the wrist-joint by anterior and posterior flaps. The articular surfaces of the bones of the forearm were left untouched, and also the inferior radio-ulnar joint. The flaps were brought together, and tied by ordinary sutures.

September 29.—One suture removed the previous day. The inner angle of the wound has commenced to slough. There is very little pain at the end of the stump. Poultices ordered to be applied.

October 1.—Wound still sloughing; poultices to be replaced by ice compresses.

6th.—For the last two days the irrigation treatment has been applied constantly, both by day and night. The effects have been beneficial; the wound is cleaner and more healthy, and a tendency towards cicatrisation is now strikingly evident.

8th.—A large granulating surface exists at the extremity of the forearm, and is healing rapidly. Irrigation is still kept up during the day. Water is allowed to drop on to a piece of lint placed over the wound, from a lamp wick inserted at one end into a small and convenient receptacle, which is placed upon the upper bar of a wooden framework, whilst the arm is resting upon a parallel bar fixed below.

22nd.—Stump has been rapidly healing. To-day it was strapped at its extremity, and enclosed in a bandage. Irrigation discontinued.

26th.—Strapping still applied to the wound, which is now almost completely healed over.

November 6.—The wound has been closed for some days. At the extremity of the forearm is a linear and depressed cicatrix, enclosed by soft, lax, and healthy skin. There is no tenderness of the stump, and firm pressure with the hand can be tolerated. The rotatory movements of the bones of the forearm are perfect. Discharged as cured.

Case 2.—Compound Fracture and Contusion of Hand—Amputation at Wrist-Joint—Recovery.

Joseph C., aged 14, was admitted into St. Mary's Hospital on September 26, two days after the former patient. Whilst this lad was at work and cleaning a steam lathe, his left hand was caught between two large cogwheels and very much injured. When examined on admission, it was found that the integuments of the hand were much lacerated as high as the wrist, and that there were compound and comminuted fractures of the carpus, metacarpus, and phalanges. The hand was removed by exarticulation at the wrist, attempts being made to cover the ends of the bones by jagged and irregular flaps, formed by trimming the wounded soft parts.

September 29.—There has been much oozing of blood since the operation. The stump is painful and tender; it is mottled at its extremity, and bullæ have formed on the posterior surface. Patient is restless, and states that he can get no sleep in consequence of the pain; tongue moist and clean; pulse 110.

October 5.—The irrigation treatment has been applied for some days; after the first twenty-four hours the wound was considerably improved in appearance.

8th.—There is still marked and increasing improvement of the stump, which now presents a broad granulating and healthy wound. Irrigation still continued. General health of patient good.

14th.—Wound is looking well and healing slowly.

22nd.—Wound almost completely closed; strapping and a bandage to be applied to stump, and irrigation discontinued.

November 6.—Patient discharged as cured. End of stump covered by irregular but firm and painless cicatrix and sound integument. Movements of rotation unimpaired.

A CASE OF TETANUS TREATED BY THE ADMINISTRATION OF QUININE IN LARGE DOSES.

(Under the care of Mr. HAYNES WALTON.)

The following case is one in which well-marked symptoms of traumatic tetanus, following an extensive burn in an adult, gradually diminished in intensity, and finally disappeared, after the internal administration of quinine in large doses.

Henry W., aged 28, a telegraph-man, was admitted into St. Mary's Hospital, under the care of Mr. Haynes Walton, on March 4, 1868. He was suffering from severe burns of both thighs, both hands, and right arm, caused by the explosion of a naphtha lamp. Dressings of carron oil were first applied over the injured surface, and afterwards, when the suppuration became very profuse and fœtid, poultices of linseed meal and charcoal. The man was placed on ordinary diet with the addition of six ounces of port wine, and two grains of quinine with

ten minims of tincture of steel were administered three times during the day.

Twelve days after the accident (March 16) the patient complained of some difficulty in opening his mouth. Five grains of calomel were immediately prescribed. The following day the mouth was firmly and almost constantly closed; there was also some stiffness of the cervical muscles, but nothing of the kind was complained of as affecting other parts of the body. The man was now ordered to take sulphate of quinine in ten-grain doses three times a day, and also six ounces of port wine and four ounces of brandy. At night twenty minims of laudanum were administered.

For ten days, from the 17th to the 26th of March, the man continued in much the same condition. The pulse was weak, and varied from 108 to 120. He suffered much pain, had violent spasms, and got but very little sleep. On March 27, the eleventh day after the supervention of the tetanic symptoms, he began to improve; the teeth could be separated to the extent of a quarter of an inch, and the spasms became less violent. After March 31, the fifteenth day, he had no severe spasm. He was up and moving about the ward on April 15, and was discharged as cured on May 9, having been detained in the Hospital by an attack of erysipelatous inflammation invading the wound on the right arm.

During the administration of the quinine, which was continued as long as the severer tetanic symptoms were present, the man did not present any sign of cinchonism.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 14, 1868.

THE TEST OF MIDWIFERY TEACHING.

We are sometimes told, with some emphasis, that the act of parturition is a "natural process," and students are emphatically warned that "meddlesome midwifery" is bad. Yet it is quite certain that the "natural process" fails sometimes, and that artificial help is necessary; and then arises the question whether the overcautious "trust to nature" kind of midwifery may not be, on the whole, worse than a certain degree of meddlesomeness.

Nature herself has given us one most terrible test of her own occasional inefficiency. When the child is delayed in its course, its pressure is apt to cause sloughing, and after a few days, when the slough separates, an uncontrollable gush of urine shows that the bladder is laid open, and the poor patient the victim of that most loathsome accident, the vesico-vaginal fistula. Perhaps the rectum may be laid open, or the vagina be left so scarred and contracted that married life is henceforth impossible. The same may be done in a rapid and impetuous labour by laceration.

Now, it is well to understand at starting that this matter is not an *opprobrium obstetricantium*, but an *opprobrium naturæ*. People sometimes speak of an unlucky labour as if it were the creation or the fault of the Doctor or of his instruments. If we want material to counteract such a notion, we need only refer to some of the cases in Dr. Emmet's late work "On Vesico-Vaginal Fistula."(a) For example, there is one case (No. 4) of a young woman confined, when 19 years of age, of her first child. She had no attendance, was delivered, after three days' and nights' labour, of a still-born child, and suffered laceration through the anterior lip of the os uteri into the bladder. In another case a fistula was produced after only seven hours of labour; the head was born in two hours, but five more hours passed before the body was expelled. In two cases the head was born fourteen and fifteen hours, during which time the swollen body filled the outlet before it was removed.

We give these instances of excess on the one hand, and deficiency on the other, of natural forces, just as a reminder (if it be needed) that this "natural process" is by no means exempt from the mischances which attend every other phenomenon in life.

One notion which has been made far too much of is, that the injudicious and violent use of instruments is a frequent cause of laceration and sloughing of the female passages. If we want a good specimen of the *bunkum* which is inflicted on obstetric pupils, in which the powers of nature are absurdly glorified, and her mischances laid at the door of the obstetrician, we need only turn to the "Principles and Practice of Obstetrics," by Gunning S. Bedford, M.D.(b) "The spirit," he says, "of conservative midwifery seems to have been lost in sleep! the ordinances of nature have been disregarded, and the accoucheur, with instrument in hand, rushes to the scene of conquest," etc., etc.!! "One would think that nature had become emasculated; that what were once considered her own admirable laws had been so changed, and she so utterly deprived of resources, as to render parturition no longer an act of hers to be accomplished in her own inimitable way and by her own consummate ordinances," etc., etc. "Nature, gentlemen, is always the same," etc., etc. "I claim for her perfection of design and unequalled skill in the display of her own efforts when not contravened either by morbid influences or the *officiousness of man*," etc., etc. Dr. Bedford next lays before his pupils a thrilling case of a poor woman who had vesico-vaginal fistula after a labour of three days had been terminated by the forceps, and directly ascribes the death of the child and the injury of the mother to the "Professional cruelty" and "reckless temerity of men calling themselves Physicians," and delighting in assaulting the health and life of the community under the shelter of a diploma! because they terminated a labour of 72 hours!

When such language as this is applied to the use of midwifery instruments by a teacher, who can wonder at cowardice and delay on the part of Practitioners?

We have carefully analysed the 68 cases of vesico- and recto-vaginal fistulæ narrated by Dr. Emmet, to find, if we could, traces of this rash and culpable recklessness, but we can find none. In about three of the cases in which instrumental labour is said to have been followed by an immediate gush of urine, it seems possible, and Dr. Emmet says the same, that a laceration had been inflicted by the operation which extracted the child; but then it must be remembered that the same might have happened under unaided delivery. One or two cases are recorded also of apparent misuse of the ergot. But Dr. Emmet's cases, as a whole, furnish the most convincing proof that meddlesome midwifery is not a prevalent vice amongst our American brethren.

It may be interesting to give the following summary of sixty-

(a) "Vesico-Vaginal Fistula from Parturition and other causes; with Cases of Recto-Vaginal Fistula." By Thomas Addis Emmet, M.D. New York: W. Wood. London: Trübner and Co., 60, Paternoster-row. Pp. 250. 1868. This book is justly dedicated by Dr. Emmet to his instructor, Dr. Marion Sims, whose skill and ingenuity in remedying this miserable accident are well known.

(b) New York, 1868. Third edition, p. 509 *et seq.*

eight cases:—As to nationality, five patients were stated to be English, twenty Irish, two German; the remaining forty-one we assume to be Americans. There were no coloured women in the list, so that the accident is not, as has been surmised, peculiar to that class: the common feature is poverty. Thirty-two were primiparæ, ten met with the accident in their second, six in their third, seven in their fourth, six in their fifth, five in their sixth, and one each in their seventh, eighth, ninth, and tenth labours, and one in her fifteenth. Their ages were pretty evenly distributed, and call for no comment. The number of hours during which the labour lasted in which the mischief was done is worth considering. Five cases were 12 hours or under, eight under 24, four under 36, thirteen under 48, six under 60, ten under 72, four under 84, five under 96, eight under 108, three under 120, and three others estimated at 140, 144, and 224 hours respectively. In only one case is it stated that the child was born alive. In thirty-six cases the forceps was used, in six craniotomy; in four turning was attempted and performed, and in one case delivery was said to have been effected by "ropes." Considering the number of hours the labours lasted, these cases certainly afford no text for a discussion on the dangers of meddlesome midwifery. Out of the five cases in which labour was under twelve hours, one (Case 57) was a breech presentation in which turning was attempted, perhaps violently. In another (Case 45) the forceps perhaps did mischief, but it was needful to use it. In Case 44 labour was natural. In Case 34 a child of 12 lbs. was removed by forceps, alive, after a labour of ten hours. In Case 31 the Physician was six hours in effecting version. Consummate skill may not have been shown in every case, but there was no ground for outcry against unwarranted interference. One would think it an easy matter to hinder a woman from being delivered!

On the contrary, we conclude that, had greater interference been exercised in three respects, the obstetric art would have been freed from some opprobrium.

First, the neglect there is alleged to have been in at least eighteen of these cases in emptying the bladder, both before and after parturition, is almost incredible. In Case 1 it is said that the urine was retained from Tuesday morning till four days after delivery (which took place on Thursday); that then it began to escape by driblets till it gushed into the vagina from the sloughing bladder on the ninth day. Of Case 3, it is said that "from Monday evening the bladder was not emptied until a gush of urine followed the delivery of the head" by the forceps on Wednesday evening. It is right to say that before the forceps the catheter had been tried, but failed; but in other cases the neglect in this particular was curious.

Secondly, the time during which these poor creatures were allowed to be in labour, and the fact that sloughing occurred almost as often in cases left to Nature as in those where a tedious labour was at last terminated by forceps. Surely they are trumpet-tongued in saying to the young accoucheur, "Don't be afraid of being called meddlesome; don't let labour go on too long."

Thirdly, after any severe labour, provided that actual laceration or sloughing have not already taken place, very much may be done to prevent mischief if the vagina be treated rationally. After any severe labour there is a complete denudation of the mucous membrane, and a tendency to ulcerate at points that have been exposed to pressure. It must be recollected that the aperture into the bladder is sometimes not formed for fourteen days, or even a month; and in this interval all the efforts of Nature towards restoration should be seconded. The urine should be relieved twice a day, the vagina be well washed out with warm water and chloride of *soda* (not lime), the diet be good, and pain relieved by opium. We feel quite certain that we have prevented mischief by such measures. But the personal attendance of the Physician twice a day is required to carry them out; they must not be left to nurses.

Lastly, in women who have already had very laborious or instrumental deliveries, the possibility of fistula adds one reason more to the propriety of bringing on labour by Dr. Barnes's dilators before the full term.

That the *opprobrium*, be it much or little, is not peculiar to our American brethren, is clear from the analysis of fifty-nine out of a parallel series of eighty-four cases given by Mr. Baker Brown in his "Surgical Diseases of Women."(c) In eight cases the labour lasted one day; in fifteen cases, above one day, and less than two; in eleven cases, from two days to three; in twelve cases, three days; and in thirteen cases from three to seven days. In four cases labour was short, in two of which it was terminated by instruments, and in the other two by nature. In one of the latter, sloughing was caused by nine hours' unaided labour; child dead. We may refer to Dr. Barnes's lecture in this week's *Medical Times and Gazette* for Dr. Ramsbotham's opinion that a dead and putrid child is more likely to cause sloughing by contact; and it may be said, as a rule, that all the children are dead. But Dr. Barnes shows emphatically that neither death of the child nor the abuse of instruments is necessary as a cause.

Writing on different sides of the Atlantic, with the view before them of these failures, there is the perfect unanimity of common sense in the words which Dr. Emmet and Mr. Brown use to point out their causes. "*The accepted teaching*," says Dr. Emmet, "to wait any given length of time after the occurrence of impaction, with the hope that nature may yet accomplish the delivery unaided, *is, as a rule, attended with great danger*." Mr. Brown says that he is "*opposed to many obstetric writers*"—*i.e.*, he says that labour ought to be terminated early. A novice with the forceps, says Dr. Emmet, would do less harm than by leaving the case to nature.

Still more emphatic are the words of Dr. Barnes:(d)—

"It appears to me quite certain that in this country we are far yet from having utilised the powers of the forceps to the highest legitimate extent. I might go further, and say that during Denman's time, *and until quite recently*, we had actually lost ground in this respect, and had reverted to the use of instruments scarcely better than the original rude forceps of the Chamberlins. More than one hundred years ago, Smellie contrived and used the long forceps. Perfect used it; and it seems that in his time the long forceps was better known than it was at the beginning of the present century."

Teachers of cowardly midwifery, then, have existed, though now they have passed away. To their surviving pupils we earnestly recommend Dr. Barnes's lectures. Meanwhile, good as our present teaching may be, we may ask if it be adequately conveyed by existing machinery to the brains and bosom of the average pupil.

THE WEEK.

TOPICS OF THE DAY.

In the enumeration of the candidates who will represent the Profession of Medicine in the new Parliament which we published last week, we inadvertently omitted the name of Mr. Mitchell Henry, of whom, however, on previous occasions we have spoken as a candidate for Manchester. Mr. Henry especially deserves well of the Profession. During several years he was an active and useful member of the Surgical staff of the Middlesex Hospital, and he filled with untiring zeal the office of Secretary to the Pathological Society. The inheritance of a large fortune has cut short Mr. Henry's career of active Professional practice, but it is well known that he has not lost his interest in the science to which he formerly gave so much labour, or his sympathy for those who

(c) Third edition (1866), p. 133.

(d) "Lectures on Obstetric Operations," *Medical Times and Gazette*, July 27, 1867.

are still cultivating it. We hope that he will obtain the active support of the Medical men of Manchester.

Dr. McDonnell, one of the Irish Poor-law Commissioners, has written to Sir Dominic Corrigan in explanation of the fact that he has departed from his usual course of political inactivity in sending a cheque for £100 towards defraying Sir Dominic Corrigan's election expenses. He states that, had he viewed Sir Dominic Corrigan's candidature in its merely political aspect, he should not have departed from his ordinary course; but he has thus liberally supported him because he regards him as the representative of the Medical Profession. We may add our regrets that the present state of political feeling in Ireland has prevented many of Sir Dominic Corrigan's Professional brethren from following an example so handsomely and loyally set by Dr. McDonnell.

We are very sorry to notice that Mr. Alfred Smee, F.R.S., the Medical candidate for Rochester, has issued an address intimating the possibility of his not continuing the contest; at least, he announces that if he does not receive the support he anticipates he shall not go to the poll. As in the case of Sir Dominic Corrigan, with Mr. Smee's view of party politics we, in this journal have no concern, but we should exceedingly regret Mr. Smee's absence from the new Parliament, and we should be very sorry, in case of his perseverance in the contest, if he lacked the support of the Medical Profession in Rochester.

We notice that Mr. Kay-Shuttleworth, a gentleman who has made a reputation by his scientific writings, is offering himself as a candidate for North-east Lancashire. Mr. Kay-Shuttleworth, who is a son of the late Sir James Kay-Shuttleworth, is on the Liberal side in politics. He is the author of "First Principles of Modern Chemistry."

Mr. John Collins, the Chairman of the School Committee of the St. Pancras Guardians, has attacked this journal in the *Times* of Tuesday last, because we republished and commented on a statement that had previously gone the round of the newspapers—that pauper children in St. Pancras cost 11s. 3d. a head per week. The statement, he says, is based upon a pure fabrication, and he then proceeds to enter upon an explanation, to which we shall afterwards refer. With regard to the truth or falsity of the statement, we must, in the first place, say that we are not responsible for it. It was first made by a ratepayer at a public meeting in St. Pancras. It was published and commented on in the *Pall-mall Gazette*, and was thence transferred to the *Times*. During this time we are not aware that any contradiction of the statement was offered. The general justice of our commentary, however, is completely borne out by Mr. Collins's letter. Mr. Collins informs us that a large proportion of the St. Pancras pauper children are at the Central London District School at Hanwell, and are paid for at the rate of 7s. per week each. Now, when we remember that there are numbers of ratepayers in St. Pancras who, having wives and families of four, five, or six children to support, cannot, by any means in their power, earn more than 30s. to 35s. a week during the twelve months of the year—and it will be acknowledged that we take no extreme case—the injustice of the expenditure is obvious. But there is more behind. The working ratepayer, besides being taxed to support children at a far higher rate of outlay than he can possibly devote to his own, has still to pay his share of the principal and interest of the sum of £50,000 which is to be spent on the Leavesden schools, and must be repaid by the parishioners in thirty years. Now, according to Mr. Collins's figures, which we do not for a moment wish to dispute, it will be seen that if the Leavesden expenditure be added, as it may fairly be, to the cost of pauper children in St. Pancras parish, the payment which each child will represent will not fall very far short of the sum stated by the indignant ratepayer. We may add that, during the lifetime of the present generation, there will be no escape from the enormous outlay. But St. Pancras, in this respect, is only following suit with the rest of London. Pauperism in the metropolis, as may be gathered from the last annual report of the Poor-law Board, is steadily gaining upon the self-supporting population. In the year ending at Lady-day, 1867, as in the previous year 1865-66, the average increase of expenditure for the relief of the poor over the whole metropolitan district has been 20 per cent. Meanwhile the vast sums which are raised from the ratepaying classes, whilst on the one hand they encourage the pauper, on the other pauperise the ratepayer. Where is the stimulus for the artisan to work and lay by for his children, when he knows that if he spends his earnings at the beershop his children will be far better fed and clothed and housed than he, with the utmost self-denial, could possibly feed, clothe, and house them? And why should he put by a weekly shilling against a rainy day when he is quite aware that when the rainy day comes he will be excellently lodged and fed and scientifically doctored and physicked at the public expense? We would not urge one word to lessen the public sense of national responsibilities or to diminish the stream of private almsgiving. But we believe that the shortest way to extinguish all energy and self-reliance amongst the lower orders is to tax them heavily for the support of the pauper, and at the same time to demoralise them with indiscriminate charity.

The Committee of the Council of the British Medical Association have issued an address to the members of the Association and the Profession at large, wherein they urge the necessity of obtaining representation of the whole Profession in the Medical Council, and they call for a united effort to obtain that object. The arguments which they advance are—First, that the Profession, as a body, is unrepresented in the Medical Council; that they have no voice in the selection of the Government representatives; and that the remainder of the Council is composed of the representatives of Universities, corporations, and licensing bodies, whose first care is to look after the interest of their constituencies. Secondly, that neither the Government nor the Medical corporations contribute anything to the support of the Council, the expenses of which are defrayed out of the fees paid for registration by the Medical Practitioner. Thirdly, that the Medical Council during the ten years of its existence, has failed to remove the most serious of the anomalies and evils which are entwined with the present system of Medical education, and that all its efforts to obtain an Amended Medical Act have proved abortive. The Committee then proceed to examine the causes which have led to these failures, and they refer them to three heads:—1. The defective composition of the Council as a representative body. 2. The want of external support from the Profession; and 3. The want of power—a want which of course can only be supplied by fresh Parliamentary legislation. They conclude by an appeal to the members of the Association to impress upon candidates for Parliament the desirableness of including in any future Bill for the amendment of the Medical Act a clause for the direct representation of the Profession in the Medical Council. We certainly can take no objection to the general tone of this address, nor can we dispute the facts which lie at the base of its argument. But even if we admit that the supposed universal panacea of representation would remove all the grave evils complained of, we very much fear that a long time must elapse, and great changes take place in Professional feeling, before the remedy could be possibly tried. In the first place, were the Profession of Medicine a united body, were it possible to get its members to join for any common Professional object at the sacrifice of their individual political opinions, there might be some reason to entertain a hope that they would get their wishes fairly represented in the House of Commons. But the experience of the present election does not certainly encourage any such expectation. With regard to the General Council, it has already refused to

move in the matter, and it is not at all probable that the separate bodies who are already represented in it will encourage any reform which will diminish their monopoly of power. But if ever the subject were brought forward in Parliament, and the experiment of remodelling the Council once set about, we should advocate an enlargement of the powers and an enlargement of the constituency of the Council, but not of its members.

We regret very much to announce that the Court of Appeal has refused a rule for a new trial in the case of Spear *v.* Doidge. The Chief Justice is reported to have said that the Court had consulted with Mr. Baron Channell, and he was of opinion that the case was peculiarly one for a jury, and, the jury having decided it, he could not say he was dissatisfied with their verdict. We hope that the Medical Profession will show that they do not share Mr. Baron Channell's satisfaction by a liberal response to the appeal for funds to meet the heavy legal expenses entailed on Mr. Doidge by a trial from which, had he been a quack and not a qualified Surgeon, he would undoubtedly have emerged unaffected in reputation and uninjured in pocket.

The undoubtedly legal but very ungallant decision of Lord Chief Justice Bovill and Justices Willes, Keating, and Byles, in the case of Charlton *v.* Lings, has settled the question of female suffrage for the time being, and, we suspect, for some time to come. Whatever *doctrinaires* and blue stockings may talk and write on the subject, it is not very likely that our future rulers, the working men, will be readily persuaded to make over any of their newly acquired power to women. It will be a long time before Mr. Mill and Mr. Fawcett will persuade them into that. We only hope that if the aggressiveness of the fair sex threaten an onslaught upon certain of the Medical Examining Boards who are bound by the provisions of Acts of Parliament and royal charters, those Boards may obtain an equally common-sense decision with that delivered by the judges on female suffrage.

A woman living in Tunbridge Wells has been sent to gaol for two months on a charge of professing to tell fortunes. The woman, it seems, had the reputation of being a witch, and practised on the fears and pockets of her neighbours. It it curious how the belief in witchcraft lingers in England. In many counties a wise woman or witch is to be found in every district, and is often consulted even by women moving in respectable society. Spirit-rapping has not yet routed the older superstition.

The case of the British Equitable Insurance Company *v.* the Great Western Railway Company, which was decided in the Vice-Chancellor's Court on Wednesday, is a somewhat important one. A policy for life assurance was disputed on the ground that after the assured person had been examined and accepted by the office, but before he had made his first payment, he had been examined by another Medical man, who intimated to him that his health was seriously affected. The assured died of heart disease eight months afterwards. The Vice-Chancellor, Sir R. Malins, in summing up, said that the suppression by the assured of the material circumstance of his having consulted another Medical man vitiated the policy, which must be delivered up to be cancelled. It was not requisite that he should have told them what that opinion was, but the fact ought to have been communicated.

Dr. B. W. Foster has been elected Physician to the General Hospital, Birmingham, and Mr. W. P. Goodall Surgeon. Both appointments were made without opposition. We notice that Dr. Fleming is endeavouring to obtain a training school for nurses in connexion with the Queen's Hospital in the same town.

At Eastbourne complaints are rife on the subject of the escape of gases from the sewers through the openings made for ventilation, and the consequent effect on health. At a late meeting of the local Board, Dr. Jeffery said that, during an experience of twenty years, he had never known so many cases of low fever in the parish of Eastbourne.

The death of Dr. Hillier has left the Medical Officership of Health for the parish of St. Pancras vacant. The post, we hear on good authority, will not be filled up until a temporary engagement made with Dr. Green, who in Dr. Hillier's absence performed the duties, has expired.

THE GAS EXAMINER TO THE CORPORATION OF LONDON.

We understand that it is likely that Dr. Septimus Gibbon, the Medical Officer of Health for the Holborn district, will succeed Dr. Letheby as Gas Examiner to the Corporation of London, having been selected as the best man by the Gas Committee. Dr. Gibbon is a graduate in Arts and Medicine of the University of Cambridge, where he obtained a good place in the Mathematical Tripos, 1849—viz., Fourteenth Senior Optime—partly through his knowledge of optics and the laws of light. Subsequently he lectured during four years on "Optics" and the other branches of natural philosophy in the Medical School of St. Bartholomew's Hospital. For nearly thirteen years he has acted as Medical Officer of Health to the Holborn district, and since the passing of the Metropolis Gas Act, 1860, has frequently been employed by the local authority to test the purity and to examine the illuminating power of the gas supplied to that district. It may not be known to all our readers that the office of Gas Examiner is held by many of the Medical Officers of Health, and that as, in the sequence of things, the establishment of a gas factory in a town is followed by squabbles as to quality and price, and a wish on the part of the inhabitants to make the gas for themselves, so there are many Medical Practitioners in small towns who may find the office of gas examiner an occupation for spare evenings and an addition to their pocket-money. If not Cambridge Senior Optimes like Dr. Gibbon, they may find it worth their while to acquire a fair knowledge of chemistry and physics, and to conjoin therewith enough commercial astuteness to qualify them to deal with the tricks of the gasmen.

THE MEDICO-CHIRURGICAL SOCIETY.

There has perhaps been no occasion in the annals of modern Surgery where such a triumph of a well-contested cause was witnessed as at the first meeting of the Medico-Chirurgical Society on Tuesday night. It was the occasion of the reception of two excellent papers on the excision of joints, by Mr. Henry Lee and Mr. Humphry, but with more especial reference to the knee. Both writers showed in the most incontestable manner that not only has excision of the knee-joint become an established operation in Surgery, but that it has most worthily become so. It was to be expected, in the discussion which followed, that some one would be found bold enough to resist such a doctrine as was enunciated by the writers of the respective papers, but the President led off with the declaration of the acknowledgments due to Sir William Fergusson for having revived the operation, and with the most emphatic admission that the more he became acquainted with the operation, the more he was in love with it; and, with one solitary exception, no one wished to controvert these sentiments. Speaker after speaker, representatives of various schools, followed, and hardly seemed able to find language warm enough in which to express their appreciation of excision of the knee and hip. A gentleman representing the army, Mr. Barwell, Mr. Thomas Smith, Mr. Maunder, and Mr. John Wood, added their testimony to that of the writers of the papers and of the President, in strong corroboration of the views expressed. But Mr. Skey, true to his principles as a pupil of Abernethy, and, as he himself stated, as one belonging to a "slow school of Surgery," and who almost had a "dread of expert operations,"

whilst admiring the brilliant results which had in some cases been produced, could not help hinting pretty broadly that Mr. Humphry had had much more than his share of cases of excision at a small Hospital like that at Cambridge, and that the operation was not found to be necessary at a large Hospital like that of St. Bartholomew's in anything like the same degree. Hereupon Mr. Thomas Smith, in the most pitiless manner, made a swoop upon his old teacher, and told the audience that his colleagues at St. Bartholomew's did now perform the operation perhaps as frequently as did Mr. Humphry. Mr. John Wood also hit hard at Mr. Skey by stating that at King's College Hospital they had excised cases when they had been condemned to amputation at St. Bartholomew's. It was impossible to leave that room without feeling that the days of amputation for diseased knee-joints are numbered; and it is instructive to reflect what a storm of disapprobation was aroused against the promoters of this operation a few years ago, and how difficult it was for those few men who were striving hard to establish it to get even a hearing. We recollect well that in a well-known review in a contemporary the term "mountebank Surgery" was applied to the efforts of these men, but they can now look back with complacency upon such opposition, and can feel that their efforts have been crowned with complete success. There is a touch of melancholy about the matter also. It brings back the names of Jones of Jersey, Mackenzie, and poor Price, who died all too soon for the art which they loved so well. But some of the earlier operators, as Humphry, Butcher, Edwards, and H. Smith, are spared to see their principles established and their example followed both by seniors and juniors.

PARASITIC THEORIES OF DISEASE.

Much attention has recently been drawn to the notions of disease originating with Linnæus, who supposed that minute organisms constituted the *fons et origo* of all maladies. Probably no researches, with the exception of those made by Professor Hallier, have received greater attention than those of the American investigator, Dr. Salisbury, who has satisfied himself as to the vegetable nature of the parasites which produce intermittent fever, measles, rheumatism, syphilis, etc. In the recently published number of Isaac Hays' *American Journal of the Medical Sciences*, in the pages of which Dr. Salisbury's communications originally appeared, we find a very smart and a very telling article by Horatio C. Wood, jun., Professor of Botany in the University of Pennsylvania, opposing the notions of Professor Salisbury. He shows, first, as to intermittent fever, that the habits of the Palmella, supposed to produce the disease, are totally opposed to such a supposition, being a plant which needs light, and does not flourish on decaying organic matter, as do fungi. Further, these plants by themselves do not produce ague, as has been shown in his own case, whilst their universal diffusion readily accounts for their presence in malarious localities—the wonder would be were they absent. Dr. Salisbury maintained that measles were produced by a fungus which attacks straw, and accounted for the prevalence of camp measles in the United States armies by the soldiers sleeping on straw. Experience and experiment, as shown by Dr. Wood, both go against him. Most cases of camp measles could be distinctly traced to infection, some of the soldiers being attacked before they slept on straw at all. Further, those seized were mostly countrymen who had not before suffered from the disease, and how to account for the more extensive prevalence of measles in town than in the country, where of course straw is most abundant, is no easy matter. As to experiment, a number of children were inoculated with the supposed measle fungus, and nothing came of it. In the case of rheumatism and syphilis, the endeavour to give a fungoid theory of the disease is still more hopeless; the peculiar history of these maladies, as compared with those of diseases undoubtedly the result of vegetable growths, shows how essentially different they are. Dr. Wood has examined specimens prepared by Dr. Salisbury, but can find in them nothing more than is to be found in any carelessly mounted microscopical object. In one instance the field of the microscope was filled with a mass of blood crystals. Both Dr. Wood and Dr. Pepper have again and again examined syphilitic patients, but have invariably failed to find anything more than the *débris* of wasting tissues in the sores supposed to be due to the *Crypta syphilitica*. To say that Dr. Wood has utterly demolished Dr. Salisbury's views would perhaps be too much before we have heard what the latter has to say. At all events, he has done a good work in forcing inquiry into doctrines likely to be assumed as true without much investigation.

FROM ABROAD.—DISPOSAL OF THE DEAD—ARSENIC IN PHTHISIS.

Baron Haussmann's threatened attack upon the Paris cemeteries—and which indeed, as regards the Montmartre, cannot long be delayed—having caused much excitement at Paris, M. Latour, in the interests of hygiene, recurs to a proposition made by him several years since. He observes that the question, "What are we to do with our dead?" in the face of a continually increasing population, is one of the highest import to society. Much as we may respect, love, and almost worship the memory of the dead, the living have a still greater claim on our attention. Suppose that Egyptian civilisation had undergone no alteration, and that the manners and customs engendered by it, gradually extending over the entire world, had led to the universal embalming of the bodies of the dead, we may be pretty certain that by this time the dead would have displaced the living, and no corner of a territory, however large, would be without its mummy. Again, suppose that cremation had universally prevailed, if only from the time of Socrates, mankind might ere this have perished from cold owing to the want of combustibles; and the funeral urns would have required a space for their deposit of which one can form no conception. That occupied by the Louvre and the Tuileries united would not have sufficed for the lodgment of the urns of the descendants of a single family. Inhumation is, in fact, the sole mode possible and practicable of disposing of the bodies of the dead, and that only on the condition of restoring to the purposes of cultivation, after a given period, the spaces of ground consecrated as cemeteries. In round numbers, 50,000 persons per annum die in Paris, and can, or ought, perpetual sepulture be provided for this large number by rendering the cemeteries for ever inalienable? If this were done, at the end of some centuries Paris would find itself surrounded for twenty leagues round by an immense necropolis devoted to sterility. If, too, all communes followed the practice, France itself would in the course of time be converted into a gigantic cemetery.

Reason, foresight, and hygiene alike point to the adoption of a system of temporary cemeteries, and any attempt to establish permanent ones is a utopia which the necessity of things must always prohibit. The earth is the common reservoir of the sources of life. All which has lived dies, and all which dies is transformed into new principles of life. To oppose this fatal law of nature is at once contrary to reason and to Scripture, which assures us that man must return to the dust whence he sprang. Under the penalty of sterility, we must restore to the land the phosphates, carbonates, and other fertilising elements which our bodies contain; and so far from favouring the tendency to perpetual concessions, contriving ingenious procedures for durable preservation, and enclosing bodies in impermeable vaults, we should recommend, and if necessary compel, just the contrary, in order that every human being on dying may prove useful, even by his remains, to the generation that is to follow him. Such ideas may seem harsh to some, but this is only for want of reflecting that con-

sideration for the living should precede that for the dead. The problem is that every portion of land consecrated to a corpse is taken from a living being. Are we to eternally render such land sterile? If so, as there die about a million of persons per annum in France, while a few more than this are born, what shall be done with the latter after the former have been provided with eternal sepulture? All may be conciliated by the adoption of temporary cemeteries. Long experience has proved that after forty years the tombs which have been conceded in perpetuity no longer are tended by pious hands. The cemeteries, then, should be closed every forty years, and ten years after the last interment they should be restored to culture, a new place of sepulture being established. And so on from age to age.

At the last meeting of the Académie de Médecine, M. Hérard read a report on a memoir presented by M. Moutard-Martin, "On the Value of Arsenic in the Treatment of Phthisis." The reporter observed that the question of the efficacy of arsenic in this disease had been frequently treated of, but that the observations hitherto published were defective in exactitude. Such a reproach cannot be directed against the present author, who, long accustomed to clinical practice, has taken care to furnish exact indications not only as to the nature, but the stage of the disease, and the particular form it exhibited. Moreover, he has detailed the effects of the arsenic treatment employed exclusively. Almost all the patients, after a few days' treatment, exhibit a marked improvement in their general condition. The appetite improves, the strength returns, the complexion is clearer, and the eye is more animated; and, at the end of three weeks or a month, flesh begins to be gained. The local malady undergoes less change, but even this is sometimes sensibly modified. The favourable action of the arsenic is most observed in cases in which there is no acute fever or serious digestive disturbance, When there is intense febrile heat, whether continuous or remittent, and this is accompanied by much sweating, vomiting, and diarrhœa, and especially when the phthisis is acute, there is little or no amelioration, or this is not durable. The results have been found to be much more favourable among patients in private practice, who are placed in better hygienic conditions, than in Hospital patients. The first appreciable effect of the administration of arsenic is the return of the appetite, whether this results from its direct action on the mucous membrane of the stomach, or from its more general operation as a tonic and neurosthenic. Another important effect it produces is that it moderates the oxidation of tissue, and thus efficaciously opposes denutrition. M. Lolliot, the most recent observer, finds that the daily administration of ten milligrames of arsenicus acid produces a diminution of temperature and a very notable diminution in the amount of area. The reporter is inclined to believe that arsenic may exert a direct action on the lung, as the respiratory mucous membrane is one of the channels of its elimination, while it proves useful in chronic bronchitis and asthma, and is resorted to by the peasantry in the Tyrol and elsewhere to facilitate their respiration during the ascent of high mountains. The arsenious acid should be administered in the form of pills or granules, each containing one milligrame, seven or eight of which may be taken at first per diem, rapidly increasing the number to ten or fifteen, and very rarely even to two centigrammes. By taking care so to divide the doses as not to give more than two pills at a time, and that when possible before meals, all accidents are avoided. It is only very rarely that it becomes necessary to suspend the medicine or diminish its dose on account of slight temporary gastro-intestinal disturbance. Still it is necessary, as a matter of precaution, from time to time to suspend the treatment. This important memoir, the reporter observes in conclusion, will greatly contribute to establish the entire harmlessness of this substance when properly administered, as well as its indubitable efficacy.

REVIEWS.

The Variation of Animals and Plants under Domestication. By Charles Darwin, M.A., F.R.S., etc. Two vols. 8vo. London. 1868.

Anthropologie. Cours de M. de Quatrefages. Reported in the *Revue des Cours Scientifiques.* 1868.

La Variabilité des Espèces et ses Limites. Par Ernest Fairre. 1868. Paris: Baillière. London: Williams and Norgate.

[Second Part.]

The greater part of Mr. Darwin's first volume was made up of a series of essays on various animals and plants, in which the author collected all the facts he could meet with to show the amount and nature of the changes induced by domestication and to illustrate the general principles of variation. The second volume, which we now proceed to notice, consists of a series of general discussions on the subjects of inheritance, crossing, sterility, hybridism, selection, variability and laws of variation, and the hypothesis of pangenesis, by which the author shows the means by which characters of all kinds are transmitted from generation to generation. The subject of inheritance is one of such vast extent that we must confine ourselves to a few of the leading points touched on by Mr. Darwin. Several recent writers of high position, amongst whom the late Mr. Buckle must be included, have called in question the force of inheritance. Their doubts must have arisen from their ignorance of facts known to all breeders of animals from the earliest time. From the first history of Arabian horses we find that their pedigrees were carefully recorded; and can we suppose that it is not without good reason that, during the many years that horse-racing has been carried on in this country, the same system has been studiously carried out? The prices which yearling colts, owning a high descent, produce afford a practical answer to this question. It is the same with shorthorn and other cattle. If inheritance is not to be believed in, why should a thousand guineas or more be given for a bull? The same remarks apply to dogs (especially to greyhounds), to gamecocks, and to pigs, the breeders preserving and printing pedigrees. It is hardly possible in a moderate space to impress on the minds of those who have not specially studied the subject a full conception of the force of inheritance. The following are a few of the facts which have most influenced the author's mind. In man and the domestic animals certain peculiarities have appeared in an individual at rare intervals, but have reappeared in several of the children and grandchildren. Thus the porcupine-man, whose skin was covered with warty projections, which were periodically moulted, had all his six children and two grandsons similarly affected. In three successive generations of a Siamese family the face and body were covered with long hair, accompanied by deficient teeth, and other cases of completely hairy faces are recorded. A race of two-legged pigs has been described, the hinder extremities being entirely wanting, and this peculiarity was transmitted through three generations. And the cases of the Mauchamp sheep and niata cattle, previously described, are similar instances, except that the deviations of structure which they present are more persistent.

In some respects the evidence of inheritance is more striking in the reappearance of trifling peculiarities, as of a single lock of hair differently coloured from the rest, the similarity of handwriting, peculiar manners, etc. Of these last Mr. Darwin gives the following curious case which fell under his own observation:—"A boy had the singular habit, when pleased, of rapidly moving his fingers parallel to each other, and when much excited, of raising both hands, with the fingers still moving, to the sides of his face, on a level with the eyes; this boy, when almost an old man, could hardly resist this trick when much pleased, but from its absurdity concealed it. He had eight children. Of these, a girl, when pleased, at the age of four and a half years, moved her fingers in exactly the same way; and what is still odder, when much excited, she raised both her hands, with her fingers still moving, to the sides of her face, in exactly the same manner as her father had done, and sometimes even still continued to do so when alone. Imitation was, in this instance, out of the question" (vol. ii. p. 6). If any one who doubts that genius and talent are hereditary will glance over a few pages of that most valuable little book, Hole's "Brief Biographical Dictionary," in which a life is almost invariably condensed into a single line, or will read Mr. Galton's able paper on this subject (published in *Macmillan's Magazine* for 1863), his doubts will soon be dispelled. The ancients were as well acquainted as

we are with the hereditary tendency of various forms of disease, as gout, insanity, consumption, cancer, etc. Confining his remarks to a single organ, the eye and its appendages, Mr. Darwin adduces evidence of the following inherited malformations and diseases:—1. Drooping eyelids; 2. A peculiar arrangement of the hair in the eyebrows; 3. Morbidly long sight; 4. Short sight; 5. Squinting; 6. Cataract; 7. Amaurosis; 8. Congenital absence of the iris; 9. Cleft iris (this has been noticed for four generations, being limited to the males); 10. Opacity of the cornea; 11. Day and night blindness (a case of the latter is recorded which ran through six generations and affected eighty-five persons); and 12. Daltonism or colour blindness, which has been traced through five generations, in which it was confined to the female sex. Even if we knew nothing of hereditary diseases and malformations in man, the horse would supply abundant evidence. Ringbones curbs, splints, spavin, roaring, blindness, crib-biting, jibbing, and ill-temper are generally recognised as hereditary. Fortunately good qualities, as sound health, vigour, and longevity, are equally inherited, both by man and animals, with evil qualities.

Inequalities in the two sides of the body, though opposed to the law of symmetry, may be transmitted. Thus a rabbit produced in a litter a young animal with only one ear, and from this animal a breed was formed which steadily produced one-eared rabbits; and a case is related of a one-horned stag that was seen in a German forest in 1781 which originated a breed of stags having only one horn on the right side of the head. There is a considerable amount of evidence showing that even mutilations and the effects of accidents, especially, or perhaps exclusively, if followed by disease, are occasionally inherited; but this is a subject on which it is difficult to come to a conclusion. Against this view is the fact that a vast number of generations have practised the rite of circumcision, but that the operation is as much called for now as in the days of Abraham. On the other hand, it must be stated that Blumenbach asserts that in Germany Jews are often born in a condition rendering circumcision impossible, and to these a term signifying "born circumcised" is applied. The perpetual repetition of the operation for nearly forty centuries has produced, as is generally believed, no inherited effect. Various other mutilations have for ages been practised by savage races, but, as in the case of the Jews, without inducing any apparent tendency to inheritance. But in favour of this view, on the other hand, there are many cases on record of cats, dogs, and horses which have had their tails, legs, etc., amputated or injured, producing offspring with the same parts ill-formed; indeed, Professor Lucas, in his great work "De l'Hérédité Naturelle," gives so long a list of apparently well-authenticated cases of this kind, that it is hardly possible not to believe in them. Amongst other cases quoted by Darwin is that of a soldier who, fifteen years before his marriage, lost his left eye from purulent ophthalmia; his two sons were microphthalmic on the same side. Guinea-pigs afford one of the most remarkable facts in favour of this view, it being ascertained by Dr. Brown-Séquard that by performing a certain experiment on these animals he could induce a form of epileptic disease, which in many instances was inherited by their progeny.

In reference to inheritance generally, Mr. Darwin observes that the wonder is not that any characters should be transmitted, but that the power of inheritance should ever fail, and he mentions the following as checks to uniformity:—(1) Circumstances hostile to the peculiar character in question—thus, dray-horses would not long transmit their great size if compelled to live in a cold, damp, mountainous region; (2) conditions of life incessantly inducing fresh variability; and (3) the crossing of distinct varieties during some previous generation, together with reversion or atavism—that is, the tendency of the offspring to resemble its grandparents or more remote ancestors instead of its immediate parents.

Reversion, or atavism, has been recognised both in man (a) and animals from the earliest period, but it is only in recent times that it has received the attention to which its physiological importance entitles it. The cases of reversion may be divided into two principal classes—namely, (1) those occurring in a variety which has not been crossed, but has lost by variation some character that it formerly possessed, and which afterwards reappears; and (2) those in which an individual subvariety, race, or species has formerly been crossed with a distinct form, and a character derived from this cross, after disappearing for one or more generations, suddenly reappears. Examples of the first class are often seen in pigeons, in the occasional reappearance, in variously coloured pure breeds, of blue birds resembling the original stock; in the appearance in the common ass of the stripes which normally exist on the legs of its wild progenitor; in the occasional birth of a horned calf amongst Galloways and Suffolk cattle which have been hornless for the last century or more, etc. Analogous cases are seen in the vegetable kingdom, where, for example, the seeds of the finest cultivated varieties of heartsease often yield perfectly wild plants; and in most of our cultivated vegetables there is the same tendency to reversion to the original state. The second form of reversion—that, namely, where there has been a cross—is well illustrated by the following case, which was communicated to the author on good authority. A pointer bitch produced seven puppies, four of which were marked with blue and white, which is so rare a colour with pointers that she was thought to have had an illicit amour with a greyhound, and hence the litter was condemned. One, however, was saved as a curiosity, and two years after a friend of the owner saw the young dog, and declared that he was the image of his old pointer bitch, Sappho, the only blue and white pointer of pure descent he had ever seen. On inquiry, it was found that he was great-great-grandson of Sappho, so that he had only one-sixteenth of her blood in his veins. Here we have a character derived from a cross reappearing after passing over three generations.

When two distinct races are crossed, the tendency of the progeny to revert to one of the parent forms is very enduring. In a litter of Essex pigs, two young ones appeared which were the image of the Berkshire boar that had been used twenty-eight years before in improving the breed; and a case is recorded of fowls showing a likeness to the Malay breed, although the cross had taken place forty years previously. Hence it is difficult to say when a breed that has once been crossed is safe from all danger of reversion; most breeders think six, seven, or eight generations are necessary.

The effect of crossing on the disposition and temper seems to be established beyond a doubt. When a domesticated animal is crossed with a distinct species, whether this is a domesticated or only tamed animal, the hybrids are often wild to such a degree that the fact can be only explained on the supposition that the cross has caused a partial return to the primitive disposition. In corroboration of this statement, Mr. Darwin quotes cases of the crossing of some domesticated humped cattle from India with English breeds of a distinct species; of the crossing of a domesticated Chinese sow with a naturally wild Alpine boar which had become very tame, and yet the progeny was extremely wild, and "would not eat swill like English pigs;" of the crossing of tame cock-pheasants with fowls of different breeds, etc. Some exceptions have, however, been noticed—the offspring of crossed canaries, for example—and mules from the horse and ass are not wild,(b) although their tempers are often notoriously bad. These facts remind us of the statements made by travellers regarding the debasing effect of the crossing of different human races. Mr. Darwin himself, long before he had taken up the special subject which has made his name a household word, was struck with the fact that in South America men of a complicated descent between negroes, Indians, and Spaniards seldom had a good expression.(c) Agassiz, in his recent voyage up the Amazon,

(a) In a very curious work by Helkiah Crooke published in 1615, and entitled "Description of the Body of Man," we happened to meet with the following passage bearing on this subject:—"So Helis, who accompanied with an Æthopian, did not bringe foorth a blacke daughter, but yet that daughter of hers brought foorth a blacke sonne. And Museus, the poet of Constantinople, though begotten of white parents, did degenerate into the colour of his grandfather, who was an Æthopian" (p. 311).

(b) If Mr. Darwin had seen Mr. Harvey Riley's treatise on *The Mule*, just published at New York, he would scarcely have made this hybrid an exception to the general rule regarding wildness. As Mr. Riley, in a single year's official duty, examined 74,000 mules, he must be regarded as qualified to write with authority. He tells us that, from its birth, the mule betrays fear of man, and that as a general rule "mules are born kickers. Breed them as you will, the moment they are able to stand up, and you put your hand on them, they will kick." He thinks, however, that their natural timidity is heightened by the rough treatment which they commonly experience in the process of training. Amongst other useful information contained in this volume, we learn that "if any gentleman wants to purchase a mule for the saddle, let him get one bred closer after the mare than the jack. They are more docile, handled easier, and are more tractable; if possible, also get mare mules." Stud mules are described as more troublesome and useless than any other animals. "It is next to impossible to keep them from breaking loose and getting at mares, and they are exceedingly dangerous to have amongst horses. They will frequently fly at the horse like a tiger, and bite, tear, and kick him to pieces. I have known them to shut their eyes, become furious, and dash over both man and beast to get at a mare; and a *white* mare seems to have the greatest attraction for them."

(c) *Journal of Researches*, 1845, p. 71.

has made some most important observations on this subject, and Livingstone's evidence regarding African and Portuguese half-castes tends in the same direction. There is something truly epigrammatic in the statement made by an inhabitant of the Zambesi region to the last-named traveller—"God made white men and God made black men, but the Devil made half-castes."

Prepotency in the transmission of character is a subject to which we next devote a few words. When individuals of the same family, but distinct enough to be recognised, or when two well-marked races or two species are crossed, it is not unfrequently found that certain individuals, races, or species are *prepotent* in transmitting their likeness.

In certain families—as the Austrian royal family—some one ancestor, and after him others in the same family, must have had great power of transmitting their likeness through the male line. The famous bull, Favourite, is believed to have had a prepotent influence on the shorthorns, and similar observations have been made on racehorses of both sexes. In crossing races the prepotency is sometimes stronger in one sex and sometimes in the other. On crossing a male Manx cat (which has no tail) with common cats, Dr. Wilson found that out of twenty-three kittens seventeen were destitute of tails; but when the female Manx cat was crossed by common males all the kittens had tails, though they were generally short and imperfect. In crossing species we find that the jackal is prepotent over the dog, and the ass is prepotent over the horse, the prepotency in this case running more strongly through the male than through the female ass. The whole subject of prepotency is extremely intricate for various reasons, amongst which may be mentioned its great variability in strength in different animals, its sometimes running equally in both sexes, and sometimes strongly preponderating in one, etc. Hence no general laws can be laid down regarding it.

Limitation of inheritance by sex is a subject of considerable importance. New characters often appear in one sex, and are more or less exclusively transmitted to that sex. Thus, the porcupine-man transmitted his peculiarity to his sons and grandsons, while the female progeny were unaffected; and many similar cases are quoted by Mr. Darwin, most of them taken from Dr. Prosper Lucas's great repertory of facts bearing on this and kindred subjects.

In our domesticated animals we sometimes find that characters not belonging to the parent species are confined to one sex alone, although we do not know the history of the first appearance of such characters. Thus, in certain races of sheep and goats the males differ greatly from the females in the shape of the horns, which in some female breeds are absent. The colour called tortoise-shell is rarely seen in a male cat; and many other cases might be given.

The last point to notice in connexion with inheritance is its latency in the offspring up to the age corresponding to that at which it originally appeared. For example, short-sightedness, greyness of the hair, gout, insanity, etc., often appear in the offspring at the same age as they appeared in the parent from whom they have been inherited. Certain pigeons do not attain their peculiar plumage until the bird has moulted two or three times; and many similar illustrations might be given.

We have not space to attempt to follow our author through his highly instructive chapters, bristling with facts, on the subject of crossing, and must content ourselves with giving some of his conclusions.

"The evil consequences of long-continued close interbreeding are not so easily recognised as the good effects from crossing, for the deterioration is gradual; but it is generally held by the best qualified judges that the evil is sure to follow, sooner or later, and at different rates in different animals. A male animal may sometimes be paired with his daughter or granddaughter, and so on, even for seven generations, without any manifest bad result; but the experiment has never been tried of matching brothers and sisters, which is regarded as the closest form of interbreeding, for an equal number of generations. There is good reason to believe that by keeping the members of the same family in distinct bodies, especially if exposed to somewhat different conditions of life, and by occasionally crossing these families, the evil results—such as loss of constitutional vigour, size, and fertility—may be much diminished or quite eliminated." In the case of pigs, first-rate animals have been produced after long-continued close interbreeding, although they became very infertile when paired with their near relations. Although offspring descended from the nearest relations are not necessarily deteriorated in structure, many good observers believe that they are specially liable to malformations and imperfections of various kinds (as blindness, deafness, etc.); and, observes Mr. Darwin, "this is not improbable, as everything which lessens the vital powers acts in this manner" (vol. ii. p. 143). From the evidence collected by Professor Devay and other writers, we think that Mr. Darwin might safely have expressed a more decided opinion on this point.

(To be continued.)

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

EDINBURGH, November 10.

I CANNOT remember any occasion in which the opening of our session was accompanied by so many or so exciting contests for various appointments connected with the University. The Chancellorship is vacant, and partisans are warmly advocating the claims of the two candidates; Mr. Carlyle's term of office as Rector will shortly close, and the students have already subdivided themselves into numerous sections, each of which supports a claimant with the spirited and somewhat noisy energy of youthful electors; and the University Council is now, for the first time, taking its share in the party strife that, in normal circumstances, accompanies the election of a member of Parliament.

It is scarcely necessary to remind your readers that the two candidates for the Chancellorship are Mr. Gladstone and the President of the Court of Session, Mr. Inglis. At the end of October, the Council met for the formal nomination of these candidates, when the election of Mr. Inglis was moved by Professor Maclagan, seconded by the Rev. Mr. Phin, and the election of Mr. Gladstone by Sir James Y. Simpson, seconded by the Rev. Dr. Guthrie. The claims of the candidates could scarcely have been entrusted to more able pleaders. We have seldom heard a speech on a similar subject characterised by greater ability and force of reasoning than that of Dr. Maclagan. Sir James had the difficult task of reply, and, although he spoke admirably, his speech was not so wonderfully effective as many we have listened to by him. He concluded with the following sentence—a sentence which evoked a burst of applause, due probably, to some extent, to recent circumstances in which Sir James had been personally concerned:—"Having now got as Principal a gentleman to aid us of great administrative experience, learning, and energy (Sir Alexander Grant), the University would go on progressing and prospering, provided their future Chancellor was not one to impede and retard its advancement." The meeting was nearly equally divided, but the Chairman, Professor Christison, stated that the advantage was slightly in favour of Mr. Inglis. A very close contest is anticipated—so close that it would be absurd to make any attempt to predict the result. The voting-papers, which have now been all issued, must be returned by the 20th inst., and the decision will be announced a few days afterwards.

The students have lost no time in inaugurating their campaign for the election of Rector. Only a day or two after the commencement of the session a general meeting was called for the nomination of candidates. This precipitancy had prevented any mature arrangement, and the candidates proposed were therefore numerous, and, in many instances, strangely unfitted for the post. Among them were the late member for the city, Mr. Moncreiff, a leading United Presbyterian clergyman, Dr. Cairns, Mr. Lowe, M.P., Mr. Ruskin, Sir William Fergusson, Bart., of London, Mr. Alfred Tennyson, Dr. Stirling, and Lord Stanley. The field has, however, been now diminished to three or four, of whom Mr. Moncreiff, Mr. Lowe, and Sir William Fergusson appear to be the favourites. Sir William Fergusson has considerable support from the Medical students, but Mr. Moncreiff's great local popularity will probably carry the day. We shall not regret this, as it is important that the Rector should be able to devote some time to attend meetings of the University Court, of which he is chairman, and as experience has shown how much inconvenience may be caused when the occupant of this post resides at a distance from Edinburgh. Meanwhile, the Rectorial contest causes the greatest excitement in the University and its immediate neighbourhood. Groups of students are to be daily seen eagerly and vehemently discussing the relative claims of the candidates; nightly meetings are held in the class-rooms to influence waverers; electioneering squibs and caricatures are largely circulated and affixed to the walls of the University,

and huge placards on committee-room windows and walls announce to the citizens that an important election is engrossing the attention of the students.

We suppose that by this time nearly every member of the Councils of the Universities of Edinburgh and St. Andrews has pledged himself to one or other of the two candidates for the representation in Parliament. The contest is, in this instance, a purely political one, and, as the Liberals appear to outnumber the Conservatives in the constituency, it is anticipated that Professor Playfair will defeat Mr. Campbell Swinton. No doubt, the withdrawal of Dr. Prosser James and Dr. Richardson has made the issue more clear and distinct. Professor Playfair, altogether apart from his political opinions, will well represent the Medical portion of the constituency, and may be relied on for voting on the right side in questions affecting our Profession It is expected that the voting-papers will be distributed on or about the 16th inst. If our anticipations prove correct, a vacancy will occur in the chair of chemistry. It is thought possible that Professor Anderson, of Glasgow, Dr. Crum Brown, Professor Guthrie, Dr. Roscoe, and Mr. Wanklyn may apply for this chair. We imagine that the real contest will take place between the first two of these gentlemen; but, in the presence of so much uncertainty, it is premature to discuss their claims.

Besides these various changes and additions, our University staff has been further completed by the installation of the new Principal, Sir Alexander Grant. I have also to announce that since my last letter Dr. Calderwood has been appointed to the chair of moral philosophy, in the room of the late Professor MacDougall, and the Rev. Dr. Charteris to the chair of bibical criticism, in the room of the late Professor Lee.

The session of the Extra-Academical School was opened on November 2 by an address by Dr. Handyside, Lecturer on Anatomy, "On the Prior Culture of a Student of Medicine." The address was cordially received, and it contained much carefully considered advice that was calculated to benefit students.

IRELAND.

DUBLIN, November 4.

THE first of our "introductories" delivered this session was that by Dr. Hargrave, Professor of Surgery in the Royal College of Surgeons. The lecturer, in the commencement of his address, referred to two important epochs which marked the history of the Medical Profession during the last few years. One was the enactment of Mr. Warburton's Bill, which had not only humanised the study of anatomy, but had also facilitated the cultivation of that science in all its details. The second was the passing of the Medical Reform Act, a measure which he believed, notwithstanding all that had been said to the contrary, had done much towards advancing Medical science and elevating the Medical Profession. Dr. Hargrave next dwelt upon the importance to the student of method, punctuality, and perseverance during the years of his pupilage, recommending that special attention should be given to the practical study of anatomy, the very backbone of Surgery and Medicine. "There are," said the Professor, "two classes of anatomists—the 'scalpellary' and the lingual: the one gains a lasting and permanent knowledge from an untiring use of his scalpel and forceps, while the other catches but a fleeting and ephemeral recollection of the subject by the perusal of books." He also pointed out the great advantage of early and extended Hospital attendance, and in connexion therewith of diligent pathological investigations, which in private practice are usually very unsatisfactory. The importance of an accurate acquaintance with chemistry, hygiene, etc., was also dwelt upon. Dr. Hargrave concluded by impressing upon his youthful hearers the necessity of cultivating feelings of self-respect and self-reliance, and of caution in the selection of their companions.

Dr. Mapother afterwards commenced the course of physiology, with the first of the lectures free to the public on comparative anatomy, showing the importance of the subject in the discovery of the causes of contagious diseases, and in the light which it throws upon the functions of many organs, and on the action of medicines upon them.

The annual distribution of prizes in the Carmichael School of Medicine took place on Thursday, the 29th ult., in the lecture theatre of that institution. From the report it appears that the Carmichael Prize Fund now enables the proprietors to award annual premiums to the value of sixty pounds. In addition, there is at their disposal the "Mayne Scholarship," founded by the friends and admirers of the late Dr. Robert Mayne, the examination for which, "in Medicine and Surgery, was conducted at the bedside, in the wards of the Hospital, in the post-mortem room and museum, and included the diagnosis, pathology, and treatment of disease." In operative Surgery the competitors were required to operate on the subject, and in anatomy they were required to make dissections themselves. The prizes were distributed by Sir Dominic Corrigan, Bart., who, in an able speech, dwelt upon the importance of the principle of practical examinations adopted in the Carmichael School as affording the only test by which the student's knowledge could be ascertained—a fact which the learned baronet illustrated by some very striking examples. The recipients of the prizes, and the value of the books or Surgical instruments handed to each, were as follows:—

Carmichael Premiums, 1867-68.

Senior Class.—First, Mr. P. Connolly, £10. Second, Mr. James A. Ross, £5. Third, Mr. Alexander N. Montgomery, £3.

Second Year's Class.—First, Mr. Walter J. O'Reilly, £7. Second, Mr. William R. Browne, £4. Third, Mr. P. Allen, £2.

First Year's Class.—First, Mr. Joseph Petit, £4.

Practice of Medicine.—Mr. James A. Ross, £3.

Chemistry.—Mr. P. Allen, £3.

Midwifery.—First, Mr. A. N. Montgomery, £3; second (Lecturer's Prize), Mr. Alexander.

Mayne Scholarship (£15 *in cash*).—Mr. P. Connolly.

Summer Session, 1868.

Materia Medica.—First, Mr. Frazer, £3; second (Lecturer's Prize), Mr. P. M. Clayton.

Medical Jurisprudence.—Mr. W. J. O'Reilly, £3.

Practical Chemistry.—Mr. W. J. O'Reilly.

Botany.—Mr. O'Connell.

Dr. Adams was then called to the second chair, when a cordial vote of thanks was passed to Sir Dominic Corrigan, Bart., for the great proof he had given of the interest which he takes, and has always taken, in the schools of Medicine, and in this school in particular.

The winter session was opened at the Meath Hospital and County of Dublin Infirmary on Monday, the 2nd inst., with an address by Professor Rawdon Macnamara, Vice-President of the College of Surgeons. Among those present on the occasion were the President of the College of Physicians (Dr. Churchill); the President of the College of Surgeons (Dr. Porter); Dr. M. Collis, Chairman of the Irish Medical Association; the Honourable David R. Plunket; Dr. Owens, J.P., etc. The learned lecturer pointed out the many improvements recently effected in the Hospital through the exertions of the Standing Committee, and gratefully acknowledged the liberal addition made to its annual income by the Dublin Corporation. He stated his opinion that those who claim for Medicine a place among the exact sciences ignore the essential principles upon which it must unalterably be founded, and do injustice to the vast difficulties which attend upon the successful pursuit of the healing art. He described Medicine as a tripod, resting upon anatomy, pathology, and chemistry. He dwelt at some length on the importance of each of these subjects, and then gave a rapid sketch of the vast improvements introduced into the art of Surgery during the last twenty years, both as regards the means of diagnosing and of treating disease. In conclusion he appealed earnestly to the students to use care and diligence in the prosecution of their studies, and to work on the principle that "all work and no play makes Jack a dull boy," not forgetting the still more important and solemn truth that "the fear of the Lord is the beginning of wisdom."

DUBLIN, November 11.

THE School of Medicine, Cecilia-street, in connexion with the Catholic University, was opened for the Session 1868-69 with an address by Dr. Lyons, the Right Hon. the Lord Mayor presiding. The learned Professor reviewed the progress of the School since its foundation some thirteen years ago, during which time fifty efficient servants had been given to the various public Medical departments, and one hundred highly trained Practitioners to civil duties. He anticipated with confidence that ample recognition by the State would yet be accorded to their labours, showing that other concessions long deferred had been only amplified by delay. He referred to the importance of Medical representa-

tion in Parliament and to the candidature of Sir Dominic Corrigan, Bart., for the City. In conclusion he said: "Be steadfast with us to the end; persevere and fear not, and our efforts will be crowned with brilliant success. We have planted a tree of knowledge in the intellectual soil of Celtic Ireland; we have tended and nurtured it with careful hands; against all the rude blasts and fierce storms it has held its head aloft; and even in the arid season of Ministerial indifference it has flourished and borne early blossom. At no distant day we shall repose under its spreading branches, and in the fruits which it sends forth to east and west, to north and south, we shall receive the rewards of our toil, and the proof that the great Author of all good has blessed our work."

The inaugural address of the session at the Mater Misericordiæ Hospital was delivered by Mr. Curran, Surgeon to the Hospital. Having dwelt at length on several subjects connected with Medical studies, Mr. Curran concluded in the following words of advice to the students present:—"One opportunity of advancing yourselves you should never neglect—that is, in the hearts and affections, the respect, esteem, and love of all with whom you may come in contact; though in doing so you may meet with much to deter you, be not deterred by it, though you may experience the truth of the Eastern adage that 'the sick man knows the Physician's footsteps, but when well he does not know even his face.' Neither be deterred by this; in such cases try again and again, and, if need be, still again, and success will ultimately crown your efforts."

The Eleventh Clinical Session of the Adelaide Hospital was opened on Thursday, 5th inst., with a very able address by Mr. B. Wills Richardson, F.R.C.S.I., one of the Surgeons to the Hospital. Having impressed upon his hearers the paramount importance of a diligent and persevering attention to clinical study, and of a sound knowledge of anatomy, as well as of the several branches of a liberal education, Mr. Richardson said, "It is not my intention to delay you with a prolonged refutation of the charge of impiety so frequently preferred against our Profession, as I believe this accusation cannot be sustained. The study of anatomy must, of all others, lead to the conclusion that the human body is the work of a transcendently wise Creator. Indeed, it is told of Galen that he was converted by means of his dissections to own the handiwork of a Supreme Being in the formation of the human body. Moreover, be it recollected that it is to a member of our Profession the world is indebted for that persuasive theology, the object of which is to prove the existence and wisdom of God from contemplating the objects of creation. Many of my hearers may remember how their minds were led captive by reading, for the first time, Paley's wonderful illustration of the watch, in which he argues, from a comparison between its structure and the mechanism of the human body, that an Omniscient Genius must have presided over our formation. Alas! that watch was taken from Dr. Bernard Nieuwentyt's papers, which appeared in the Leipsic Transactions towards the close of the seventeenth century, and vended as his own by Paley. Nieuwentyt was a Hollander, and born in the middle of the seventeenth century. He practised Medicine in Westgraafdyke, his native Dutch village. Instead, then, of our studies tending to disbelief, the probabilities must be the very opposite. Furthermore, many of the circumstances of daily practice peculiarly dispose the Medical mind to look forward to scenes beyond this life, and to imbue it with religion. Medical Practitioners have frequent opportunities of seeing people, once the gay and happy, now sunk in misery and deep distress—once prosperous and hopeful, now crushed by the contemplation of poverty, to be followed by a painful and lingering death—once confident in futurity, now struggling against the tortures of a doubtful and distracted mind. Such harrowing scenes tend to soften the heart, and make it reverence that true religion by means of which alone can be supported the faltering soul through the most complicated and torturing afflictions. It may not be out of place to make a few remarks concerning the great advantages to be derived from companions judiciously selected. Lord Bacon, one of the most profound observers of human nature, has not omitted allusion to the value of friendship for mutual improvement; and, although friendship for this purpose only is selfish, still we should not forget that it may lead to the most sincere and binding ties. It is a true saying that you may tell the character of any man by his acquaintances, the failings of the latter being so often reflected in him. Avoid, therefore, the idle and dissipated, if you wish to maintain a good name, and not imperil your future welfare. On the other hand, studious and literary companions are of inestimable value; by mutually imparting what they have separately learned, mutual advance must result—

> "By mutual confidence and mutual aid
> Great deeds are done and great discoveries made;
> The wise new wisdom from the wise acquire,
> And one brave hero fans another's fire.'"

Within the last few days Dr. Traill, LL.D., one of the Fellows of Trinity College, has come forward as a candidate for the Parliamentary representation of the University. In his address he says: "Owing to the inadequate representation of the Medical Profession in Parliament, it has occurred that the interests of its members in Ireland have been completely ignored. Having myself just gone through the labours and risks of a Medical education, I can understand the wants and sympathise with the feelings of the Profession." It is much to be regretted that the appearance of Dr. Traill's address should have been so long delayed, as, owing to a report which prevailed during an entire week to the effect that he had withdrawn, many of those who would undoubtedly have supported him pledged themselves to other candidates. As to Sir Dominic Corrigan's candidature for the City, it is unfortunate that it should have occurred at a time when the momentous question of the existence of the united Church in Ireland, and the not less serious results which would follow as necessary corollaries from its adverse decision, engage the public mind; as, although his invariable kindliness and courtesy would make all his Professional brethren desirous, on personal grounds, to support him, the great majority of the Profession in Dublin, as I believe, important as they consider able representation in Parliament of their body to be, are strongly and conscientiously opposed to his political views at the present juncture.

On Thursday, the 5th inst., the usual monthly meeting of the Council of the Irish Medical Association was held at the Royal College of Surgeons, Dr. Maurice Collis, Chairman of the Council, presiding. Dr. Mapother proposed that a meeting of the Association should be convened for the purpose of supporting Sir Dominic Corrigan's election. Upon referring to the rules of the Association, it was found that the Council had not the power to do so, and it was considered that the rules should not be broken through. Dr. Mapother, however, pressed his resolution, having modified it to suit the rules, as follows:—Proposed by Dr. Mapother, seconded by Dr. J. A. Byrne: "That a meeting of the whole Profession in Dublin be called at the Antient Concert-rooms on Friday next, for the purpose of taking into consideration the expediency of supporting the return to the House of Commons of a representative of our Profession." The motion was put from the chair, and rejected by the Council.

The annual distribution of prizes at Dr. Steevens's Hospital and Medical College took place in the anatomical theatre of the institution on Tuesday, the 3rd inst., the Right Hon. Sir William Carroll, Lord Mayor, presiding. The report, read by Dr. Edward Hamilton, referred to the recent and sudden death of Dr. Hardy, the Physician-Accoucheur of the Hospital, of whom an obituary notice has appeared in your columns. The following prizes were handed to the successful candidates by the Right Hon. the Lord Mayor:—

HONOURS AWARDED AT THE TERMINATION OF SESSION 1867-8.

Cusack Medals and Exhibition.—Senior, Thomas L. Bookey, Carnew. Middle, Abraham Colles, Dublin. Junior, William Bookey, Carnew. Surgical Clinical Prize, Richard Swan, Kilkenny. Midwifery Assistants, Mr. E. A. H. Roe, and Mr. James G. Wall.

Certificates of General Attention and Proficiency at Terminal Examinations.—Fred. C. Adey, Thomas Bayly, Chichester A. Bell, Robert Jones, T. Magrath, Ross F. Maguire, E. Matthews, E. A. H. Roe, James G. Wall, S. Sexton, T. H. Taaffe, and Thomas R. Wills.

Materia Medica Lecturer's Prize.—Mr. MacIlwee, Mr. Bookey.

The Lord Mayor then addressed the meeting. He said it was his first and pleasing duty to return his cordial thanks to the Medical men and governors of that noble institution for calling on him to preside that day. It afforded him infinite pleasure to hand these prizes to those young gentlemen, who had in their student days sowed the seeds of the rewards which they were destined to reap hereafter. It was by perseverance, industry, and hard work at this stage in their career that they would attain hereafter to the honours and emoluments of their noble Profession. He need not remind them that that institution was one of the oldest establishments of the kind in Dublin—an Hospital that had sent men of eminence

to every part of the world. He was reminded on that occasion of the days of his youth, when he walked through the wards of that Hospital at a time when it was presided over by men of the greatest Professional distinction—by Wilmot, and Colles, and Marsh, and, though last not least, by the celebrated Mr. Cusack. He was happy to preside at such a meeting, and he was also sincerely glad to be able to say that though these men had departed from amongst them, their places had been supplied by not unworthy successors. Every department in their great school was well and nobly presided over by competent and efficient professors. He thanked them heartily for asking him to preside there that day, and he was sure that the invitation to do so was not given to him solely as Lord Mayor, but rather as being a member of the Medical Profession.

Mr. Robert R. Warren, jun., then proposed a vote of thanks to the Lord Mayor for his kindness in presiding on that occasion. He had been asked to perform this pleasing duty, he supposed, because he happened to be the junior Governor of the Hospital. The Chairman had said that he felt it an honour to be present on that occasion, but he thought the compliment was rather conferred on them by being enabled to hold their meeting under the presidency of the Lord Mayor.

Mr. Tabuteau, one of the governors of the Hospital, seconded the motion, which was unanimously adopted.

The Lord Mayor, in returning thanks, said that before they parted he wished to assure his young friends that the Profession on which they had just entered was one near and dear to his heart. He promised them that he would on every occasion do everything he could to advance the interests of the Medical Profession.

The session was opened at the City of Dublin Hospital, at a later hour on the same day, with a very able lecture delivered by Dr. John Hawtrey Benson, one of the Physicians of the Hospital. The chair was on this occasion also occupied by our worthy Chief Magistrate, who has won the esteem of all, not only by the splendour of his hospitality and the impartiality of his rule during the year of his mayoralty now drawing to a close, but by the countenance he has shown to every good and charitable and educational movement. More especially has the Medical Profession in this city to acknowledge the warm interest his Lordship has shown in everything relating to its welfare. On the conclusion of Dr. Benson's address, the Chairman distributed the following prizes:—

Surgery Prize Medals.—Mr. John Burgoyne, first prize; Mr. George Bevan, second prize; Mr. Wm. Algeo, third prize.

Medicine and Pathology.—The silver medal in the junior class was awarded to Mr. Lewis A. Irving.

In the senior class the silver medal was awarded to Mr. Alexander R. Joyce.

Messrs. William Finlay and Mr. Ernest Thompson were awarded certificates.

The Lord Mayor, at the termination of the proceedings, begged to return his grateful thanks to the Medical gentlemen attached to that most noble and useful institution for having afforded him the opportunity of listening to the admirable address which had just been delivered by the talented son of one of their most accomplished Physicians. He had also to thank those gentlemen for giving him the opportunity of meeting so many of his Medical brethren. Though severed from them for a time, he could assure them that the interests of the Medical Profession were dear to his heart.

Postscript.—Since the foregoing was written, Dr. Traill has formally withdrawn his candidature for the representation of the University. As his political opinions are those of the majority of the electors, and as he will be able to come forward as a Fellow of the College, and as qualified by special education to represent the Medical Profession, it is not unlikely that on a future occasion he may be successful.

A meeting of Medical men favourable to the claims of Sir Dominic Corrigan, Bart., was held yesterday evening in the Lecture Hall, Molesworth-place. The meeting was, however, not confined to electors, nor even to inhabitants of Dublin, many of those present being from remote country districts. On the other hand, a declaration, signed, within two days, by ninety Medical electors of the city, has appeared in the morning papers, to the effect that the subscribers, "while admitting the desirability of Medical representation in Parliament, cannot support the candidature of Sir Dominic Corrigan, Bart., in consequence of the pledge he has given to vote for the disestablishment and disendowment of the Irish branch of the United Church of England and Ireland." The signatures include those of the President of the College of Physicians, the President and Vice-President of the College of Surgeons, the Governor of the Apothecaries' Hall, the Chairman and Secretary of the Irish Medical Association, etc., etc. This document is still in process of being extensively signed.

At a later meeting of the Council of the Irish Medical Association, held in the Royal College of Surgeons, Dr. Maurice Collis in the chair, it was resolved:—"That this Council calls upon the members of the Irish Medical Association and all Medical electors to vote for no candidate for Parliament who will not give a distinct pledge to aid by every means in his power in obtaining superannuation for Medical officers employed under the Poor-law and Medical Charities Acts similarly to other officers in the Poor-law service." Such a pledge has been given by the City and University candidates.

GENERAL CORRESPONDENCE.

POOR-LAW MEDICAL OFFICERS AND CANDIDATES FOR PARLIAMENT.

LETTER FROM DR. JOSEPH ROGERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—The enclosed form of letter has been forwarded to every member of the Poor-law Medical Officers' Association, with an earnest request that he would at once transmit it to any candidate for a seat in Parliament for the county or borough in which he may reside.

Although our members are to be found in every county in England and Wales, I have on the part of the Council to request that you will kindly insert it in this week's Journal, so that Poor-law Medical officers who have not joined us may adopt a similar form of letter in their applications to candidates.

I am, &c. JOSEPH ROGERS,
President of the Association.

Poor-law Medical Officers' Association,
33, Dean-street, Soho, November 11.

Sir,—The grievances of the Poor-law Medical officers of England and Wales, upwards of 3000 in number and having charge of more than a million and a half of poor sick persons annually, being universally acknowledged, I am requested by the Council of the Poor-law Medical Officers' Association to inquire of you whether, in the event of your being returned to Parliament,

1. You will endeavour to amend the constitution of the Poor-law Board by securing the appointment thereto of Medical and other members competent to devise and carry out a uniform and efficient system of Medical relief to the sick poor.

2. Whether you will support any well-devised measure that may be brought forward in Parliament to obtain justice for the Medical officers and adequate remuneration for their services.

Requesting the favour of an early reply

I am, Sir, yours obediently.

MEDICAL ELECTRICITY AT QUEEN'S-SQUARE.

[To the Editor of the Medical Times and Gazette.

SIR,—An anonymous critic accuses me of having made, in my report on the Hospital for Paralysis and Epilepsy, "some very extraordinary statements concerning Medical electricity." Further, that these may not pass uncontradicted, he proceeds to criticise one "glaringly incorrect" passage. Thanking him for his kindness in thus limiting attention to a single extract, instead of spreading it over the whole report, I think I may claim from you the right of replying to his strictures. It must, however, be premised that these reports on special institutions, which are the result of much labour and care, are intended for the General Practitioner, not the specialist. It is their aim to convey some practical hints—to afford the hard-working Medical man with little leisure the chance of putting an extra guinea into his pocket without having to wade through unreadable volumes—in short, to be practical rather than purely scientific.

First, then, "M.D." criticises my loose language in making use of the term *direct* instead of *continuous*, when referring to one of the kinds of currents used in Medicine. Admitting the scientific accuracy of this emendation—even although it

is plain I was speaking of the continuous current all along—I would reply that the terms used by myself are in common use, and beg leave to refer my unknown friend to an article by Dr. Hammond (no mean authority in such matters) in a recent number of the *New York Journal of Psychological Medicine*, who, *apropos* of this very subject, makes use of terms identical with my own.

Secondly, as to the fact alleged to be a new discovery, the kind of paralysis I referred to should perhaps have been more accurately defined as the so-called *essential paralysis of childhood*, when speaking of the simultaneous discovery made by Dr. Hammond and Mr. Radcliffe, although other kinds of paralysis have been found to exhibit similar peculiarities; this was *not* discovered by Baierlacher in 1859. In the same matter "M.D." may consult with advantage a footnote in Russell Reynolds's "System of Medicine," where the subject is discussed, or the article by Dr. Hammond already alluded to.

Finally, "M.D." seems to be perfectly well satisfied as to the value of these discoveries, which he alleges to be the superiority of the continuous over the induced current in the treatment of such forms of paralysis. I am not aware that the relative values of these two forms of electricity have been finally and definitely settled; that the induced, as well as the continuous, should be used in the treatment of the wasting paralysis of children is laid down by no less an authority than Dr. Russell Reynolds, in a lecture on the subject published in the *Lancet* so recently as July 11 of this year. Perhaps "M.D." would do well to consult this author also.

I am, &c. YOUR REPORTER.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 4, 1868.

Dr. HALL DAVIS, President, in the Chair.

DR. T. B. HAY, Mr. E. Fletcher, Melbourne, and Dr. G. R. Playfair, Agra, were elected Fellows.

Mr. HECKFORD exhibited the generative organs of a child aged 10 months, in which the vagina was enormously dilated, and occupied by villous growths of a medullary character. The rectum, bladder, and urethra were normal. The os uteri opened into the upper wall of the vaginal sac. The disease had lasted for about four months, and the child died shortly after its admission into the East London Children's Hospital.

Dr. MEADOWS exhibited some

MEDICATED PESSARIES,

which he believed to be more efficacious than those made with the cocoa-butter. These new forms were more cleanly and more certain. The uncertainty in the action of the pessaries in ordinary use he believed to depend mainly on the fact that it was no part of the function of the vagina to absorb fats, and that the medicinal ingredients in the pessaries, being coated over, as it were, with a protective shield of the butter, passed away from the vagina without being absorbed. At his suggestion, Messrs. Bell and Co. had now made some pessaries in which the basis was soft soap, made into a mass either with powdered althæa, or with starch, or with beeswax. In either of these forms the pessary would readily melt, and the ingredients were easily absorbed by the vagina.

The PRESIDENT exhibited an

INTRA-UTERINE FIBROID TUMOUR,

which he had recently removed from a maiden lady aged 50. Symptoms of uterine disorder had existed for upwards of seven years. The abdominal tumour reached nearly to the navel, was uniform and symmetrical. Internally it was adherent to the uterus anteriorly and laterally, free posteriorly up to the fundus, where it was strongly and widely attached. After due preliminary measures the lower third of the growth was amputated by the single wire écraseur. The remainder was then cut into in various directions, and portions excised with curved scissors. On the fourth day the devitalised remnant was thrown off entire, leaving the uterus quite empty. The entire tumour weighed eighteen ounces. The patient had done well.

Dr. GRAILY HEWITT exhibited a series of pessaries which he had for some time employed in the treatment of uterine displacements and flexion. First, a series of oval rings, a modification of Hodge's pessary, of various sizes, for the treatment of retroflexion and prolapsus. Secondly, a series of pessaries of various sizes, and of novel construction, for the treatment of anteversion and flexion. These are made from a ring bent into a peculiar form, and termed by the inventor "cradle" pessaries. For two years he had made use of these with very satisfactory results. Thirdly, a series of stem pessaries, also of novel construction, the stem of ebonite, an inch and a half long, supported in its place by an oval-shaped basis of gutta-percha—of various sizes, according to the size of the vagina. These he had used in the more obstinate cases of anteflexion, and for dysmenorrhœa or sterility therewith associated, and also in certain cases of retroflexion. The various instruments exhibited were constructed on the principle of using the vagina as the basis of support, or *point d'appui* from which to act on the uterus, and the author had found them most efficacious in dealing with various obstinate mechanical derangements of the uterus.

The discussion on the papers of Dr. Tilt and Dr. Meadows, adjourned from the October meeting, was then resumed by

Dr. ROUTH, who said that if he understood Dr. Tilt's paper accurately, it went to prove that the disease called irritable uterus by Gooch was very infrequent nowadays. Experience proved that abnormal complications existed in many of these cases; but, while admitting this, it could not be doubted that the amount of complication often bore no relation to the amount of pain endured. And just as, in an ordinary attack of tic douloureux of the eye, there was copious flow of tears and redness of the conjunctiva, not unlike inflammation, so it was possible that the uterus should be red and apparently inflamed, and yet this, after all, be only simple tic of that organ. Such cases might still be cited as instances of irritable uterus. As bearing on the etiology of displacement, he would say that there were three varieties:—1st. Those produced by inflammatory or other complications of surrounding parts—*i.e.*, those retained by adhesions; these formed about 2 per cent. 2nd. The congenital, the percentage of which could not be yet determined. 3rd. The acquired, which might be met with either in an active state, with inflammatory or congestive symptoms, or in a quiescent state after all these had subsided. As regards anteversion, he believed it to be a more common affection than generally supposed, but fortunately often quiescent. It should be remembered that the normal position of a child's uterus and also in early puberty was one of anteversion; and in later life, a fat omentum, heavy and loaded intestines, etc., might readily induce this flexion, quite apart from any inflammatory disorder of the uterus itself. With respect to retroflexion he would say that, given a healthy pelvis and healthy ligaments, retroflexion was impossible; but what did occur was this—the round ligaments and the ligaments of Douglas were both especially relaxed, the lateral less so. The points of support superiorly being thus removed, the organ was disposed to fall on one side or the other, and, when topheavy through inflammation or congestion of the fundus, this tendency was increased, and, with this predisposition, a sudden accident—a jump or a fall—often proved an efficient exciting cause of retroflexion. If he was right in these views, it followed clearly that until the congestion or inflammation was at least partially subdued by treatment no permanent good could result from the use of instruments. Now, he had seen several cases of women who had been treated by Hodge's pessaries and Dr. Hewitt's modifications of them, and were still uncured and suffering intense pain from them, and who only got well when the complications had been overcome; and in these cases, where retroversion was accompanied with pain, inflammation, or congestion of the organ, nothing but depletion, combined with absorptive remedies, did good, specially the former, and whether accomplished by leeches, scarifications, or the hysterotome, it was a necessary preliminary measure to the use of instruments. There was one variety of retroversion in which the pain in the fundus was most acute, but with little or no actual congestion or inflammation of the organ, the pain in this case being reflected from the ovary, which, on examination, would be found tender and inflamed. To treat this was to cure the disease and reduce the case to one of simple retroflexion.

Dr. SAVAGE said that this antagonism between Practitioners so eminent as Dr. Hewitt and Dr. Meadows plainly showed that all opinion about uterine displacements was lamentably unsettled. He thought, therefore, that a reconsideration of the normal relations of the female pelvic organs with the pelvis might do something towards a more creditable uniformity of opinion. Dr. Routh had alluded to three liga-

ments of the uterus, but there were others, and those more essential, or what would become of Dr. Hewitt's vaginal base of support for his pessaries? The utero-pelvic cellular tissue which enclosed the pelvic organs had properties eminently fibro-elastic (muscular also in many parts of it), and was an integral part of the pelvic uterine system. The function of this tissue could be inferred from the following experiments on the dead body:—Draw forcibly on the cervix with a vulsellum. The strain will be seen to begin with the utero-sacral portion, where it divides to give passage to the rectum; then it passes on to the broad ligaments. Cut through these. The uterus comes down about an inch. In short, it is necessary to divide the pelvic cellular tissue before a notable displacement can be effected. Or to the vulsellum attach a weight, the body in the sitting position. The weight must be heavy, and the time long before the uterus appears at the vulva. Remove the weight, and the elastic property of the tissue, even in the dead body, causes the organ to retire. Cut through the broad ligaments close to the womb; the organ falls helplessly in all directions. If backwards, fix the neck, and there will be retroflexion (supposing the neck to be weak enough to bend); release the neck, and the back deviation is retroversion. He believed there was always some prolapsus with retroversion. Owing to the presence of the rectum and bladder, the cellular attachments of the vagina are limited to its sides, and this is why the vagina contracts not as a cylinder, but as a flat tube; the upper half being fixed, dilatation and contraction for the most part affect the lower half only, which must fall or rise in this to-and-fro relation with the former. No pessary, one excepted, can do much more than keep the womb out of the vagina. Then how account for the comfort attending their use? They ease the strain on the cellular tissue, which begins forthwith to regain its healthy tone. Aggravated cases of prolapsus of long standing are again and again held up, permanently reduced after the perineal operation; but should this tissue have lost its elasticity the best artificial perineum would be sure to give way. Hodges' was the best pessary, because in shape it corresponded with that of the contracted vagina, and with it the lateral vaginal action was unhindered, and the series of curative processes referred to permitted. It was a marital consideration which led to Hodge's curious modifications of the pudendal end of his instrument, and another authority, still more considerate, had cut off this end and substituted india-rubber. It was regrettable to hear proclaimed, far and wide, pretensions to originality for what were in reality very unessential modifications. Of internal uterine pessaries the record, as a rule, had been one of disaster. But, at the same time, he wished it to be understood that, in condemning intra-uterine pessaries, he did not include that of Dr. Hewitt, because he had had no experience in its use.

(To be continued.)

OBITUARY.

THOMAS HILLIER, M.D., &c.

We record with sincere regret the death, on the 7th inst., of Dr. Thomas Hillier, at the early age of 37. Educated at University College, and taking at once a prominent position there, he ended a successful student's course by obtaining the appointment of Resident Medical Officer of the Hospital. This position he left on being chosen in St. Pancras, out of a number of distinguished competitors, to the newly created post of Medical Officer of Health. For twelve years he filled this office with singular ability and judgment, earning for himself the esteem of his fellow-workers and of his constituents by the honest discharge of his difficult duties. To his indefatigable labours is in great measure due the position which the Association of Medical Officers of Health has achieved in public estimation.

Time was when devotion to sanitary work was held to mark a man out as parted from the common aims of a Physician. To-day the case is almost reversed, for no road to popularity is more often trodden by the teacher or Practitioner than that which recognises preventive medicine as at least co-ordinate in rank with curative medicine. This is a fact full of good augury for the future of Medical science; and it is due to those whose lives have been a protest against the old error to note their influence in bringing about healthy Professional opinions on the point. Dr. Hillier had no sooner undertaken the duties of a Health Officer than he attached himself to the Hospital for Sick Children in Great Ormond-street, at a time when that institution boasted the names of Jenner, Rolleston, and Reynolds on its staff. Working assiduously in a field then but little cultivated, he soon became Physician to the Hospital, and got wide reputation by those excellent clinical lectures which have lately been collected into one of the most practical treatises of the time. In this sphere, more than anywhere, will Dr. Hillier's successor find it difficult to emulate his skill, his method, his tenderness, his every quality which marked him as an almost perfect Physician to the charity, and promised for him a career of wider recognition and success than it has been ordained that he should attain.

University College, which has a habit of discovering the good qualities of its *alumni* long after everybody else has recognised them, had not until late years the advantage of numbering Dr. Hillier among its lecturers. But on the creation of a department for diseases of the skin Dr. Hillier was appointed Physician in that Hospital, and gave several courses of lectures besides much valued instruction at his weekly clinique. His book on skin diseases, undertaken, as he tells us in his preface, half reluctantly, and with misgivings as to the value of his work, has at once taken rank as the standard manual for students and practitioners.

The circumstances under which this useful and promising career has ended furnish additional ground for lamenting Dr. Hillier's untimely death. By his great natural abilities and his incessant toil, he had begun, somewhat earlier than usual, to get a share of London consulting practice, when he was surprised by an attack of hæmoptysis. On the advice of his friends, he was about to spend the winter abroad, and had made all the many preparations that were wanted to that end, when his plans were frustrated by a family affliction which kept him in England, and so deprived him of what was his only chance of recovery. Those who watched how his own good was thus postponed to considerations of more apparent urgency saw the character of the man illustrated, and know how an eager sense of duty and utter unselfishness were blended in hastening the result which they, in common with the whole Profession, are deploring.

ISAAC PIDDUCK, M.D.

We regret to notice the death of Dr. Isaac Pidduck, for many years Physician to the Bloomsbury Dispensary. Dr. Pidduck was in his seventy-sixth year. He graduated at Edinburgh in 1819, and in 1833 became a Licentiate and afterwards a Member of the Royal College of Physicians. He was universally respected, and was much beloved by the poor of Bloomsbury and its neighbourhood, to whom he devoted a large portion of his time and energy.

NEW INVENTIONS.

J. PAUL LIEBE'S SOLUBLE FORM OF LIEBIG'S SOUP FOR CHILDREN.

(*Messrs. Zimmermann, 3, Fowkes-buildings, London, E.C.*)

In an article on the Feeding of Babies, which we published some time ago, we gave some account of the chief forms of artificial aliment suitable for these tender creatures. We spoke of the various modes of manipulating the caseum of cow's milk, of the use of cream, and of the preparations of malt introduced by the illustrious Liebig. Amongst these, some present the ingredients in a raw state, some partially cooked; some manufacturers aimed at sending out the food ready prepared and fresh daily, others at producing a concentrated preparation which might be preserved for an indefinite time and be ready on any emergency. Amongst the last we mentioned a semi-liquid preparation by M. Loefflund, and a solid form which has been brought into use by Mr. Mellin. Now we have another concentrated form by J. Paul Liebe, apothecary and technical chemist at Dresden. This we believe to contain the malt, wheaten flour, and potass in the due proportions in a soluble form, and as little as possible altered by heat. It is of a light golden colour, and not acid. We have found it free from unpleasant taste, and well relished by children.

We have never hesitated to express our criticism on Liebig's theory of this food, nor to condemn the policy of treating fat and sugar both mere as heat-producing food, and as if there were no difference between them. In nature we find starch converted into sugar, and sugar into fat, and we claim for our

artificially fed nurselings a due share of fat in the form of cream. But, as sugar should be added also, we strongly advise some such preparation of malt as Mr. Liebe's as the means for sweetening diluted cow's milk instead of ordinary sugar. Not only for young children, but for convalescents and other sickly persons, this malt syrup may be used with the best effect.

NEW BOOKS, WITH SHORT CRITIQUES.

Essays on Physiological Subjects. By Gilbert W. Child, M.D., F.L.S., etc. of Exeter College, Oxford. London: Longmans. Pp. 142.

*** The author tells us that this volume was printed for private circulation early in the present year. Its publication has, however, been delayed, that the author might add to the number of his works. This, however, he has not done, being anxious that the articles, dealing as they do with subjects now undergoing discussion, should appear at once. The essays are on Darwin's work on the fertilisation of orchids, on marriages of consanguinity, and researches on the production of the lowest forms of organised life. All have already appeared in print.

A Manual of the Diseases of the Eye. By C. Macnamara, Surgeon to the Calcutta Ophthalmic Hospital, Professor of Ophthalmic Medicine and Surgery in the Calcutta Medical College. London: John Churchill and Sons. Pp. 571.

*** This, the most recent of Messrs. Churchill's well-known series of manuals, is the work of one who thoroughly understands his subject. Mr. Macnamara has had extensive experience, and the fruits of this experience, together with the result of much study, are here presented to the student. Wecker, Mackenzie, and Stellwag von Carion have been chiefly followed. The work is illustrated by fifteen beautifully executed chromo-lithographic plates. Those relating to ophthalmoscopic work especially are well worthy of attention.

The Pathology and Treatment of Syphilis, Chancroid Ulcers, and their Complications. By John K. Barton, M.D. Dub., F.R.C.S.I., Surgeon to the Adelaide Hospital, Lecturer on Surgery, Ledwich School of Medicine, Dublin, etc. Dublin: Fannin and Co. Pp. 316.

*** The want of a good sound practical treatise on the all-important subject of syphilis has been felt and expressed for some time. In our opinion this work by Dr. Barton will go far to remedy the deficiency. It is neither too long nor too short; it is the work of a thoroughly practical man well up in the literature of his subject. The treatment is, we think, equally sound and judicious, although we are not so fond of introducing mercury through the skin as Dr. Barton seems to be. His account of the natural history of the disease and the significance of its various manifestations is very good.

The Elements of Heat and of Non-metallic Chemistry. By F. Guthrie, B.A. Lond., Ph.D., etc., late Professor of Chemistry and Physics, Royal College, Mauritius. London: John Van Voorst. Pp. 210.

*** The volumes which have passed through our hands of late dealing with the subject of chemistry have been so numerous, that one would almost consider a new one *de trop*, were it not that Dr. Guthrie's little manual appears with a special purpose. It is intended to serve as a guide to the matriculation examination in the University of London. Dr. Guthrie's is not one of those cramming engines we have so recently had occasion to condemn; something more than a mere bundle of isolated facts uncemented together, and to be forgotten as soon as the examination is passed. It aims at giving a scientific, if brief, account of the simpler portions of chemistry and physics.

Contributions à la Chirurgie. Par M. le Dr. Sédillot, Médecin-Inspecteur des Armées, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Strasbourg, etc., etc.

Contributions to Surgery. By Dr. Sédillot, Medical Inspector of Armies, Professor of Clinical Surgery in the Faculty of Medicine, Strasbourg, etc., etc. Paris: J. B. Baillière and Sons. Two vols. Pp. 683 and 704.

*** Under the above title, this well-known French Surgeon has published not exactly all that he has written, but what now, with his matured experience, he looks on as of most value. The first of these contributions will be read with interest. It deals with the subject of purulent infection after operation, to which subject Sédillot's labours have given a clearness of expression. Anæsthesia, dislocations, fractures, tumours, subcutaneous wounds, hæmostatics, amputations, resection, the surgery of the genito-urinary organs, of the digestive and respiratory organs, etc., are all discussed in turn.

The Plague of Beggars: A Dissuasive from Indiscriminate Alms-giving. By a London Physician. Third Edition. H. Renshaw. Price 1d.

*** A most pungent and much-needed tract. Mendicancy, it asserts, is the offspring of the Englishman's pride, indolence, and weakness. It is the cause of poverty and nurse of idleness; it supports a set of incorrigible thriftless vagabonds, who revel in coarse debauchery, whilst it allows the poor labourer and shopkeeper to starve; moreover, it encourages that increasing horde of "roughs" to whom we owe the destruction of the park railings and the Reform Bill. The tract on the "Evils of England," by the same author, ought to lie on the table of every philanthropist and philosophical politician.

Nouveau Dictionnaire de Médecine et Chirurgie Pratiques. Directeur de la Rédaction le Dr. Jaccoud. Tome 9ème, Conc—Coud.

New Dictionary of Practical Medicine and Surgery. Edited by Dr. Jaccoud. Vol. 9, Conc—Coud. Paris: J. B. Baillière and Sons. Pp. 819.

*** This ponderous and elaborate work drags along from letter to letter. Before it can be finished the early volumes will be antiquated and out of date. Still the work is a thorough one, and its articles are able as well as exhaustive. The bibliography, as a rule, is particularly good. Among the most noticeable articles in this volume are those on the conjunctiva and cornea, on constipation, contagion, convulsions, diatheses, hooping-cough, the ribs, the neck, the elbow-joint, etc.

Medical Life in the Navy. By W. Stables, M.D. London: Hardwicke. Pp. 101.

*** Pleasant and readable enough, would be more so were not its author anxious to be funny at all times and under all circumstances. Shows both the lights and the shadows of a Naval Surgeon's life.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH—DOUBLE QUALIFICATION.—The following gentlemen passed their First Professional examinations during the October sittings of the examiners:—

Kerr, Thomas Graham, Calcutta.
M'Naughton, Niel, Argyllshire.
Molloys, Oscar Frederick, Belfast.
Mossop, Isaac, Whitehaven.
Spedding, Benjamin Henry, County Cork.

The following gentlemen passed their final examinations, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

Blakely, Edmund Breakey, Banbridge.
Cox, H. A. Hamilton, Chicago.
Gill, William, London.
Hilles, Joseph William, London.
Isaac, John Baldwin, Strokestown.
Lyall, Andrew, Macduff.
Misso, William Edwin, Ceylon.
Murray, John, Kirkcudbrightshire.
Parke, Robert Cooper, Millvin, Donaghadee.
Peters, Charles Thomas, Dinagepore, Bengal.
Roe, William Alexander Crawford, County Cavan.
Smyth, Arthur Vereker, Tipperary.
Smyth, William John, Cookstown.
Wilson, John Bower, Sheffield.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 10th inst., and, when eligible, will be admitted to the pass examination:—

Allen, M. H., of St. Bartholomew's Hospital.
Allen, Patrick, of Dublin.
Ballantine, George, of Dublin.
Bolton, R. E. N., of Dublin.
Clarke, F. E., of Dublin.
Clifton, George, of St. Thomas's Hospital.
Dickson, J. R., of Kingston, Canada.
Griffiths, D. E., of Glasgow.
Horsey, A. J., of Kingston, Canada, and the London Hospital.
Howell, J. A., of Bombay.
Kelsey, William, of the London Hospital.
Page, H. W., of Cambridge, and the London Hospital.
Paterson, W. H., of Edinburgh.
Salaman, S. M., of Dublin.
Shaw, Josephus, of St. Bartholomew's Hospital.
Thorpe, G. E. K., of Sheffield.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 5, 1868:—

Boutflower, Andrew, Strangeways, Manchester.
Bulmer, Thomas Sanderson, Hackney.
Little, William, Eye, near Peterborough.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ASH, VACY, M.B., L.R.C.P.L., etc.—Resident Medical Officer to the Royal Cornwall Infirmary, Truro.

CARTER, ALBERT EDWARD, House-Surgeon of Toxteth-park Workhouse.—Medical Officer of No. 1 District, Toxteth-park, Liverpool.

NAVAL AND MILITARY APPOINTMENTS.

The following appointments have been made at the Admiralty:—Dr. Robert Potter, Assistant-Surgeon to the *Boxer*; Dr. Galloway, Acting Assistant-Surgeon to the *Cambridge*.

3rd HUSSARS.—Staff Assistant-Surgeon Charles Hamilton Harvey, M.D., to be Assistant-Surgeon, *vice* James Parr, who exchanges; November 7.

ROYAL ARTILLERY.—Surgeon David Woods, from the 107th Foot, to be Surgeon, *vice* Walter Moses Gibaut, appointed to the Staff; November 7.

11th FOOT.—Staff Assistant-Surgeon George William Barroll to be Assistant-Surgeon, *vice* Edmond Hoile, M.D., appointed to the Staff; November 7.

50th FOOT.—Surgeon James Fraser, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867; October 9.

90th FOOT.—Staff Surgeon Nathaniel Norris to be Surgeon, *vice* William Boyd, appointed to the Staff; Nov. 7.

104th FOOT.—Staff Assistant-Surgeon Joseph Septimus Steward to be Assistant-Surgeon, *vice* Thomas Parker Smith, M.B., appointed to the Staff; November 7.

106th FOOT.—Staff Assistant-Surgeon William Henry McNamara, M.D., to be Assistant-Surgeon, *vice* Stephen Flood, M.B., appointed to the Staff; November 7.

107th FOOT.—Staff Surgeon William Henry Corbett, M.D., to be Surgeon, *vice* David Woods, appointed to the Royal Artillery; November 7.

MEDICAL DEPARTMENT.—Staff Surgeon Henry Crisp, M.B., having completed twenty years' full-pay service, to be Staff Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867; October 1. Surgeon William Boyd, from the 90th Foot, to be Staff Surgeon, *vice* Nathaniel Norris, appointed to the 90th Foot; Surgeon Walter Moses Gibaut, from the Royal Artillery, to be Staff Surgeon, *vice* William Henry Corbett, appointed to the 107th Foot; Assistant-Surgeon Thomas Parker Smith, M.B., from the 104th Foot, to be Staff Assistant-Surgeon, *vice*

Joseph S. Steward, appointed to the 104th Foot; Assistant-Surgeon Edmond Hoile, M.D., from the 11th Foot, to be Staff Assistant-Surgeon, *vice* George William Barroll, appointed to the 11th Foot; Assistant-Surgeon James Parr, from the 3rd Hussars, to be Staff Assistant-Surgeon, *vice* Charles Hamilton Harvey, M.D., who exchanges; Assistant-Surgeon Stephen Flood, M.B., from the 106th Foot, to be Staff Assistant-Surgeon, *vice* William Henry McNamara, M.D., appointed to the 106th Foot. November 7.

BIRTHS.

DE CHAUMONT.—On November 9, at Oakland Woolston, Hants, the wife of F. De Chaumont, M.D., Staff Surgeon, of a daughter.

ELLIOTT.—On November 9, at 10, Wright-street, Hull, the wife of G. F. Elliott, M.D., of a daughter.

GARMAN.—On November 9, at Kent House, Bow-road, E., the wife of H. V. Garman, Surgeon, of a daughter.

HAYWARD.—On November 7, at 38, Harley-street, London, the wife of H. Howard Hayward, M.R.C.S., etc., of a daughter.

JACKSON.—On October 24, at Malta, the wife of P. Neville Jackson, Surgeon 31st Regiment, of a daughter.

PICARD.—On November 2, at 24, Abbey-road, N.W., the wife of P. Kirkpatrick Picard, M.D., of a son.

MARRIAGES.

BOLDERO—WEBB.—On November 5, at Amblecote Church, Stourbridge, Staffordshire, Frederick Boldero, Surgeon. Penkridge, Staffordshire, son of John Boldero, Esq., of Rattlesden, Suffolk, to Fanny, eldest daughter of Joseph Webb, Esq., of Coalbourn House, Stourbridge.

GINNE—CARTER.—On November 7, at Sandgate, George Heasler Ginne, Esq., to Annie Chappell, eldest daughter of the late John Carter, M.D.

PEACOCK—GARDNER.—On November 5, at Northallerton, James Bailey Peacock, M.R.C.S., etc., to Isabella Jane, eldest daughter of Geo. Gardner, late Captain 13th Hussars. No cards.

TATNER—FINCH.—On November 2, at Upton Old Church, Slough, T. Tatner, Esq., late of Kirby Hall, Kent, to Angelique, widow of the late W. Finch, M.D., and the only daughter of the late Sir Charles Harcourt Palmer, Bart., of Dorney Court, Bucks. No cards.

DEATHS.

EDDOWES, EMILIA, the wife of Walter Eddowes, Surgeon, at Stamford, on November 2, aged 36.

HILLIER, THOMAS, M.D., F.R.C.P., Fellow of University College, and Physician to the Hospital for Sick Children, at 32, Queen Anne-street, on November 7, aged 37.

LUCAS, WILLIAM, Deputy Inspector-General of Hospitals and Principal Medical Officer (late of the Ceylon Rifle and 96th Regiments), at Chelsea Hospital, after a few days' illness, on November 3, aged 63.

PALETHORPE, THOMAS, M.D., at Queen's-terrace, St. John's-wood, on November 7.

PIDDUCK, Dr. ISAAC, at 22, Montague-street, Russell-square, on November 10, in his 76th year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bramley Union.—Mr. Hudson has resigned the Bramley District; area 2505; population 8691; salary £20 per annum.

Tynemouth Union.—The Earsdon District is vacant; area 7268; population 4866; salary £30 per annum.

West Ward Union.—Mr. William Irving has resigned the Eamont Bridge District; area 47,040; population 3247; remuneration "per case." Also the Workhouse; salary £14 per annum.

APPOINTMENTS.

Horncastle Union.—Henry S. Ward, M.R.C.S.E., L.S.A., to the Tetford District.

Northallerton Union.—Thomas Watt, M.D., M.C., to the Osmotherley District.

Penrith Union.—Donald MacGregor, L.R.C.P., M.R.C.S.E., to the First Division of the First District and the First Division of the Third District. Also to the Workhouse.

St. Mary Lambeth Parish.—John Erskine Chalmers, M.R.C.S. Eng., L.S.A., as Resident Medical Officer at the Workhouse.

MEDICAL MAGISTRATE.—Dr. Drake has been appointed a justice of the peace for the city of Exeter by the Lord Chancellor.

MR. R. LEY, M.R.C.S., etc., was elected Mayor and Chief Magistrate for the borough of South Molton on Monday last.

PRESENTATION AT CHASETOWN.—Dr. Clarke, late of Rugeley, and formerly of Burton-upon-Trent, and who has been for more than five years the Medical officer of Mr. M'Clean's collieries, received last week a pleasing proof of how highly his Professional skill and kindly manner are appreciated by the working men with whom he is brought in contact. Upwards of two thousand purchased an exceedingly handsome marble timepiece and a costly centre-piece. The shield of the latter and the front of the former bear the inscription:—"Presented to James Clarke, M.D., by the miners and workmen of the Cannock Chase Colliery, Staffordshire, as a testimony of their high appreciation of his Professional skill, and his uniform attention and kindness as their field Surgeon."

COLLEGIATE EXAMINATIONS.—It is stated that at a meeting of the Court of Examiners of the Royal College of Surgeons on the 10th inst., just one-third of the twenty-four candidates who presented themselves for the primary examination in anatomy and physiology failed to reach the required standard, and were consequently referred to their studies on these subjects for three months. At this meeting of the Court, Mr. George Busk, F.R.S., the recently elected examiner, in the vacancy occasioned by the resignation of Mr. John Flint South, took part in the examination.

AT the annual meeting of the Greenock Medical Society, held on the 2nd inst., the following gentlemen were elected office-bearers for 1868-9:—*President:* Dr. Richmond. *Vice-President:* Dr. Wallace. *Secretary:* Dr. Marshall. *Treasurer:* Dr. Whiteford. *Librarian:* Dr. Aitken.

SCARLATINA is very prevalent at Mile-end Old Town, no less than thirty-two cases having been sent to the Fever Hospital from the hamlet; and the disease is reported as getting worse instead of better. The Medical officer reported that it was scarlatina, and that fifteen deaths had taken place from it. In almost every case the disease had been traced to the school where the child attended. He considered it might be prevented by children being kept away from school for a lapse of time after they had been affected.

CRETINISM.—According to a recent official return, it appears that cretinism is by no means on the decline in Switzerland. The cases of this disease at the beginning of the present year, among a population of 2,032,119 in the nineteen cantons of Switzerland, amounted to 3431, and it further appears that there were at the same period 6258 cases of insanity, thus showing that there is one mentally diseased person to every 202 inhabitants in that country.

THE members of the Medico-Chirurgical Society of the Isle of Wight held their first quarterly meeting at Newport on the 5th inst. The President (H. Waterworth, F.R.C.S.), in an eloquent address, pointed out that although, as country general Practitioners, they could not hope to advance the sciences of physiology and pathology, it was yet in their power, by the careful observation of the natural history of cases of disease, and the effect of giving or withholding remedies, to add to the general fund of experience on which, ever since the days of Hippocrates, the great art of healing was mainly built. The Hon. Sec. for Newport then read a paper on "Cholera, with reference to the Epidemic in Newport in 1866." Mr. Barrow, one of the Surgeons of the Ryde Infirmary, contributed reports of some remarkable cases, which induced a lively discussion. Fifteen of the members afterwards dined together.

MONTHLY RETURN OF DEATHS REGISTERED IN THE EIGHT PRINCIPAL TOWNS OF SCOTLAND FOR OCTOBER, 1868. —The deaths of 2298 persons were registered in the eight towns during the month, of whom 1163 were males, and 1135 females. Allowing for increase of population, this number is 216 more than the average number for the month during the last ten years, and is 329 more than the number registered in October last year. The zymotic (epidemic and contagious) class of diseases proved fatal to 726 persons, constituting 31 per cent. of the mortality. This rate was exceeded in Glasgow and Edinburgh, from the prevalence and fatality of scarlatina; in Greenock, from the prevalence and fatality of scarlatina and hooping-cough; and in Paisley, from scarlatina and fevers. Scarlatina was again the most fatal epidemic, having caused 325 deaths, or 14·1 per cent. of the whole mortality. Hooping-cough caused 95 deaths. The deaths from inflammatory affections of the respiratory organs (not including consumption, hooping-cough, or croup) numbered 364. Those from consumption alone amounted to 235.

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH. —The ninth ordinary meeting of this Society took place on Wednesday, the 4th inst., at the Garrison Hospital, Deputy Inspector-General Dr. Gordon, C.B., in the chair. Dr. Perry, Royal Artillery, read from the regimental records an account of two cases of pleuro-pneumonia which had come under his treatment. Assistant-Surgeon Maunsell, Royal Artillery, read a paper on mortality in India according to temperament. Assistant-Surgeon O'Leary, in the absence of the author, read a paper on a case of malingering, by Dr. Clarke, R.A. This man persistently endeavoured to feign disease for a considerable time. He was eventually tried, convicted, and punished, and was at that present time in the full performance of his duties as a soldier in the Royal Artillery. Dr. Lamprey, 67th Regiment, in continuation of this subject, read a short account

of a man of his regiment who was for a long time suspected of malingering, but who suddenly manifested symptoms of internal disease, and eventually died of aneurism of the aorta. Dr. Gordon related the case of a soldier who had been tried and punished for this crime, but in whom, after death, he detected disease of the cortical substance of the brain, and to the existence of which he had no doubt the suspected attempts at imposture were attributable.

Dr. Humphry Sandwith's Candidature for Marylebone.—Seeing that neither of the other candidates for the borough of Marylebone had expressed any opinion upon the important questions of public health, Poor-law Medical relief, and others affecting the interests and relations of the Profession and the public, it was thought desirable that Dr. H. Sandwith should have an opportunity of expressing to the Medical electors his views on these subjects. On Wednesday evening a conference was held, at which it was intimated that upwards of one hundred of the leading Medical electors of the Borough had within twenty-four hours intimated their intention of supporting Dr. Sandwith, including Dr. Walshe, Dr. Quain, Dr. Head, Dr. Maudsley, Dr. Anstie, Dr. Henry Lawson, Dr. T. H. Green, Dr. Broadbent, Dr. Ridge, Mr. Acton, etc. Mr. Ernest Hart was called to the chair, and in the course of a long discussion Dr. Sandwith announced his intention, if elected, to support the amendment of the Medical Act in such a manner as to protect Medical titles. He would advocate the direct representation of the Profession in the Medical Council. He thought the appointments of Poor-law Medical officers should be for life; he considered their remuneration inadequate, and was strongly of opinion that drugs should be paid for separately, and he would energetically support any measure to provide superannuation for Medical officers as for others in the Poor-law employ. In respect to sanitary legislation he was of opinion that a consolidation is needed of the Government departments of health, and would desire to see a full inquiry by a Government Commission, preliminary to a revision of the sanitary laws. A vote of confidence was carried unanimously, and it was resolved that Dr. Humphry Sandwith's candidature was deserving of the unanimous support of the Medical electors of the Borough on Professional grounds.

Composition and Quality of the Metropolitan Waters in October, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	19·04	0·080	0·105	0·001	13·0	4·0
West Middlesex	16·91	0·056	0·036	0·000	12·5	3·5
Southwark & Vauxhall	—	—	—	—	—	—
Chelsea	20·00	0·076	0·150	0·000	13·0	4·0
Lambeth	18·09	0·053	0·165	0·003	13·0	3·5
Other Companies.						
Kent	27·60	0·038	0·270	0·000	18·5	7·0
New River	17·15	0·059	0·075	0·000	12·5	3·5
East London	17·68	0·053	0·042	0·000	12·5	3·5

All the samples were bright when drawn from the companies' mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

Poor-law Medical Service.—*St. Luke's.*—A letter was read from the Poor-law Board, offering no objection to the appointment of a Medical officer to the Old-street district, and stating, with regard to Medical officers generally, that their appointment was to be regarded as permanent, unless it was specially recorded as temporary or for a fixed period. *Hackney.*—Mr. Bywater, one of the Registrars of Births and Deaths, applied for the office of vaccination prosecutor, as his duties brought under his notice cases of neglect. He stated that there were already in the Union 700 cases of neglect. The guardians replied that the new clerk, Mr. Goodwin, had already succeeded to that post, it being attached to the clerkship. *City of London Union.*—The Out-Relief Committee reported having found the charge against Mr. Elliott, District Medical Officer, of refusing to go and see a child because he had a cold and it was raining, to be substantially correct; that the assistant sent by him was an unqualified one. The evidence was ordered to be sent to the Poor-law Board for their consideration. [We think this a very hard case.—Ed.] The Out-Relief Committee brought up the sketch of a rearrangement of the Medical districts, which was passed, as also was a recommendation that £135 each should be paid to Mr. Humphreys and Mr. Brown, Medical Officers for the East and West Districts respectively. *Clerkenwell.*—It was resolved that, in the case of cod-liver oil and quinine, the Medical Officers should write out the prescriptions only, and that the poor should go to chemists appointed in the district for these expensive medicines. *St. Pancras.*—A communication from the Poor-law Board intimated that the salary of the Vaccination Clerk should be according to the number of cases, until the work to be done was ascertained. *East London Union.*—It was resolved that Dr. Clarke, the Medical Officer of the Workhouse, should be required to dispense the medicines, and that the nurses should confine their attention to administering the same. It was stated that for twelve years the custom had prevailed of the nurses mixing the medicines for the patients.

Chronic Psoriasis.—The following formula is much employed by MM. Hillairet and Lailler at the St. Louis, the patients at the same time using vapour baths:—Fresh lard fifty parts, sulphocyanide of mercury half a part.—*Bull. de Thérapeutique*, October 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

J. S. H., Co. Antrim.—Write to Dr. Maclaren, Blairgowrie, Scotland.

G. C. B.—Out of print. Apply to Messrs. Longman, the publishers.

P.—For the lighter gymnastics after the American system, consult Madlle. Noa, of 102, Norfolk-terrace, Westbourne-grove; for the heavier gymnastics, Bernard, of Red Lion-square; for fencing, Messrs. Angelo, or their successors, St. James's-street; for apparatus, Mr. Aldred, 126, Oxford-street, and Mr. W. Tweedie, of the Strand, opposite Somerset House.

R. P. G.—Candidates for the *Fellowship* of the College will also have to undergo an examination in *Medicine*, unless already possessing a diploma or licence on this subject. Meetings on the 21st and 28th inst. will be held for the purpose.

Medical Archæologist.—There is no particular robe or costume for the President of the College of Surgeons other than the plain silk gown and the one worn on state occasions—viz., scarlet and gold—which we do not remember to have seen since donned by Sir William Blizard, who also carried the three-cornered silk hat. The books of the Barbers' Company have reference to the *garlands*, still in the possession of the ancient Company. "The loving cup" of the College of Surgeons was presented by the celebrated Ranley.

Further Correction for the British Pharmacopœia.

To the Editor of the Medical Times and Gazette.

Sir,—In addition to the corrections for the British Pharmacopœia published in your impression for October 17, please add the following:—At page 231, between lines 2 and 3 from top, *insert* "Suppositoria Plumbi composita, one grain in each suppository."

I am, &c.

Trinity-square, Southwark, S.E. A. Gardiner Brown.

"Clarissa Harlowe."

To the Editor of the Medical Times and Gazette.

Sir,—The following bit from this once celebrated and lately revived romance may be interesting as a sample of the satire poured upon the Profession in the last century. Speaking of Physicians, one of the chief personages in the piece thus delivers himself:—

"Silly toads, too, now I think of it. For why, when they know they cannot do good, may they not as well endeavour to gratify as to nauseate the patient's palate?

"Were I a Physician, I'd get all the trade to myself; for malmsey and cyprus, and the generous product of the Cape, a little disguised, should be my principal doses. As these would create new spirits, how would the revived patient covet the physic and adore the Doctor!

"Give all the paraders of the Faculty whom thou knowest this hint. There could but one inconvenience arise from it. The apothecaries would find their medicines cost them *something;* but the demand for quantities would answer that, since the honest nurse would be the patient's taster, perpetually requiring repetitions of the last cordial julap."

Here is another bit. It describes the low apothecary, who visits an unhappy patient in a sponging house. Mark his deference to the supposed Doctor.

"On my return, I found that the apothecary was just gone up. . . . She was sitting on the side of the broken couch, extremely weak and low, and, I observed, cared not to speak to the man; and no wonder, for I never saw a more shocking fellow of a profession tolerably genteel, nor heard a more illiterate one prate. Physician in ordinary to this house and others like it, I suppose! He put me in mind of Otway's Apothecary in his 'Caius Marius,' as borrowed from the immortal Shakspeare:—

"'Meagre and very rueful were his looks;
Sharp misery had worn him to the bones.
—— Famine in his cheeks,
Need and oppression staring in his eyes,
Contempt and beggary hanging on his back;
The world no friend of his nor the world's law.'

"As I am in black, he took me at my entrance, I believe, to be a Doctor, and slunk behind me with his hat upon his two thumbs, and looked as if he expected the oracle to open and give him orders."

Turning a few pages, we come to a "worthy apothecary," a better kind of man; but it is clear that the epithet "worthy" indicates the very mediocrity of praise. We speak of a worthy landlord, a worthy magistrate, a worthy clerk, but not of a worthy judge or barrister. We might speak of a worthy attorney or country squire, but not of a "worthy" Lord Chancellor, or the worthy Mr. Gladstone. "Worthy" is applied to a class of people who, if honest, are considered to act almost above their station.

I am, &c.

VOX ET PRÆTEREA NIHIL.

CORRIGENDA.—CAMBRIDGE UNIVERSITY MEDICAL SCHOOL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the list of Provincial Medical Schools, apparently from official sources, given in your journal last week, the number of students pursuing their Professional studies in the Cambridge University Medical School is given as seventeen. In this there is certainly some mistake, as the number of Medical students who were members of the Medical Society amounted last year to not less than forty-five. The number of those who commenced Medical study in the University in that year was twenty-five. The number of entries seems, therefore, probably equal to that of any of the provincial schools, and more than half those in London.

I am, &c. BERESFORD N. EARLE,
Late Secretary of the Cambridge
Jesus College, Cambridge. University Medical Society.

LEEDS SCHOOL OF MEDICINE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I beg to call your attention to an error into which you have fallen in last Saturday's number of the *Medical Times and Gazette*, under the heading "Provincial Medical Schools." You mention the number of students at each of the schools, with the remark that there had been an increase in most of them. You then give the total number at this School as thirty-two, while last year our total was forty-four. This number, however, represents only those who are attending the course of anatomy, our whole number of students this year being fifty-two. Please to correct the error in your next number.

I am, &c.

EDWARD ATKINSON, Secretary.

COMMUNICATIONS have been received from—

Dr. J. S. HOLDEN; Dr. J. B. FAIRMANN; Mr. REID; Dr. WALLACE; Dr. MACCORMACK; Mr. THOMAS STOKES; Dr. THOMAS RADFORD; Mr. A. GARDINER BROWN; Dr. CASTLE; Mr. BERESFORD N. EARLE; Dr. C. A. GORDON; Mr. EDWARD ATKINSON; Dr. T. R. FRASER; Dr. A. L. MAC KAYE; Mr. J. F. COLLINGWOOD; Dr. GERVIS; Dr. JOSEPH ROGERS; Dr. BARNES; Dr. R. P. COTTON; Mr. J. CHATTO; Dr. J. HUGHLINGS-JACKSON; Dr. LIONEL S. BEALE; Dr. B. W. RICHARDSON; Dr. W. D. MOORE; Mr. J. HUTCHINSON; Mr. ALEXANDER SULL.

BOOKS RECEIVED—

Dudgeon's Report of the Peking Hospital—Report of St. Mark's Ophthalmic Hospital—Journal of Anatomy and Physiology, November—Macnamara's Manual of the Diseases of the Eye—Pacific Medical and Surgical Journal, No. 17—The A B C Sewage Process—Army Medical Department Report, vol. viii.—Barton on Syphilis—Dublin Quarterly Journal of Medical Science, No. 92—Report on the Proper Principle of Drainage—Leach's Ship Captain's Medical Guide—An Appeal to the Electors of Great Britain and Ireland by the "Times of India."

NEWSPAPERS RECEIVED—

Birmingham Daily Post—Northern Whig—Sydney Morning Herald—Indian Medical Gazette—Staffordshire Advertiser—Sussex Advertiser.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 7, 1868.

BIRTHS.

Births of Boys, 1063; Girls, 1082; Total, 2145.
Average of 10 corresponding weeks, 1858-67, 1950·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	716	671	1387
Average of the ten years 1858-67	662·9	628·9	1291·8
Average corrected to increased population..	..	..	1421
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	6	31	2	4	2	5	..
North ..	618,210	..	11	19	2	8	17	3	1
Central	378,058	..	5	25	1	1	7	..	..
East ..	571,158	..	4	24	1	6	20	5	..
South ..	773,175	1	6	20	2	9	8	6	..
Total ..	2,803,989	1	32	119	8	28	54	19	1

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·751 in.
Mean temperature	43·9
Highest point of thermometer	57·1
Lowest point of thermometer	26·1
Mean dew-point temperature	39·1
General direction of wind	SW, WSW, N.
Whole amount of rain in the week	0.18

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 7, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Nov. 7.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Nov. 7.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2145	1441	1387	57·1	26·1	43·9	0·18	18
Bristol (City) .	167487	35·7	112	75	*52	..	..	..	..	..
Birmingham (Boro')	352296	45·0	215	171	141	61·0	24·0	44·6	0·56	57
Liverpool (Borough)	500676	98·0	369	290	242	60·4	29·8	43·9	0·75	76
Manchester (City) .	360835	81·8	229	208	*179	58·7	26·5	43·5	1·84	186
Salford (Borough) .	117162	22·7	88	59	65	64·7	23·5	43·3	1·46	147
Sheffield (Borough).	232362	10·2	164	122	98	63·5	27·8	45·2	1·11	112
Bradford (Borough)	108019	16 4	58	55	79	..	..	..	..	..
Leeds (Borough) .	236746	11·0	169	120	129	64·0	29·0	46·5	0·85	86
Hull (Borough) .	108269	30·4	79	50	58	63·0	24·0	42·7	0·13	13
Newcstl-on-Tyne, do.	127701	23·9	78	68	67	54·0	25·0	39·1	0·68	69
Edinburgh (City) .	177039	40·0	107	85	91	59·7	23·0	40·3	1·20	121
Glasgow (City) .	449868	88·9	307	262	253	57·2	25·2	41·3	2·46	248
Dublin (City and some suburbs) .	319985	32·8	131	157	136	64·3	26·5	42·9	0·33	33
Total of 14 large Towns . . .	6391080	34·7	4251	3163	2977	64·7	23·0	43·1	0·96	97
					Week ending Oct. 31.	Week ending Oct. 31.				
Vienna (City) .	560000 (1863)	..	..	..	..	..	..	..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·751 in. The barometrical reading decreased from 30·08 in. at the beginning of the week to 29·44 in. on Wednesday, Nov. 4.

The general direction of the wind was S.W., W.S.W., N.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

November 14. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

16. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Mr. Spencer Watson, "On a Case of Injury to the Knee-joint," and also a Specimen of Comminuted Bones from a Gunshot Wound. Dr. Leonard Sedgwick will exhibit an improved Uterine Speculum. Mr. Alfred Cooper, "A Case of Carcinoma." A Ventilating Urn for the Sick-room and for the Diffusion of Vapour or Warm Air, invented by Mr. Jones, of Aylesbury, will be shown. Mr. Thos. Hunt, "On Phases of Physic in the present Century."

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Adjourned Discussion on "Anthropogenesis." Dr. Charnock and Mr. Wake, "Language as a Test of Race." Mr. Hoddor Westropp, F.S.A., "Origin of Language."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

18. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Dr. J. Spence Ramskill, "On the Treatment of Rheumatic Gout by the Internal Administration of Olive Oil."

20. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

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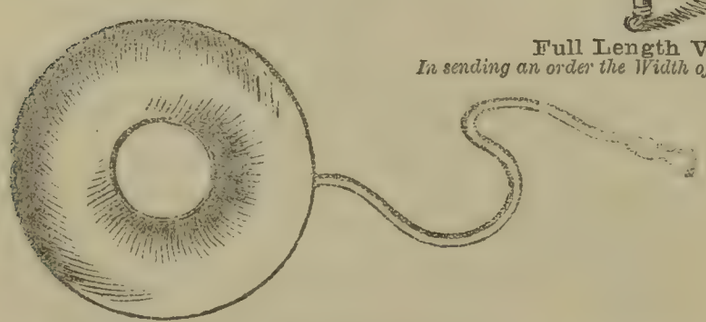
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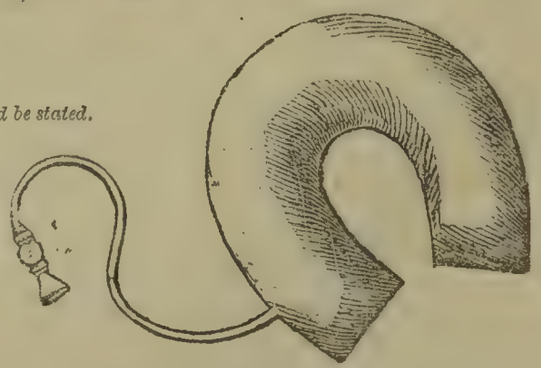
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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Locomotor Ataxy—*Continued.*

Symptoms of Ataxie Locomotrice.—There is the want of control over the limbs, and thus the patient totters when he walks, or resembles the man alluded to by Sir C. Bell, who steps along a narrow ledge. He throws his feet out as if pawing the air, and feels almost as if he was walking in the clouds, or, as is sometimes the case when a partial anæsthesia is present, as if he was stepping on wool, or as if he had no legs and possessed no weight. The limbs are thrown out with a jerk, or as if pulled with a string, as though not altogether under the control of the will, and, when standing, he has a difficulty in maintaining the equilibrium, and a liability to fall. This staggering has been considered worthy of a new name—"titubation." Unlike a blind man, who holds himself backwards, he precipitates himself forward, and, unlike a drunken man, does not roll from side to side, although I know of the case of a man affected with this disease who on more than one occasion was charged with being intoxicated. His occupation was a rent collector, and he had a remarkable way of precipitating himself into people's houses, which suggested to the ignorant the notion of inebriety. The gait is rather like that of the man on a ledge, who is attempting to balance himself, and who is constantly working his feet to preserve them in position. The patient has a difficulty in starting, as some of you witnessed in a patient lately in the Hospital: when requested to walk across the ward, he would stand motionless for some time, as if he were winding up a clock for the performance, and then off he would go in a most precipitous manner. When the patient is on the trot there is often the same difficulty in arresting his own progress or in turning round. Thus, a patient of mine assured me that whilst at Margate he walked a long distance along the road, and then, wishing to stop in order to return, was obliged to guide himself up to the bank, where he fell down. Some years ago one of our out-patients afflicted with this disease apologised for being late at the Hospital, as his friends had started him out of his house in the wrong direction, and when or where he would have stopped no one knows, had he not been met by an acquaintance, who turned him round and sent him back again. I should say that the story was proved to be true, although I cannot take it altogether as a consequence of the disease I am describing, for the patient subsequently proved to be mad.

For this want of control over the movements or want of knowledge as to the movements of the limbs the eyesight compensates, and thus the patient is continually looking at his legs. Whilst his eyes are fixed on them he may walk for miles or stand quite steady; but let him place his feet together and raise his head, he immediately falls.

The same facts apply to the arms. He cannot make a straightforward thrust, for in the endeavour his arm would strike from side to side. A good method of testing the power of control which is left to the patient is to ask him to perform the manœuvre suggested by Dr. Hughlings-Jackson, to place the thumb to the nose and at the same time extend the fingers, or, as it is usually called, to "take a sight." If he be troubled with ataxy, he will experience considerable difficulty in performing the operation. Just as the patient can walk for miles if not interrupted, or make a great resistance with his leg whilst in the sitting posture, so with these tottering arms he can carry great weights. When in bed the difference between his condition and that of an ordinary paraplegic patient is well seen; he has no difficulty in throwing his arms and legs about, but he does so without apparently a fixed purpose, and in a most ungainly manner. In this disease, I should have said, the muscles do not waste. Not only the limbs but muscles of other parts of the body may be affected, or rather the nerves supplying them, especially those of the cranium, as the third nerve. Thus the pupils are very often contracted and unequal in size, as occurs so frequently in many other chronic disorders of the cerebro-spinal system; strabismus has been described by some, and, as Dr. Hughlings-Jackson has pointed out, occasionally amaurosis. In some instances there has been anæsthesia of the face as well as of the extremities. Finally the bladder and rectum may lose their power. Towards the end of the disease, the sexual powers, as in many other nervous affections, fail; but at the onset it has been observed that they have been much increased—so much so that venereal excesses have been considered mainly instrumental in the production of the disease.

Then there are other symptoms which are pretty constantly present, and assist in characterising the disease. These are more especially pains in the limbs which, at a former time, when the peculiarity of the affection was not recognised, were thought to be rheumatic, but now are known to be spinal. These are deep-seated aching pains, as if, to use the common expression of patients, they were seated in the bones. Sometimes, instead of being constant or enduring like those of rheumatism, they resemble electric shocks darting through the limbs or muscles. This resemblance was volunteered by a patient lately in the Hospital, who, having had the limb galvanised, described the pains which he suffered as being exactly similar to the effects of the battery. They were not persistent, but would come on at intervals, and were described as most excruciating.

With these pains there may be some amount of anæsthesia, for, as you know, neuralgic pains may be accompanied not only by an over-sensitiveness of the part affected, but by the opposite condition. Some writers have endeavoured to discover a cause for the peculiar symptoms attendant on ataxy in the anæsthesia, but, unfortunately for the theory, the patients often possess their full amount of feeling. Duchenne, who first wrote systematically on the subject, divided the *ataxie locomotrice progressive* into three stages (see *Archives Générales*):—1. Where there was paralysis of nerves of the eye, shown by inequality of the pupils and amaurosis, with darting pains in the limbs. 2. Characteristic unsteadiness of gait, with diminished sensibility and pains in the legs. 3. Symptoms still further increased, and the want of co-ordination increasing upwards.

Now what is the morbid anatomy of this disease? My own experience in the pure cases of ataxy has been very limited, but I believe the statements of Duchenne have been confirmed by numerous other observers, that a marked change has existed in the posterior columns of the spinal cord. These have become changed into the grey translucent structure which I before described to you. This is composed of new connective tissue, whose presence necessitates a certain amount of destruction of the normal tissue, which is found degenerated and containing amylaceous bodies. The disease may be found extending a great length of the cord, but in the less severe cases affecting more especially the lower end with the cauda equina. The posterior roots of the nerves have been found involved in the disease, as well as sometimes the cranial. The membranes, too, have been thickened and adherent.

The disease, then, known as locomotor ataxy, is believed to be due to this grey degeneration of the posterior columns of the spinal cord, and consequently various explanations of the phenomena observed during life have been advanced. There are those who would at once place the function of co-ordination of movements in this portion of the medulla, whilst there are others who still, holding to the cerebellar influence for this purpose, see only how the disease spoken of severs the cerebellum from the nerves distributed to the muscles. There are some who maintain that the affection necessitates an anæsthesia, which may always be found, and in this absence of common sensation lies the explanation of all the phenomena of the disease, whilst others somewhat modify this opinion by stating that disease of the posterior roots cuts off communication from the motor spinal centres, whose office it is to co-ordinate movements.

Now, having described to you the disease in its pure and simple form, I should add that I am in no way convinced that we are right in giving the designation "ataxy" to many forms of spinal affection because certain symptoms are present in them which may be found in ataxy. Nor would you, indeed, suppose that, even if it be true that this disease is due immediately to the changes described as occurring in the spinal cord, such morbid changes might not frequently involve other portions of the cord, and thus a complex case would arise. Thus it constantly happens that a patient comes before us complaining of weakness of the legs, and at the same time informing us that he has great pains in them, and this may be accompanied by some anæsthesia. We apply the test by requesting him to d with his feet together, and to look upwards or shut his

eyes. Immediately he does so, he falls; but that man has not ataxy, for he is scarcely able to walk across the room or move his legs from the bed—he has, in fact, true motor paraplegia. You will find constantly that patients with ordinary paralysis of motion are assisted in walking by their eyes. As for the so-called characteristic pains in the legs, they are constantly met with in paraplegia. Some of you may remember the case of an old man in one of my beds with progressive muscular atrophy, in whom the muscles were so wasted that he could scarcely move his hand to his head, and could only just stand. When on his feet, he invariably staggered and fell if he did not look downwards. If his arm was out of bed, he was quite unconscious of its position until he looked at it; and as for darting pains in his limbs, these were his most urgent symptoms. The case, indeed, was one of progressive muscular atrophy and ataxy combined, if the symptoms which he had are considered in any way characteristic of the latter disease.

Although we are indebted to Duchenne for a succinct account of this disease, I should state that Dr. Todd, more than twenty years ago, described a form of paraplegia in which the co-ordinating power was lost, and also that my late colleague, Dr. Gull, had observed these symptoms of ataxy in his paraplegic patients, although he did not separate those in whom they existed into a distinct class having a new name; and more than this, he had associated these symptoms with that peculiar degeneration of the spinal cord to which I have referred, and which is now said to be the true seat of the disease. Dr. Gull, in describing such cases, says:—"One patient told me he could not walk without looking down at his feet all the time, because he felt as if his legs were cut off below the knees. Another patient said he had to do so because he had no apparent weight." Again, in a case related in the *Guy's Hospital Reports* for 1858, how a patient, whilst in the recumbent position, could flex and extend his legs with some freedom, but the movements were sudden and vague, from want of control over the action of the muscles, the spinal centres, when stimulated by the will, seeming to shoot off their influence at once, making the feeble muscles contract to their full extent with a jerk. In other words, there was no power to regulate the muscular contraction. The movements of the fingers were also wanting in precision, and he was awkward in handling objects." Dr. Gull then gives a drawing of a section of the cord, exhibiting a very defined disease of the posterior columns, and adds the following remarks:—"This brings us to the theory of the posterior columns proposed by Dr. Todd, that they 'propagate the influence of that part of the encephalon which combines with the nerves of volition to regulate the locomotive powers, and serve as commissures in harmonising the actions of the several segments of the cord.' The want of power in this case to regulate the action of the muscles was very characteristic. The legs when drawn up, as they could be freely, were drawn up with a sudden jerk, and extended in the same manner. The voluntary movements of the hands were also fumbling and vague."

In the year 1851, M. Landry described cases of paralysis of the legs where there was no anæsthesia, but a loss of muscular sense, as he proved by placing a metal goblet in the hand, and it seemed to weigh no more than a feather.

I mention these facts in no way to disparage Duchenne, but to show you that those who had made a study of nervous disease were fully aware of the occurrence of symptoms which I have described. To such the addition of a new name is of no value, but it is of service to those less experienced who may have overlooked this variety of complaint. Be on your guard, however, because a new name has found its way into our nosology, not to apply it to every case where perchance a single symptom rightly belonging to it is present.

St. Andrews Medical Graduates' Association.—The second anniversary session will be held at Willis's Rooms, St. James's, on Wednesday and Thursday, December 3 and 4. Communications will be read from Drs. Harrington Tuke, Crisp, Day, Lloyd Roberts, Maund, Bogg, Bower Harrison, Hughlings-Jackson, Wynn Williams, Whitehead, Sedgwick, and others. The President, Dr. Richardson, F.R.S., will deliver the annual address, "On the World of Physic and the World," on Thursday at 4.30 p.m. The anniversary dinner will be held on the same evening at 7 p.m.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

Delivered in the Museum at Oxford

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

Lecture I.

OF VERY MINUTE LIVING PARTICLES—GENERAL STRUCTURE OF THE PARTICLES—PROCESS OF INVESTIGATION—THE CELL OR ELEMENTARY PART—GENERAL CHARACTERS OF GERMINAL OR LIVING MATTER—THE AMŒBA—THE MUCUS CORPUSCLE—OF THE GROWTH OF GERMINAL MATTER AND PRODUCTION OF FORMED MATERIAL—OF A SIMPLE FUNGUS.

(*Continued from page 552.*) (a)

We have now to consider the manner in which the formed material is produced from the germinal matter, and this is a most interesting inquiry, involving questions of fundamental importance. It has been shown that the amœba may become surrounded by a capsule, and the material formed upon the surface of a mucus corpuscle be firmer than ordinary mucus, so as to form a "cell wall." This alteration is probably dependent in great measure on change in the external conditions. When these are favourable, the germinal matter of the amœba and the mucus corpuscle grow very fast and multiply rapidly, but when the external conditions are unfavourable, and the supply of pabulum very limited, the germinal matter ceases to increase rapidly, and becomes changed on the surface; a firm material being produced which protects the living matter within from destruction, but which renders its free movement impossible. Under such circumstances, the so-called mucus corpuscle may assume the characters of an epithelial cell.

But the growth of *germinal matter* and the production of the *formed material* can be so well studied in the lower fungi, that I shall venture to draw your attention to the phenomena as they occur in this lowly organism before alluding to the higher plants and animals. Each little spore of mildew, which is so light that it may be wafted long distances by currents of air, may be said to correspond to a single *cell* or *elementary part* of the higher tissues, and consists of a spherical mass of germinal matter invested with a tolerably firm capsule of formed material.

If one of these spores falls upon a moist surface where the conditions necessary for its development are present, it soon undergoes remarkable changes, and abundant growth occurs, so that by the germination of this one minute particle many hundred times its weight of material may result in a very short time, and every portion of the newly formed germinal matter is itself capable of further growth.

The changes which occur are of exceeding interest and worthy of the most attentive study. The facts which we shall learn cannot fail to influence our general conclusions concerning the nature of the process of growth as it occurs in all living things in health and disease, while at the same time they serve to impress upon us forcibly the amazing difference between *growth*, as it occurs even in this simple organism, and the *mere increase* in size which the crystal undergoes, and which has been very wrongly termed growth.

The capsule of the spore about to germinate first becomes swollen and more readily permeable to moisture. The germinal matter within, being supplied with pabulum, begins to increase, and moves outwards wherever the capsule is very thin or wherever pores exist in it. As soon as the small portion of germinal matter reaches the surface, it comes into more immediate contact with the pabulum, and is only separated from it by a very thin layer of permeable membrane. It then grows very quickly, and soon forms a sort of process or outgrowth, still connected with the original mass of germinal matter by a very thin pedicle. Growth continues with considerable rapidity, and soon an oval spore like the original one (as may be seen in the rapid multiplication of the yeast-cells in ordinary fermentation) or a long branching stem results, from various parts of which new buds proceed which grow and branch like the original one, and sometimes with astonishing rapidity. At first the membrane or formed material of these branches is ex-

(a) *Erratum.*—In last lecture, page 551, sixth line from top of second column, for "*basis*" read "*hairs.*"

tremely thin, but it gradually becomes thickened by the deposition of new formed material within, until it acquires considerable firmness. If the conditions cease to be favourable to growth, the branches cease to extend, and the membranous protective covering acquires increased thickness.

These two processes—the extension of germinal matter and the production of formed material—occur under different and often opposite conditions; the circumstances favourable to the rapid increase of germinal matter being unfavourable to the production of formed material, and *vice versâ*, so that an abundant supply of pabulum is associated with rapid growth of the germinal matter, a scanty supply with the production of formed material. The former is a very rapid process, the latter a slow one. In a few hours germinal matter may multiply itself a hundred-fold, but days or weeks may be required for the formed material to double in amount. If, after rapid growth from exposure to favourable conditions, the germinal matter be brought under the influence of adverse circumstances, the formed material gradually increases in thickness. At the same time the amount of germinal matter becomes less and less as it undergoes conversion into the formed material, which, therefore, becomes thickened by deposition, *layer within layer*. At last a mere speck of germinal matter may remain, surrounded by a very thick investing membrane, which acts as a most efficient protection to the trace of germinal matter, which is thus enabled to resist the influence of extreme cold and retain its vitality until external conditions become again favourable, when the trace of living germinal matter soon increases, spreads through the thickened membrane, much of which it even consumes as pabulum, and the rapid growth already referred to is resumed. This rapid increase of germinal matter under favourable conditions is a fact of the greatest interest and importance in reference to certain changes occurring in disease of the higher tissues of plants, animals, and man. For we shall find that just as the germinal matter of the fungus may grow and live and produce new germinal matter at the expense of the formed material already formed, so the germinal matter of a cell of the highest organism may increase and consume its formed material. In this way we shall see that firm and scarcely changing tissue may become the seat of active change, and ultimately be removed. Thus is the fatty matter of adipose tissue removed, and the hard, compact tissue of bone scooped out to make room for new osseous texture. In this way the abscess and the ulcer commence, and the "softening" of cartilage and other hard textures is brought about. The pathological process known as "inflammation" is due to the increase of germinal matter. In certain forms of cancer the process is seen in its most active and, to us, most painful form; for as the growth proceeds not only is the formed material of adjacent textures rapidly consumed, but no sooner has the soft cancer-tissue been produced than it in its turn is consumed by new cancer-tissue, and this by more, until an enormous mass of soft, evanescent, spongy texture results, which destroys the poor patient by its enormous exactions upon his terribly exhausted system.

List of Microscopical Preparations illustrating Lecture I.

No. of Specimen.		No. of diameters magnified.
1.	Cartilage common newt, showing germinal matter	215
2.	Germinal matter and formed material, vegetable tissue	215
3.	Cells or elementary parts, cuticle, newt. Young cuticle below, fully formed cuticle above	215
4.	Cells or elementary parts of capsule of a seed	130
5.	Cells or elementary parts of growing seed	215
6.	Cuticle from the nose of the mole	215
7.	Fat cells with small masses of germinal matter, newt	215
8.	Germinal matter growing fungus	215
9.	Germinal matter forming buds of growing tissue at a very early period of development. Man	215
10.	Germinal matter of fungus from a rotten apple	215
11.	Large masses of germinal matter, thyroid gland, newt	215
12.	Germinal matter in act of division, cartilage, newt	215
13.	Germinal matter, mucus from the throat	215
14.	Spores, sugar fungus	700
15.	Growing spores, penicillium	700
16.	Growing branches and fructification, spores, penicillium	215
17.	Budding and branching of sugar fungus	215
18.	Masses of germinal matter at the extremity of radicle of growing potato	130

In my next lecture I shall speak of the germinal matter of some of the most important tissues of man and the higher animals.

(*To be continued.*)

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.(a)

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON SEPARATION OF FIBRINE FROM THE BLOOD WITHIN THE CIRCULATION.

(*Continued from page 554.*)

Summary of Predisposing Conditions to Separations of Fibrine.

I have so often in previous papers and lectures defined in detail the symptoms attending the separation of fibrine that it would be obtrusive again to enter on this topic at any length. But, as I am still frequently desired to make a diagnosis in cases where separation is suspected, and as I find much doubt often prevails, I may be excused for recording a few general rules by which I am myself guided, and which very rarely fail to lead to a correct conclusion. Indeed, I think the diagnosis in most cases is very easy, and, although the evidence is circumstantial only, there are so many indications all pointing in one direction that, with careful and unbiassed observation, there is little chance of error.

Called to a case where there is acute exhaustion or collapse, I first ask whether the preceding history of the case is in accord with the idea of separation of fibrine. If the case has been marked in its early stages by sudden elevation of the animal temperature and the other symptoms of over-action, the indication is fair, though not certain, that there is separation of fibrine. Further—and the point I am about to name is of the greatest practical importance—I attach, as the forerunner of separation, no undue weight to mere severity of severe local symptoms as distinct from slight local symptoms. In truth, separation of fibrine in the heart may follow the most trifling symptoms of local mischief. I have seen fatal separation occur in a case of what is called erysipelas, the blush of erysipelatous redness having been of the faintest tinge in one ear and of the most temporary duration. My friend, Dr. Fergusson, brought me a few weeks since the heart of a little child filled on the right side with finely separated fibrine. This child had been a little unwell for a day or two, but had never been to bed, and had shown such slight signs of disorder that her relatives sought no assistance until she was in the hour of death. In a case which I have recently seen with my friend Dr. Nicholas, of Wandsworth, the patient was recovering from a rather long and unpronounced series of symptoms, beginning with what seemed cold, and then taking the character of undeveloped scarlet fever, with a little redness and soreness of throat. The man was so much improved he had recommenced to go about in his daily life, when he began to sink and shortly died.

I need not multiply these examples, for unfortunately they are of such frequent occurrence they are only too readily recognised as familiars when they are pointed out. But it was necessary briefly to depict them, in order to connect them, in relation to separation of fibrine, with more severe and determined signs of local disease, and as the prelude to the following general rule, that the local indications of disease from which many diseases take their common name, as croup, scarlet fever, erysipelas, peritonitis, pleuritis, and the like, are no diseases of themselves, but the indices, probably of third or fourth value, of certain fundamental changes proceeding in the prime motion of the organism, one of which fundamental changes is the abnormal separation of fibrine from the blood.

Again, presuming that, on hearing the history of a case where separation of fibrine is possible, there be no account of any preceding inflammatory or febrile disorder, severe or slight, I take into consideration any pre-existing feebleness and languor of the circulation. During partial stasis of blood alone, the tendency to separation of fibrine may be determinate. The exhaustion of shock, if not followed by reaction, may be thus supplemented.

A man was crushed by the fall of brickwork, and was conveyed into the Royal Free Hospital. There it was found that his thigh and pelvis were fractured, and that the shock was of

(a) Lecture delivered on November 10.

the severest character. He lived on in extreme exhaustion for four days, rallying a little, when he was suddenly seized with intolerable dyspnœa, and death soon put an end to his pain. On opening the body it was found that a band of separated fibrine, taking a firm hold on the muscular fibres of the inner wall of the right auricle, ran down into the ventricle, and, making a spiral turn round the chordæ tendineæ of the tricuspid valve, looped up the curtains of the valve, and entirely closed the opening from the auricle into the ventricle. My friend Dr. Cockle, who was present at the post-mortem, was kind enough to remove this heart for me with the fibrine mass *in situ*, and from that specimen the very correct representation which I have handed round is drawn.

In slow exhausting diseases the same event may occur. I recall the case of a middle-aged woman who was suffering from cavity of the lung and great exhaustion. Nevertheless, she was up for many hours in the day, and attended to her domestic duties. In the evening she complained suddenly of intolerable faintness and inability to breathe; in a few hours she was dead. After death I removed from the heart two large separated masses of fibrine: as they were removed I laid them on paper, and drew a line round them to mark their exact size at the moment of their removal. The sketch is here traced on clean paper. It defines large solid cylinders of fibrine with cone-shaped pointed ends.

In aged people we may witness a similar series of events, under conditions leading to depression. The slowness of circulation, incident to exposure, to cold, and to reaction, may be sufficient alone in the aged to lead to changes ending in separation of fibrine. In one of the drawings I have sent round there is a representation of a tubular separation of fibrine in the aorta. This was removed from an aged woman, who enjoyed very good health until a few hours previous to her death. She became a little feverish, as from cold after exposure to a chill, quickly became exhausted, and then suddenly died. In this patient, the aorta, large and roughened on its inner surface, formed a favourable spot, during the feeble passage of blood, for the fibrine to go down in successive layers until the channel through the mass was too small to admit the column of blood coming from the ventricle.

Arrest of blood from passive or active obstruction may lead to separation of fibrine. This occurs in aneurism, where round the sides of the dilated vessel, as Lancisi so beautifully showed, there is a slower current of blood than in the centre of the vessel. This also occurs in examples where the branches of an artery are compressed, as by the ligature, or are closed by disease, as in some forms of gangrene. This occurs again, and in its most common and serious aspect, where the venous system is obstructed, as during the latter periods of pregnancy, when there is pressure on the large veins through which the blood is immediately returning to the heart. It has become customary of late, in cases where fibrine separates in consequence of obstruction in a vein, to consider that the separation must take place primarily at the point of obstruction, and that if there be in such cases a separation of fibrine in the heart itself, that is secondary, and is the consequence of a primary removal of a plug of fibrine from the point of obstruction in the vein. As an exception, this idea is true; as a generalisation or rule, it is as great an error as that which traces all separations of fibrine found in the arteries to the breaking up or breaking away of fibrine from masses of it in the heart. The simple truth is that when there is a reduced column of blood through the veins into the heart, the heart itself is at once rendered the most favourable seat for the separation. The heart becomes relatively large to the column of blood it receives. Then, as in an aneurism, there is slower motion of blood around the sides of the organ. Then, in the auricula especially, there is the first line of separation, and the first line set there is the foundation of what becomes, almost inevitably, a large mass of the concrete from the blood. I was taken to the post-mortem of a lady who, being advanced to the ninth month of pregnancy, was seized with dyspnœa and collapse while engaged in playing with a child. She was soon dead, and the case was presented to me as one in which a clot of fibrine had suddenly floated into the heart from an inflamed vein in or near the pelvis. There was no inflammation, no obstruction, no sign of disease of the veins anywhere; but there was an enormous uterus pressing backward upon the ascending cava, and in the right heart there was true cardiac separation of fibrine, which had commenced in the auricula of the auricle, had passed as a band into the ventricle, and, getting loosened from an attachment there, had floated up into the infundibulum, and over the pulmonary valves. On that event came the dyspnœa, on that the collapse, and finally the death.

Presuming that in a case of collapse, or impending collapse, there be no history of pre-existing fever, and no history of exhaustion nor of obstruction of blood, I ask if there have been any occasional or paroxysmal symptoms indicative of obstruction of blood within the heart. It sometimes happens that separation of fibrine takes place in the heart, and that the mass formed, either from being small from the first, or from after-shrinking, does not kill at the time, but lies out of the direct current of the blood, and for intervals of time gives no inconvenience. Anon it moves into the current of the blood, to give rise to symptoms of the most painful kind; and once more may shift back into its original place, the symptoms being thereupon relieved. The case sent me by Mr. M'Nab, and to which I have once before referred, was a wonderful instance of this nature. The separated fibrine formed, it will be remembered, a thin tape or band, which was fixed by its attached end or base to the anterior wall of the right ventricle, and by its free end floated into the infundibulum and pulmonary artery. In this case, for weeks the patient suffered from paroxysms of terrible dyspnœa, due to obstruction of the heart, and at last, in one of these attacks, he died. But this is the most singular and conclusive part of so unhappy a history. The patient himself discovered that the paroxysm, which was always brought on by lying upon the back, could be at once relieved if he laid himself in a straight line with his face downwards. Why this should be was abundantly clear when the position of the band of fibrine was discovered after death. When the body was reclining on the back, the band of fibrine sank across the current of the blood, and, like a valve, obstructed the course of the blood; but when the body reclined on the breast, the band of fibrine floated with the blood-stream, was laid up against the anterior wall of the heart and of the pulmonary vessel, and gave little or no difficulty.

In another case where signs of obstruction of the left side of the heart were present at intervals for many years, but not in an intense degree, the patient dying at last suddenly after some trifling exertion, the cause of the obstruction was found to be a separation of fibrine which had become organised, and which was suspended by what may be called a pedicle from one of the segments of the mitral valve. The fibrine mass had been carried with the current of the blood into the infundibulum, and up to the aorta, closing the vessel completely.

Thus there are three distinct predispositions to be considered on entertaining the question in any given case whether there is separation of fibrine—viz., Has there been overaction and local inflammatory action, severe or slight? Has there been stasis of blood? Has there been previous indication of floating obstruction in the heart? If so, either condition favours, but does not prove, an affirmative view.

Summary of Direct Symptoms of Separation of Fibrine, Differential and Absolute.

I cannot express the leading symptoms of separation of fibrine in the heart better than by putting them into one short passage. *They are the symptoms of hæmorrhage without the visible loss of blood.* They are—falling temperature, pallid or livid surface, feeble, irregular, or fluttering pulse, muscular prostration, and gasping respiration.

With these facts in the mind, the diagnosis becomes simple; still it must be approached with care. I usually proceed by the exclusion of other causes that might possibly also lead to symptoms of hæmorrhage without visible loss of blood.

I ascertain, first, if it be possible to exclude the idea that the collapse is from primary nervous lesion. This is pretty safe. In cases of obstruction from separation of fibrine, there is, as a rule, none of the evidence of special nervous injury. The mind is clear, often painfully clear, nearly to the last; there is no sudden coma, there is no stertor, there is no primary loss of sensibility, there is no special paralysis of muscle—there is exhaustion, debility of muscle, but not paralysis. Next, I ask if direct loss of blood can be excluded. In cases of obstruction from separation of fibrine this point is always easily determined, except in such rare instances as the rupture, by a small opening, of an aneurism into the pericardium. Failing the process of exclusion, I try and learn if excessive exudation or excretion of fluid from the body can be excluded, such as choleraic flux. There is no difficulty in the ordinary run of cases in arriving at a correct conclusion on this point.

There is one form of exudation which might lead to error of diagnosis. I refer to effusion of fluid within the pericardial cavity. The phenomena of sudden death from this cause are

indeed very close to those of obstruction within the heart. I remember the late Dr. Golding Bird describing a case of this kind, at the Medical Society of London, which struck me at the time as singularly instructive. Such a case might perplex the most careful inquirer, but its extreme rarity places it almost out of the range of practice.

Lastly—still carrying out the process of exclusion—I put it whether any obstruction in the respiration is the primary cause of the symptoms. On this head the diagnosis is usually very clear. There is always dyspnœa when there is separation of fibrine in the heart, but the dyspnœa is peculiar in that it occurs—except in cases complicated with independent disease of the lung—with open air-passages. Examining the lung, we find that there is plenty of free space for breathing, and that the difficulty lies not in air gaining access to blood, but in blood gaining access to air. In young children, in whom the chest is expansible, there is often a confirmatory sign which stamps the fact of concretion on the *right* side: the chest is raised, and there is the resonance due to emphysema. This arises from the destruction of balance between the column of air passing into the lungs and the column of blood passing through the pulmonary artery; the column of air presses with its usual force, the column of blood is reduced, and the air permeates the lung tissue.

The idea of the symptoms as dependent on nervous lesion, hæmorrhage, flux, exudation, accumulation of fluid in the pericardium, or obstruction of respiration, being then excluded, I proceed next to the direct physical evidences of separation of fibrine. The first of these is a peculiar dyspnœa. I allude now specially to cases in which the obstruction is on the right side. The dyspnœa is most distressing; it admits of no relief. If you ask where is the oppression, the finger is invariably pointed to the heart; if the patient can speak and explain his symptoms, he will describe that he has no difficulty in drawing in breath—that he has no pain, in the ordinary sense of the term, but yet he feels that he is sinking from inability to breathe. This dyspnœa lasts to the end, and there is often intense working of the alæ of the nose. The explanation of the dyspnœa is that the blood has been cut off from the air, so that, whatever efforts are made to breathe, there is no efficient result. I have already said that in the young obvious signs of emphysema attend this condition.

There is dyspnœa, again, when the obstruction caused by fibrine is on the left side; but, though severe in character, it is not of the same type as is described above. It is congestive rather in nature, and is referred by the sufferer to the chest generally, not specially to the heart.

From the dyspnœa I turn next to the heart itself. I was at one time of opinion that few, if any, special physical signs of separation of fibrine exist as reliable signs. A larger experience has, to a considerable extent, modified and corrected that opinion, and indeed, during the last five years, I have detected not only fibrine within the heart, but the actual position of the mass in regard to the cavities, with extreme precision. The points I keep in mind are as follows:—If, with all the conditions likely to lead to separation, I find the action of the heart feeble and irregular, I make a careful examination with the stethoscope for the two sounds of the heart on the right and on the left sides of the organ. Whatever theory we may adopt as to the cause of the heart's sounds, one thing is certain—that, in health, the tricuspid and mitral valves act together, that the pulmonary and aortic valves act together, and that the first and second sounds respectively are coincident with the simultaneous action of those valves which move together at the same time. When, therefore, in any given case, the action of the valves on one side of the heart is impeded—when, for example, a mass of separated fibrine interferes with the valvular movements—then the sounds produced by the valves on the impeded side will be reduced or even lost altogether. It is possible to detect this. In a case I saw with Mr. Spencer Wells, where fibrine was being laid down on the right side of the heart, this line of diagnosis was so easy that he expressed to me it had only to be practised once to be recognised ever afterwards. Suppose, then, that the separation is on the right side of the heart, there will be feeble or deficient first and second sounds over the line of the right side of the organ—that is to say, in the line of the heart by the sternum. Turning, however, to the left side, both sounds of the heart will be heard.

Supposing the separation of fibrine to be on the left side, these physical signs will be simply reversed—that is to say, the sounds of the organ will be faint or inaudible on the left, audible and distinct on the right side.

One other distinctive point is worthy of attention. When the heart is blocked up with fibrine on the right side, its impulse is reduced, and its action is feeble throughout. When, on the other hand, the organ is blocked up on the left side, the action as a rule is for a long time irregular, tumultuous, struggling.

In some rare cases there is separation of fibrine on both sides of the heart, in which case the prominent symptoms are those of obstruction in the right cavities.

In concluding this history of symptoms, it is necessary briefly to refer to the condition of the other organs of the body when there is separation of fibrine in the heart. I may state on this point as a general truth, that when there is an obstruction on the right side of the heart from fibrine, there is necessarily congestion of all the organs of the body except the lungs, and that when the separation is on the left side of the heart the congestion extends to the lungs also.

In three cases where the separation of the fibrine was on the right side, and the symptoms were prolonged over many days, I have seen congestion of the veins in the lower half of the body succeeded by exudation of watery fluid, so that the limbs became œdematous.

The diagnosis of separation of fibrine in arteries and veins is in some cases as remarkably clear as it is in other cases profoundly obscure. When from the left side of the heart a portion of fibrine floats away into the arterial system, plugs up a main trunk, and acts like a ligature on an artery, the diagnosis is easy enough; or when in a superficial vein small portions of mass can be detected directly, as in one of the cases I have related, then again the diagnosis is sufficiently simple; but when a tube or solid cylinder of fibrine is laid down in an artery or vein, and produces obstruction at the point where it is so laid down, then, although the fact of obstruction may be clear enough, and the position of the obstruction clear enough, the nature of the obstructing substance, and whether it be or be not fibrine, must in many cases be out of our calculation. Nothing assists us here except the previous history. Should it be discovered that the patient has recently suffered from acute disease marked by tendency to separation of fibrine, or that he has been exposed to exhaustion, or shown indications of local stasis of blood, then we may draw an inference as to the possibility of separation of fibrine. There, I fear, we must rest content, hoping that, having discovered so much, we may in course of time discover more.

Up to this point to-day I have endeavoured to depict, free from any theory, the natural history of separation of fibrine in disease. I have shown the mode in which these separations are laid down—*i.e.* their mechanical construction. I have shown the conditions of disease in which they are met, and I have tried to point out the phenomena which indicate the fact of separation. But these, after all, are only preliminary studies to a much broader inquiry. I mean—Why in any case is the blood broken up? Why is the once homogeneous fluid ever separated into different parts? In this long glass cylinder I have a column of blood; I direct the magnesium light on this blood, and you will see that the fluid is divided into three layers. The bottom layer, dark and compact, is composed of the blood corpuscles; the viscid layer in the middle is fibrine; the clear almost transparent layer at the top is the serum. This separation has been induced artificially. At the other end of the table there is a glass basin containing blood which was drawn yesterday by Mr. Spencer Wells from a patient suffering from peritonitis after ovariotomy. You will see here the blood corpuscles at the lower part, an immense layer of purely separated fibrine above, and over and around the fibrine a thin serum. In this instance the separation is natural. We look at the two specimens, and we say again, Why, in either case, is the homogeneous fluid broken up? It is too late in this lecture to enter on the question, but I may state, in conclusion, three basic facts, because they are illustrated in the specimens before us:—1. That whenever fibrine separates from the rest of the blood, as in this specimen of blood drawn from the patient with peritonitis, there is always a reduction in amount of blood corpuscle. 2. That, under the same circumstances, there is always a low specific gravity of serum. In the present case the specific gravity of the serum is 1023 at 60° Fahr. 3. That the large mass of solid fibrine, so called, is made up of not less than from 95 to 97 per cent. of water.

ORIGINAL COMMUNICATIONS.

CALCULUS IN THE BLADDER OF A FEMALE—RAPID DILATATION—REMOVAL OF NINE CALCULI—RECOVERY.

By ALFRED POLAND, F.R.C.S.

[From notes by Mr. C. Roberts.]

Elizabeth D., aged 57, admitted into Guy's Hospital, under the care of Mr. Poland, on August 26, 1868. The patient, who is a widow and has borne several children, has had prolapsus uteri seven-and-twenty years. With the exception of the inconvenience arising from this cause, she enjoyed good health until ten years ago, when, whilst at work, she felt severe pain in the bladder, and on attempting to pass water experienced difficulty in doing so, the urine passing by drops, with a scalding sensation, and occasionally with sudden stoppage for a time. This pain and difficulty in micturition lasted for a week, when it ceased; but during the following six weeks difficulty occurred in micturition without any pain, and then the symptoms disappeared altogether. She is not aware of having passed any stone during this period. No recurrence of the symptoms took place until about three years since, when they returned with greater severity, occurring at intervals of a week or a fortnight; micturition was attended by severe pricking and shooting pains. For the last two years she has been obliged to pass water very frequently, and never without suffering much pain. During the past twelve months her urine has often passed involuntarily, chiefly during the night, but sometimes in the daytime. She states that her urine has frequently been thick and deposited a white sediment. She has latterly, at various times, passed small calculi of the size of a millet seed. She has resided at Brixton sixteen years.

On admission, the patient appeared in a very emaciated condition, suffering the most excruciating agony, so much so that her shrieks were almost unbearable by the patients in the ward. She passes her water about every hour, and generally in drops, and then with increased intensity of pain. By means of vaginal examination, a stone about one inch in diameter could be distinctly felt in the bladder, and on sounding the bladder several calculi were detected, as well as the large stone, which could be readily detected, situated just beneath the pubes, apparently adherent to the anterior wall of the bladder; and by further more accurate vaginal examination with the finger, the calculus could be felt between the finger and the anterior walls of the abdomen. This examination was conducted under chloroform. The uterus was prolapsed to the extent of two inches beyond the ostium vaginæ, and was returned during the above examination. The patient was kept under the influence of opium for a few days, and on August 31, five days after admission, Mr. Poland determined to remove the calculi. He stated that he should remove the calculi by rapid dilatation, and that, should the large calculus be fixed in the anterior wall of the bladder, he would extract it by the supra-pubic operation. Chloroform was duly administered, and the urethra then rapidly dilated by Weiss's instrument to the size of a man's thumb. Mr. Poland then removed several stones, varying in size from that of a pea to that of a filbert, by means of the forceps, having, at the same time, to return the prolapsed uterus, to facilitate the extraction. The large stone at the anterior part of the bladder, as anticipated, was found to be adherent, and this Mr. Poland, after some little trouble, was able to separate from its adhesions by means of the finger introduced through the urethra into the bladder. After several attempts with the scoop and the forceps, the stone was extracted, and it proved to be larger than was expected. After the operation an enema of starch and opium was administered, and the patient kept under the influence of opium to a moderate extent. The patient never had a bad symptom, and lost all her distress and pain; the appetite returned; sleep was a luxury, of which she had been deprived to a great extent for a long time; the urine at first passed away by dribbling, but soon the contractility of the urethra recovered itself, so that in the course of three weeks she was enabled to retain the urine for two hours at a time. She left the Hospital shortly afterwards free from all symptoms, and with rapidly improving health and condition of body.

The calculi removed were nine in number, all exceedingly light, weighing only 596 grains, and consisted of the "fusible" variety. The eight smaller ones, weighing in the aggregate 236 grains, included five pyramidal-shaped stones, of a triangular form, having one side slightly curved, their bases being half an inch and the sides one inch in extent, and they seemed as if they were the component parts of a broken-up calculus; but on section they proved to be distinct calculi, having each a distinct nucleus, and had derived their form from attrition. The large calculus weighed 360 grains, and measured five and a half by four and three-quarter inches in circumference, and one and a half by one and a half in diameter, and with the lithotomy forceps measured not quite two inches. Dr. Stevenson's report upon the nature of the calculus is the following:—"The calculus dust consists of mixed phosphates—*i.e.*, of phosphate of lime, magnesia, and soda, chiefly the two former—with a little animal matter. The calculus is a 'fusible' calculus."

Remarks.—The above case will add another to the series of cases collected and published by Mr. Bryant in his very excellent paper in the forty-seventh volume of the *Medico-Chirurgical Transactions* for the year 1864, a paper well worthy the perusal of the operative Surgeon. I quite coincide with his remarks on vaginal lithotomy, that the latter operation is not "the only justifiable operation for stone in the female bladder." In our present case we had complications, one of which is by no means uncommon—viz., prolapsus uteri. I feel sure that, in the exhausted and precarious state of the woman, had any operative measure otherwise than the one adopted been employed it would have resulted in a fatal termination. Had we not succeeded in extracting the stone by the urethra, we had determined to perform the supra-pubic operation in preference to all others.

ON CRANIOTOMY.

By THOMAS RADFORD, M.D.

Dr. Barnes, in his lecture on this operation (*Medical Times and Gazette*, October 31), says: "Dr. Osborn contended that by canting the base of the skull, so as to bring it edgewise into the brim, it was quite possible to deliver a full-sized child through a conjugate diameter measuring an inch and a half only." Now Dr. Osborn positively asserts he delivered Elizabeth Sherwood, whose pelvis measured in its antero-posterior diameter only one inch and a half. My estimable friend and Hospital colleague, the late Dr. Hull, disputed the truth of Dr. Osborn's positive statement, and most truly and satisfactorily proved by a series of experiments that it was physically impossible for the head of a full-grown infant, howsoever reduced, to be dragged through a pelvis so greatly contracted. Dr. Barnes has no doubt unintentionally made a mistake in saying "his (Dr. Osborn's) contention was hotly disputed by Dr. Hull, who, nevertheless, ended by proving satisfactorily that it could be done." It must be understood that Dr. Osborn states he brought down the lateral part of the base of the skull first, the measurement of which doubtless agreed with his estimation of it, but he overlooked the fact that the upper edge which had to follow must necessarily be accompanied by the cervical vertebræ and the soft parts of the neck, which addition most assuredly greatly increased the bulk which he stated passed through this narrow pelvic aperture. Dr. Hull most indisputably proved by experiment that the least measurement of the head of the infant after it has been reduced to the utmost extent, having dragged away the frontal and the two parietal bones, is from the root of the nose to the chin, and therefore, in order to bring the head through the smallest pelvic space after craniotomy, the face must be brought down first, but he never stated that the head thus reduced to its utmost limits and the face placed foremost could be brought through a pelvic conjugate diameter of only one inch and a half. If the reader will refer to plate 12, fig. 1, he will see this fact graphically shown as regards the impossibility of the base of the skull, reduced and placed most favourably, being dragged through such a pelvis as that of Elizabeth Sherwood. The difference in opinion between Dr. Hull and Dr. Osborn is conspicuously very great, and after a careful consideration of the subject, an accurate computation of the measurements of the reduced head and those of the alleged pelvic space, and after a long and extensive Hospital practical experience, I am firmly convinced it is impossible safely to deliver *per vias naturales* a woman with her pelvis so greatly contracted as that of Elizabeth Sherwood.

Dr. Barnes quotes the following words from the late Professor D. Davis:—"There are few pelves with superior apertures so small as not to furnish from 1″ to 1½″ in the conjugate diameter, or at least of antero-posterior diameters across some part of the brim. In any such cases it would be the Practitioner's duty to avail himself of the use of the osteotomist, and to undertake delivery by the natural passages. It will have the effect of reducing almost to zero the necessity of having recourse to the Cæsarian section."

To say we can reduce almost to zero the necessity of the Cæsarian section by the employment of the osteotomist is a bold and unwarrantable statement, and unsupported by any evidence of this instrument having ever been successfully used on a living woman whose pelvis was so diminished as to furnish only one inch to one inch and half in its conjugate diameter. This instrument, to be effective in cutting out portions of the infant's skull and leave the maternal structures uninjured, must be endowed with other attributes than that which belongs to metal.

Dr. Davis based his opinion on the results of craniotomy operations performed on representatives of distorted pelves carved out in solid blocks of oak. He states that a head craniotomised was brought through one of these models carved to represent the pelvis of Elizabeth Thompson. I had a similar pelvic representation (now at St. Mary's Hospital), but in trying to bring a full-grown infant through it I never succeeded. Although these wooden blocks are accurate in the measurement of those distorted pelves they represent, yet they want all the organs and tissues existing in the living subject, and which render craniotomy a dangerous operation; it is one thing to operate on an inanimate machine, however accurately formed, and another to operate on the pelves of a living woman. To open the head of an infant in cases of slight pelvic distortion is a very easy operation, and this facility is one reason why it has been in many cases rashly performed. In cases of higher degrees of distortion it is both a difficult and a dangerous procedure. If an accurate computation could be made of the comparative loss of lives which take place after the performance of Cæsarian section and after craniotomy in extreme cases of distorted pelvis, I am inclined to believe that deaths would be found to preponderate in the latter class of cases. Craniotomy, however dexterously performed, cannot overcome all the obstacles offered during labour from contracted pelvic apertures.

Cases have repeatedly occurred in which the brim of the pelvis has been so contracted that the head of the infant could not be dragged away, although every effort has been made to reduce its bulk and crush it into a smaller compass. In these cases the poor creatures have generally been left to die with a mangled infant in the uterus or in the abdominal cavity, having escaped through a rent in this organ. In some of these instances abdominal section has been performed when too late to save life. Such practice adds nothing to the reputation of the operator, and tends to inflict odium on the Cæsarian section. It is quite impossible to eliminate the Cæsarian section from the list of recognised obstetric operations, and with all attempted mechanical improvements craniotomy must and will remain a difficult and dangerous operation, etc.

Manchester.

Contraindications to the Use of Anæsthetics.—One of these, M. Gosselin observed in a recent clinical lecture, is the inveterate use of alcoholic drinks so common in the classes brought to the Hospitals. In subjects of this kind who have passed their 50th year, anæsthetics should either be abstained from or employed with the greatest circumspection, so that the anæsthesia may not be too deep or too prolonged. Another still more important contraindication is the state of stupor which immediately follows violent injuries. This, indeed, is self-evident; but the question arises as to how soon after the cessation of such stupor are anæsthetics admissible. After some of these great injuries, when all the known signs of such stupor have disappeared, there may be a certain amount of latent (*larvée*) stupor which may yet deceive us. This is at present a very ill-determined matter, to which M. Gosselin is desirous of drawing the attention of Surgeons. Amongst the injuries in which M. Gosselin thinks that the employment of anæsthetics is unadvisable are recent dislocations, and especially those of the shoulder, in consequence of the serious lesions of important trunks of nerves which may be present. The objection does not hold good with regard to old dislocations, wherein anæsthetics are particularly indicated.—*Gaz. des Hôp.*, October 31.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

NOTES OF WARD VISITS AND CLINICAL REMARKS.

(Cases under the care of Mr. HUTCHINSON.)

Expected Recovery from Traumatic Tetanus.

We mentioned a month ago that three cases of traumatic tetanus were then under care. Of these patients two died, but one is still living and bids fair to recover. Within the last week he has suffered from pleurisy on the right side, which has weakened him and quickened his pulse, but all the tetanic symptoms are subsiding. He can now open his mouth widely, and eats well. The risus sardonicus still remains, and his abdomen is still board-like, but he has now scarcely any spasms. The treatment has consisted in keeping him free from excitement in a single-bedded ward, allowing a full supply of fluid nourishment, and carefully abstaining from drugs likely to interfere with the digestion or complicate the symptoms. With the exception of two turpentine enemata, and of the application of an ice-bag to the nape of the neck, the treatment has been negative. It is now about a month since the disease began.

We may just add that there has been a fourth case of tetanus in one of Mr. Curling's wards. The patient, a middle-aged man, was admitted with an injury to one foot, and tetanus came on about the eighth day.

Staphyloraphy Operations.

Three operations for cleft palate were performed last week, two of them being first ones, and the other a second for union of the uvula. The two new cases were done in the theatre on Saturday afternoon. In one, the subject of which was an Irish girl, aged 20, who behaved admirably, only the soft palate was involved. Pollock's method for division of the levator palati was employed. The subject of the other was a boy of 14 from the country, who showed from the beginning evident signs of a determined resistance which were not belied by the event. Mr. Hutchinson stated that had it not been that the lad had been brought up by his friends from a great distance and at considerable expense he should have declined to operate for a few years longer. Chloroform was not given. The boy was held by assistants, and his mouth kept open by the ingenious and very useful apparatus devised by Mr. T. Smith, of St. Bartholomew's. The cleft was a complete one. Mr. Hutchinson closed the hard palate, and left the rest for another sitting. Wire sutures were used. In all three cases excellent union has resulted.

Curious Case of Spontaneous Fracture of the Thigh.

There is in Talbot Ward a man in whom fracture of the left thigh occurred about a month ago from simply moving in bed. He had been confined to bed for a few weeks before from an abscess in the thigh, but was not supposed to have any disease of bone. Suddenly one morning, in moving the limb, he caught the knee against the bedclothes, and felt the bone snap. He was at that time under the care of Dr. Dickson, of the Customs, by whom Mr. Hutchinson was consulted. As the case promised to be both serious and tedious, the man was transferred to the Hospital. The man had enjoyed good health up to the time of the abscess. The fracture is now compound, and there is such profuse discharge and such a large extent of bare bone that amputation has been advised. There is no proof of the existence of any malignant growth. The man, whose health at first bore up well, has latterly much failed.(a)

Fractures of the First Rib.

Fractures of the first rib are usually considered to be very rare, on account of the efficient manner in which it is protected by the clavicle, and its own shortness and strength. Four examples of this lesion have, however, presented themselves in Mr. Hutchinson's wards during the last few weeks. In each instance the first diagnosis was made by the House-Surgeon, Mr. Clouting. In two of them the rib was broken close to its junction with the sternum. In one case the clavicle was dislocated and the scapula fractured, but in the

(a) Since this was written amputation has been performed. No malignant disease was found, but the bone was extensively destroyed by abscess and caries. The man sank two days after the operation.

others the clavicle had escaped. All the patients were labouring men; one had been run over, and two others had fallen from scaffolding, and had probably struck on pieces of wood.

Foreign Body in the Ear.

There is a child in "Sophia" with a bean (a "locust bean") in one ear, which it has been found impracticable to remove. It is now a month since it was introduced. Mr. Hutchinson saw the child two days after the introduction, and, after persevering attempts had been made without result to extract it, he tried his favourite method with a loop of wire, but found it impossible to get the wire round, as the bean had swollen, and seemed to plug the cavity. Some fragments of it were got away by means of scoop and small forceps, but the bulk remained. A second attempt (both under chloroform) was made a few days later, with like result. A week later the child was feverish, and had much pain in the head. Then paralysis of the portio dura came on. The paralysis varied from day to day, and was never complete. It has now almost passed off, and the child is in better health. In some clinical remarks on this case, Mr. Hutchinson mentioned that there is in the Hospital Museum part of the temporal bone of a child who died from meningitis caused by a bean in the ear. The bean had passed through the membrana tympani, and was firmly wedged.

Thumb torn off by Machinery—Detached Epiphysis, &c.

A week ago a boy of 14 came to the Hospital whose right thumb had been torn completely off by a cogwheel. He brought his thumb with him wrapped up in paper, and it was detained by Mr. Clouting for the Museum. The specimen consists of the terminal and first phalanges, the proximal half of the latter denuded of soft tissues, and its end showing evidences of a clean detachment of its metacarpal epiphysis. The epiphysis was left in articulation with the metacarpal bone, and as there were soft parts sufficient to cover it well Mr. Clouting did not find it necessary to remove it. The two tendons inserted into the last phalanx (long flexor and extensor secundi internodii) have been torn away from their respective muscles high up. In each instance the full length of the tendon is preserved, and at its proximal end end are some ragged portions of muscle. The case, therefore, well illustrates the fact that the weakest part of a young bone is at the epiphysal junction, and that of a muscle just before its tendon is formed.

Delirium Tremens treated by Beer.

Amongst the admissions of the last fortnight there have been several cases of rather sharp forms of delirium tremens complicated, perhaps, with traumatic delirium. All of them have done exceedingly well under a treatment of which the chief point consisted in the free administration of beer. Mr. Hutchinson rarely employs either opium or spirits. In private practice he reports the best narcotic to be bottled stout, but for Hospital use common London porter is sufficiently stupefying if taken in quantity.

Case of Suspected Feigning, with interesting Nerve Symptoms.

A man was admitted with a fractured left clavicle done a week before. A few days after admission it was found that his arm on the injured side had completely lost sensation, and almost completely motion also. The only motor power which remained was the ability to move the thumb a little. He could not feel when the forearm was lifted by the hairs which grew from it. He averred that this condition had been present from the first, and when told that he ought to have mentioned it said he "waited to be asked about it." Mr. Hutchinson, in some clinical remarks at the bedside, said that there were cases in which, with injuries to the shoulder, and especially with fractures of the clavicle, the whole brachial plexus was so damaged either by stretching or contusion that complete paralysis resulted. The present case, however, presented some not unimportant peculiarities. With paralysis of the brachial plexus there usually goes paralysis of the cervical sympathetic and inability to dilate the pupil, with contracted palpebral aperture. This man's pupil, however, acted well, and his ears were equally hot. Then, again, it is almost impossible, in injuries of the kind alluded to, that the intercosto-humeral nerve should be damaged, since it comes from the second dorsal. There ought to be therefore, and there usually is, a tract of skin in the inner side of the upper arm which retains sensation. In this case there was no such tract. Thirdly, the skin above the shoulder is supplied by branches from the cervical plexus, and ought to retain sensation. In this case, however, it as well as the arm was wholly anæsthetic. These three remarkable discrepancies seemed to Mr. Hutchinson to justify the opinion that the paralysis was feigned; and this opinion was strengthened a few days later by finding that although the man could not move the forearm in the least, he could resist attempts to bend the elbow, and very positively employed his muscles to steady both forearm and hand. Mr. Hutchinson remarked that absolute anæsthesia of skin with partial retention of motor power was a state almost unknown to nerve pathologists, the reverse being the common condition. The man was put on low diet, and for some days was constantly sick and took almost nothing. The penal regimen was, however, persevered in, and beer and meat were refused. After a while his stomach became more tolerant of broth and gruel, and he is now steadily recovering and beginning to use his arm.

CAMBRIDGE COUNTY ASYLUM.

ABSCESS IN THE CHEEK EXTENDING INTO THE SKULL.

(Under the care of Dr. MACKENZIE BACON.)

In this case, Dr. Bacon remarks, a very ordinary ailment took an unusual course, and proved rapidly fatal. It could hardly, perhaps, be predicted that an abscess around a carious tooth should extend into the skull, traverse the base, and terminate in the orbit of the opposite side; yet this is what happened, and the post-mortem left no doubt as to the actual course of events, The outline of the case is as follows:—

A man aged 45, a patient in the Cambridgeshire Asylum, had in June, 1868, the left side of his face swollen in consequence of an abscess around the last tooth in the lower jaw on that side. The patient was a general paralytic, in feeble health, and in an advanced stage of dementia. He said very little, and was very dull and apathetic. After a few days the abscess burst inside the cheek, and the swelling subsided, but a few days later, on looking at the man one morning, it was noticed that his right eye was prominent, the whole orbit being distended, and the globe bulging out. This increased the next day; the conjunctiva projected above the level of the cornea, and was congested, and the skin around became livid. The patient got gradually comatose, and died in two days.

Post-mortem Examination.—On opening the skull, which was very dense, the brain seemed tolerably healthy to the naked eye, but on removing it a broad patch of discoloration was seen at the base where it rested in the middle fossa of the skull, more extensive on the right lobe than the left. The damaged part was dark from decomposition and covered with fœtid pus. A broad line of dark, fœtid, decomposing tissue, with pus, could be traced from the left ala of the sphenoid across the sella turcica into the right orbit, which was distended with pus and fluid. The line of inflammation was afterwards traced downwards through the superior maxilla and muscles of the cheek to the last alveolus of the lower jaw, where was a loose carious tooth surrounded by pus. Around this tooth was a mass of fœtid tissue, to which the mischief had been at first limited.

CONGENITAL SYPHILIS — HEMIPLEGIA AND BLINDNESS—INTRACRANIAL TUMOUR DIAGNOSED.

(Under the care of Dr. BACON.)

Flora W., a child about 4 years old, had the following history:—Both parents were seemingly healthy when married, but the husband had once had syphilis, with slight symptoms, of which he considered himself perfectly cured at the time, and about which he had never troubled himself since. His wife in due time became pregnant and miscarried, after which she showed signs of constitutional syphilis, for which she was treated for some time. Two years later she had a child which was small and delicate, and died in seven weeks. A year or so later she bore another child, the subject of the present remarks. This child six weeks after its birth had an eruption about the anus and "snuffles," but got better under treatment. When nine months old it became suddenly hemiplegic on the right side, and the next day it was thought to have also lost its sight. After a few months it improved in health, and regained some power in its right limbs, but has remained considerably paralysed and blind ever since. It has also had ulcerations on the tongue, which have been healed from time to time under the use of pot. iod. Its head is large, being distended in the frontal region, as in hydrocephalus, but the child is fairly intelligent, and learns many things. It cannot

apparently see anything. It is fairly nourished, but the chest is narrow. The eyes were examined by Mr. Soelberg Wells, who diagnosed a tumour. The mother has since had twins, one of whom died, but the other has had no signs of syphilis, and has grown up a healthy child.

SUNDERLAND INFIRMARY.

EPILEPTIFORM CONVULSIONS FOLLOWING A BLOW ON THE HEAD—IODIDE OF POTASSIUM—RECOVERY.

(Under the care of Mr. MORGAN.)

A STRONG lad, aged 16, who had never suffered from fits of any kind, was admitted an out-patient in May, 1868. His history is as follows:—Five weeks previously he had been knocked down by the "tubs" while at work in a coal-pit. He was much bruised about the head, though there was no scalp wound, and remained unconscious and insensible for a day and a half. He then gradually recovered, and though feeling some pain in the head and constant dizziness, he was able to resume his work ten days after his accident. On the second or third day, while at work, he was suddenly seized with a well-marked epileptic fit. There was no previous warning. He fell down with a scream, foamed at the mouth, and worked so strongly as to require two or three men to hold him. On recovery, his tongue was found bitten and bloody. These fits have since recurred at irregular intervals—sometimes two or three in a day; sometimes he remains free from seizure for two days at a time, but always when seized it is without previous "aura" or twitching—he falls from the chair, or from the upright position, to the ground, and works in strong convulsions. There is no mark of fracture or any irregularity to be felt upon the head. A free purge (calomel followed by mag. sulph.) was directed, and after its action pot. iodid. gr. v. every four hours. He had a fit the second day after commencing this medicine, but has had none since, and is now perfectly well. He continued the pot. iod. six weeks, and has required nothing further.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 21, 1868.

COLONEL EWART'S REPORT ON SYSTEMS OF TOWN DRAINAGE.(a)

THE local authorities of Oxford, Eton, Windsor, and Abingdon were called upon in April, 1867, by the Conservators of the river Thames to comply with the provisions of the Thames Navigation Act by removing the whole of their sewage from that river. Perplexed by the various schemes of drainage in vogue, they memorialised the Secretary of State to appoint an engineer to advise them on the course they should adopt, with the view of carrying into effect the provisions of the Thames Navigation Act. Lieutenant-Colonel Ewart was accordingly directed by the Home Secretary, in June last, to make the necessary investigations. The result is now before us as a report in pamphlet size which, from its concise and decisive style, is evidently the work of a man who thoroughly understands the subject, and who possesses the rare power of expressing in a few terse authoritative paragraphs the opinions which he has formed and the course which he recommends for adoption.

Colonel Ewart having inspected the four towns in question and their immediate neighbourhoods, and having thoroughly studied all plans and suggestions submitted to him by the local authorities, and made himself up in Acts of Parliament, blue books, etc., and having visited the several places where arrangements are in progress for the disposal of sewage, believes that no possible system of town drainage has escaped his notice.

He mentions the cesspit system merely to condemn it, and with regard to the Milan plan, which has been partially introduced in Paris, by which air-tight and water-tight receptacles, and special carts provided with vacuum reservoirs, are employed for the conveyance of sewage to the neighbouring country, he thinks them too costly and liable to accidental derangement to require any further consideration. He considers closets with removable tanks as open to every objection which can be urged against the Milan system.

It is impossible to rate too highly the beneficial effects of earth-closets in cottages, detached buildings, hot climates, and wherever water supply is defective, but their suitableness for towns is another question. The *general* use of earth-closets would necessitate the *general* abolition of water-closets, which Colonel Ewart considers would be inexpedient and impracticable in a town where water-closets have been long established. There would also be difficulties about supplying sufficient quantities of dry earth at all seasons, and without fail, in the case of a large population, and the relative expense of carrying earth to the excreta instead of the excreta to the earth by water carriage, must be considered, regard being had to the necessary removal of house slops, which cannot be effected on a large scale except by foul drains. Bearing these considerations in mind, Colonel Ewart does not recommend the earth-closet system for the towns to which his report applies.

The question for decision narrows itself into the inquiry as to the best mode of using water as a carrier of sewage matter. The interposition of the Thames Navigation Act has rendered it necessary for the towns on the banks of that river to distribute the whole of their sewage over land. The profitable irrigation of land with sewage will depend to a great extent upon the bulk of the foul matter to be dealt with.

Colonel Ewart considers the plan of chemical purification of sewage quite unsuited for the towns referred to, as, besides the constant expense of the purchase of ingredients, no chemical methods hitherto invented purify sewage to such a degree as will render it fit for admission into the Thames under the Thames Navigation Act.

The various systems of conveying sewage by water may be classed under three heads—the "joint system," the "mixed system," and the "separate system," these being the terms used by the local authorities in their memorial to the Home Secretary. Under the "joint system," being that by which London and several other large towns are drained, all the rain which falls within the drainage area is carried into the same sewers as the sewage matter, and passes with it in a polluted state to the outfall. Under the "separate system" (a full explanation of which is given in "A Treatise on Sanitary Management and Utilisation of Sewage in 1865," by William Menzies, Deputy Surveyor of Windsor Forest and Parks), the sewage matter is carried in separate sewers, and the rainfall

(a) "Report on the Proper Principle of Drainage to be adopted in the Towns of Oxford, Eton, Windsor, and Abingdon." By Lieutenant-Colonel Ewart, R.E., commanding Royal Engineers, London District. Printed by order of the Secretary of State for the Home Department.

passes into the river or is absorbed by the surface on which it falls. By the "mixed system," which is a modification of the first two systems, a portion only of the rainfall passes into the sewers, the remainder being carried into the natural channels.

Colonel Ewart does not consider that the "joint system" fulfils the conditions required for the proper drainage of the towns whose case he had to consider, for reasons which he gives in detail, one being that the difficulty of distribution of sewage over land is much increased by the vast and uncertain bulk which it attains in that system; and besides, the greatest quantity is delivered in winter, when the rainfall is greatest —that is to say, at the time when it is least needed by the land.

Sewers constructed on the "mixed system" are, to the extent to which the rainfall is admitted, open to the same objections as those constructed on the "joint system." Colonel Ewart finally recommends the "separate system" for the towns in question. Examples are to be found at Broadmoor, Aldershot, Hounslow, and, to a great extent, at Bedford and Canterbury. The sewers are only of size sufficient to carry off the sewage matter, and,' being closed throughout their course, do not afford exit to injurious effluvia or involve any overflow or unsafe accumulation of silt or gas. The sewage delivered at the outfall is not over-diluted with rain-water, and the bulk is reduced to manageable compass, and is not liable to sudden and extreme variations, although it must periodically be increased by the flushing of the sewers. The "separate system" involves, it is true, a double set of drains, one for rainfall and the other for sewage; but, having regard to the fact that the sewers are smaller and the cost of plant and pumping apparatus less in proportion, he is of opinion that, "if begun anew, the 'separate' would not be more costly than the 'joint system,' and, in the case of the towns above mentioned, the existing drains may be used with little alteration for the conveyance either of surface-water or sewage, as may be found most convenient."

Colonel Ewart closes his report with a series of recommendations as to the measures necessary for carrying out the "separate system" in the towns referred to. The rainfall should be stored in tanks for domestic use, or, if allowed to flow off, care must be taken, by careful scavenging of the streets, to remove all impurities, or, if necessary, it should be purified by passing into settling-beds before it reaches the river. The sewage from all stables, cow-houses, etc., must pass from trapped cesspits into the foul sewers. Refuse from gas and other factories must be collected, and the constituents injurious to vegetation separated by precipitation and filtration before passing into the drains. A sufficient area of land, about an acre per 100 of the population, should be purchased or leased for the purpose of irrigation. The subsoil drainage must be effected on different principles and in a different manner from the town drainage; but this does not fall within Col. Ewart's province, and he merely alludes to it to show that it has not escaped his attention. In an appendix Colonel Ewart gives a detailed account of his visit to Bedford, where the system of utilising sewage on land is extensively carried out; we have merely space to say that the arrangements appear judicious and successful; they have been in progress for about three years.

QUARANTINE.

In the *Medical Times and Gazette* of March 28 last, we printed the text of a memorial addressed by representative men of the highest official and Professional standing to the Lord President of the Privy Council, asking that the subject of quarantine in its bearings on public health, commerce, and the naval and military services, should be thoroughly examined by a Royal Commission—a request which we felt bound to endorse for a variety of reasons, and one, moreover, which we had every right to expect would be acceded to without delay. For did not his Grace the Duke of Marlborough assure the deputation which waited on him to present the memorial "that their proposal of a Royal Commission would receive his serious attention?" and do we not, in less exalted stations, mean, when we so express ourselves in reference to any matter of importance, that deliberation shall be followed by immediate action? Yet months have passed giving no sign of the desired commission, and, in view of the exciting aspect of political affairs, we fear that quarantine has been altogether forgotten at Whitehall. Our ministers will probably be taking thought for their own political existence for some time to come, all the while that grave questions like quarantine and public health, which may at any moment give rise to circumstances that brook no delay, and must be dealt with somehow, are left to take their chance. So much the worse for us, or rather so much the more need for a real non-political Board of Health to whom the nation might look for constant undivided attention to its duties irrespectively of party warfare.

Of quarantine and its vexations, as enforced by foreign authorities, we have all heard more than enough. Its recent imposition on English vessels by the Spanish and Portuguese Governments under a mistaken idea that Asiatic cholera was epidemic in this country, has called forth remarks which only serve still further to illustrate the need of some settled principles being established as to what diseases quarantine should be invoked against, and as to the mode in which it should be carried out internationally. The memorialists of last March urged as one ground for action being taken by our Government "that the well-considered expression of opinion by this country, after a searching investigation, could not fail to have great influence with most Continental states, as well as with all our colonies, and would eventually lead to the adoption of a more judicious system of defence against the introduction of foreign disease than is at present generally relied on."

And that alteration or uniformity of system is greatly called for in some of our home quarantine arrangements may be gathered from the following, which we extract from the *Western Morning News* of November 5:—

"On the arrival of a mail steamer (at Plymouth) from the West Indies, before any one from the shore is allowed to board her, the Medical officer [local] of the Privy Council has to make inquiries of the officers of the ship as to the health of the passengers and crew during the voyage, and in the event of the existence of yellow fever, cholera, or other virulent or contagious disease, to obtain a record in writing of the facts, and parade on the gangway those who have recovered, with a view to ascertain that no ill-consequences would be likely to arise from their communication with the shore. Happily the mail steamers have for many months had clean bills of health, and No. 1 question of the Privy Council's forms having been answered to that effect, the Medical officer at Plymouth very naturally left blank the spaces for replies to the very long string of queries on matters of detail concerning the symptoms of the sufferers and so forth. A busybody at Southampton, however, perceiving here an opportunity for faultfinding, wrote to the Privy Council, complaining that the quarantine forms were not properly filled up at Plymouth, and insisting that it was essential that exact and full details should be given of the character and duration of the indisposition of every one who, during the voyage, received Medical attention, and that all convalescents should be paraded on deck. Every one who has to do with arrivals from the West Indies knows that, in the passage from Colon, a large proportion of the officers, passengers, and crew are always more or less ill, temporarily, with intermittent or remittent fevers. The attacks are usually very slight and transient, and involve as little danger from contagion at the port of arrival as would an equal number of cases of toothache. To give minute particulars of these trivial indispositions on the returns was obviously absurd and foreign to the object of the regulations, as the character of the questions on the form about 'black vomit,' and so forth, clearly showed. But it suited the purpose of the Southampton official to insist on the forms being filled up, and the Privy Council executive allowed him to have his way. The result was that,

on one or two occasions, the steam-tug has been detained for about two hours alongside the West India Mail steamer in the Sound, while elaborate diagnoses of every petty febrile attack were being penned, and the unfortunate convalescents were made to turn out in the dead of the night to appear on the gangway according to the regulations. The utterly absurd as well as the injurious character of these proceedings was so evident that Mr. Fox, the official Surgeon, wrote to expostulate, and then commenced a long triangular correspondence between the Privy Council Office, the Southampton official, and the Plymouth Collector of Customs. It was pointed out that if these forms had to be thus minutely filled up, that could be done without detriment during the voyage, and their accuracy certified to on arrival, when they might be handed at once to the Medical officer. But difficulties innumerable were interposed, and it is only after the solicitor to the Privy Council has pronounced such a course legal, and the captains of the West India steamers have declared it practicable, that this simple and common sense arrangement has been permitted."

We cannot help remarking, by the way, that we clearly have not the whole case before us; that if by the "busybody at Southampton" is meant the Medical Superintendent of Quarantine, he is not very likely without due grounds to insist on the enforcing of minute regulations which would be more vexatious to himself than to any one else. There are very many reasons in the interests of science why "elaborate diagnoses" and records "of every petty febrile attack" on board should be made.

Another feature in the Plymouth arrangements for quarantine is thus referred to:—

"If a ship with contagious disease on board arrives in the Sound, she must either anchor in Cattewater or be sent round the Land's End to Milford Haven! Such were the regulations made forty years ago, and although Cattewater has since then become a crowded anchorage the rules remain in force. We need not waste words in pointing out how ill suited Cattewater is for a quarantine ground, or how necessary it is that Plymouth should have its 'Motherbank,' in which infected vessels might lie."

But, in truth, it may be said of quarantine at this present time that the utmost perplexity abounds in reference to the question whether, assuming its abstract desirableness, it is or is not possible to be efficiently administered for preventing the importation of disease. The official utterances on this point are calculated to increase rather than diminish that perplexity; for, in his Eighth Report, the Medical Officer of the Privy Council virtually concedes what the opponents of quarantine contend for—namely, that, as it cannot be rigorously enforced, it is worthless. "A quarantine," says Mr. Simon, "which is ineffective is a mere irrational derangement of commerce; and a quarantine of the kind which insures success is more easily imagined than realised. Only in proportion as a community lives apart from the great highways and emporia of commerce, or is ready and able to treat its commerce as a subordinate political interest, only in such proportion can quarantine be made effectual for protecting it. In proportion as these circumstances are reversed, it becomes impossible to reduce to practice the paper plausibilities of quarantine." Quarantine restrictions, he adds, in great commercial countries can scarcely be dreamt of as anything better than "elaborate illustrations of leakiness." Against cholera, Mr. Simon clearly holds that any such quarantine as could be enforced in England would be simply useless; and, as regards yellow fever, he considers that preventive measures should be based upon the doctrine that the disease is of the nature of ague rather than of typhus—that it is the ship which spreads infection, irrespectively of the persons who are in it, whether they be healthy or diseased—and that therefore the quarantine of the ship, rather than of the persons on board, should be enforced.

We believe an impression prevails in some quarters that the Quarantine Acts are administered under the direction of the Medical Department of the Privy Council, but it is plain, from what we have quoted above, that Mr. Simon is in no wise answerable for the state of things at present existing, and, as a matter of fact, we may state that his branch of the Privy Council has nothing whatever to do with quarantine, which is conducted under the direct orders of the Privy Council by the Medical superintendents at the respective ports.

And now, last of all, we have Dr. Farr, in his report on the cholera epidemic of 1866, condemning quarantine as "the least important of all the measures for the mitigation of cholera that have ever been devised." We are reminded that neither Spain, Italy, nor France, where quarantine has been in force, has ever escaped the destructive influence of any epidemic of cholera—rather, they have suffered much more than England. Dr. Farr observes that hitherto the epidemics in quarantine countries have shown no abatement of virulence. "The reason," he says, "is obvious: quarantine absorbs all the attention of the authorities, and serves as an excuse for the neglect of extensive hygienic measures of water-supply and purification."

On the other hand, the International Cholera Conference adopted the view that a rigorous and lengthened quarantine is indispensable for the exclusion of cholera; the inconsistencies of some of the recommendations of the Conference on this point are, however, noticed by Dr. Farr in his report, as they had previously been by himself, Mr. Radcliffe, and others when the subject was under the consideration of the Epidemiological Society.

Professionally, we have every reason to desire that the whole subject of quarantine may be investigated by a Royal Commission—properly constituted, of course—for it is most important that the conflicting opinions now entertained by able men amongst us should be brought to the test of judicial and impartial examination, and an authoritative decision be come to, so that we may no longer offer to the world the spectacle of a nation nominally adopting the principle of quarantine, but practically disbelieving in its efficacy. To the Government, therefore, we say that it is quite time that the "serious consideration" of the Lord President began to take effect.

THE WEEK.

TOPICS OF THE DAY.

We regret that we cannot congratulate the Medical Profession on the success of the Medical candidates in the present election. We cannot say that we have been in any degree sanguine since it became evident that the seats which naturally belonged to the Medical Profession—the seats of the Scottish and London Universities—were to be deliberately thrown away. Had the Medical graduates been true to their Profession and their own interests, three Medical men of suitable social position and attainments might have been by this time certain of seats in the new Parliament. But mere political motives were paramount, and the results of the English borough elections have in no degree compensated the loss of influence which the university Medical constituencies have inflicted on their Profession. It is true that Mr. Vanderbyl has been again returned for Bridgewater; Mr. Clements heads the poll at Shrewsbury; Dr. Brewer is returned for Colchester, and Mr. Lush is said to have a good chance at Salisbury; but at Manchester Mr. Mitchell Henry retired from a hopeless contest about 1 o'clock on the day of the poll; in Marylebone Dr. H. Sandwith was beaten by between three and four thousand votes; at Northampton Dr. Lees was at the bottom of the list, having obtained only 485 votes; and at Rochester Mr. Smee was in a minority of about 600 less than his opponents. In Ireland the Medical cause has not fared better in the person of Sir Dominic Corrigan, the fact, as we have before stated, being that the Irish Church question has set Dublin in a flame,

and none other but political or theologico-political influences at present have a chance. One moral we should draw from these reverses is that the general public have but little faith in Medical men when they step out of the ordinary business of their lives. Considering the manner in which the Profession studiously neglects all chances of obtaining power and influence in the State, we cannot wonder at people outside it arriving at that conclusion. As it is, in the new Parliament Medical claims for remuneration for services rendered to the State will probably be ignored as coolly as in the debates which occurred in the last on the Vaccination Act—which, our readers do not require to be reminded, has rendered it compulsory on every private Medical man who vaccinates to furnish without fee to the State a report of the operation, the alternative being a pecuniary fine—and Medical rights and privileges will be encroached on quite as unconcernedly as they have been by the Pharmacy and Sale of Poisons Act. If similar injustice be hereafter inflicted, certainly the Profession are to a great extent responsible for it. Government put three seats at their disposal, and the chance of fair representation has been relinquished in each instance without a struggle.

Dr. Brewer's return for Colchester, however, is undoubtedly a gain to the Profession. He has himself been engaged in active practice, he has taken the largest possible share in the administration of the laws for the relief of the poor, and, still more, he has contributed most largely of his time, personal exertions, and money in the direction of the various voluntary philanthropic associations connected with the parish of St. George's, Hanover-square. If there be a public library, baths and washhouses, soup-kitchen, dispensary, or visiting and relief association, Dr. Brewer is sure to be either treasurer or secretary, or one of the most active members of the committee, and a liberal subscriber. His position as chairman of the Metropolitan District Asylum Board came to him by virtue of his character as an enlightened and practical philanthropist, although it may be remembered that he studiously set his face against those attacks on the London workhouses which were headed by the Archbishop of York, and which Dr. Brewer, together with his able and liberal colleagues of the board of guardians of his parish, denounced as sensational and exaggerated. He is a good speaker, and we hope he will become a favourite in the House of Commons, as he deserves to be.

The case of death from starvation in Bethnal-green, which was reported in the *Times* of Saturday last, is one of those things which could not possibly happen if the machinery of Poor-law relief were—we will not say perfect—but not grossly imperfect. It is one of those cases which make impulsive philanthropists rush into all sorts of gigantic schemes whereby ratepayers of the working-classes are impoverished, and from which parochial jobbers and contractors reap their harvests. The evidence at the inquest proved that the family of which the deceased was the head had had no meat for five months, and that for three days the unfortunate man had wandered about in hope of getting work or relief, during which time he had only tasted a halfpenny loaf and a little water. Application had been made both by the husband and wife to the Workhouse, but no relief was granted, and no inquiry was made by the parochial officers into the case. Now, all we can say is that the death of this man is a proof that there is no efficient system of inspection in Bethnal-green. Had there been, the catastrophe would have been simply impossible. If the Poor-law Board and the parochial authorities, instead of taxing the ratepayers in London for a sum of money estimated at from £1,000,000 to £1,500,000 sterling to be paid over to builders and architects for erecting school houses where children will be lodged and educated at the expense of seven shillings a week per head, and large fever and small-pox Hospitals to be unoccupied except during epidemics, were to turn their attention to planning and carrying out a proper system of pauper inspection, whereby the case of every person applying for relief should be investigated, we should hear no more of deaths from starvation. We see that the *Daily News* and other papers are animadverting on the present enormous rate of metropolitan taxation, and on the increased powers of the Poor-law Board and the centralising effect of Mr. Gathorne Hardy's Act. The fact was that the public mind had been so excited by the highly-coloured representations of some of our contemporaries, together with the occurrence of one or two "sensation cases" for which individual boards of guardians were alone to blame, that any remedy would have been accepted regardless of its cost or fitness. In this journal, whilst we acknowledged the abuses and shortcomings which here and there existed, and which a proper system of Medical inspection would have easily remedied, we never lent ourselves to the popular cry, or disseminated exaggerated statements. We believe we were the first to point out the enormous burdens which the buildings at Caterham, Leavesden, and elsewhere would entail on the metropolitan ratepayers.

The nomination of candidates for representing the Universities of Edinburgh and St. Andrews took place in Queen-street Hall, Edinburgh, on Monday last. Professor Christison, who acted as Vice-Chancellor of the University of Edinburgh, presided. Professor Syme proposed, and Principal Tulloch seconded, Dr. Lyon Playfair. Sir John M'Neill proposed, and Professor Shairp, of St. Andrews, seconded the nomination of Mr. Campbell Swinton. A poll, of course, was demanded, and will be taken on Monday, November 30, and the four following days—in the case of Edinburgh in the Upper Library Hall of the University, at St. Andrews in the United College Hall, North-street. It is difficult to say what the result will be, as each party claims a large number of promises. As neither of the candidates belongs to Medicine (although Dr. Playfair's connexion with science must doubtless recommend him to members of a scientific Profession), the election is principally interesting because it will furnish evidence of the political leanings of a large Medical constituency. We have received from Mr. Campbell Swinton's committee a copy of correspondence between Mr. J. B. Greig and Dr. Richardson as to a statement which appeared in a Medical contemporary to the effect that the obtaining of the franchise for the Medical graduates of St. Andrews was due to the exertions of Professor Playfair. Dr. Richardson writes to correct the statement, and asserts that "whatever credit attaches to the obtaining of the franchise belongs to the St. Andrews Medical Graduates' Association;" and that the enfranchisement was conceded by the present Government before a meeting of the Senatus Academicus of the University of Edinburgh, where the subject was discussed, and where Dr. Playfair is said to have supported the claims of the graduates, occurred.

A remarkable case of concealment of birth is reported in the Carlisle papers. A countrywoman, aged about 30, is in custody on the charge of having secretly given birth to a child in a house in Margaret-street, Carlisle. Immediately afterwards leaving the house with the child, she proceeded across a timber yard, climbing over a gate, and made her way to the river Caldew, into which she threw the child; she then returned to the house. The child was proved to have breathed, and to have died of asphyxia, but how the asphyxia was produced, Dr. Lockie, who made the post-mortem examination, was unable to offer an opinion. The case affords an excellent illustration of the truth of an observation lately made in this journal that there is nothing done by women of savage tribes in parturition which English women, under the stimulus of shame and fear, will not accomplish.

A Physician has lately been elected to the Cumberland Infirmary in place of Dr. Lonsdale, who has retired with the honorary rank of Consulting Physician. The choice of the Governors fell on Dr. Stewart Lockie, a gentleman who is said

to be in general practice in Carlisle. One of his opponents was Dr. R. Elliot, a member of the Royal College of Physicians, who has been long in practice in the same town. The papers, however, state that Dr. Elliot declined a personal canvass.

The next annual meeting of the St. Andrews Medical Graduates' Association, which is to be held at Willis's Rooms on the 2nd and 3rd of next month, will be distinguished from its predecessor by a novelty. The President, Dr. Richardson, will deliver an annual address as on the last occasion, but it will be on a subject of general interest, and the general public of both sexes are to be invited to attend. Willis's Rooms and ladies are pleasantly suggestive. We hope the learned and gallant Doctors will finish up with a ball.

The elections of Lord Rectors in the Universities of Edinburgh and Glasgow took place last week. In the former University three candidates—Mr. Moncreiff, Mr. Ruskin, and Mr. Lowe—were started. Mr. Lowe's name was withdrawn at the end of the first quarter of an hour's polling, 80 votes having been registered for him. In the end Mr. Moncreiff stood at the head of the poll, having obtained 607 votes, whilst Mr. Ruskin had obtained only 425. In the Glasgow election Lord Stanley and Mr. Lowe were the candidates started. Lord Stanley obtained a numerical majority of 15, but as there was not a majority of "nations" in his favour, the Chancellor, the Duke of Montrose, will be called on for a casting vote, which will doubtless be given in favour of Lord Stanley. Mr. Lowe, however, may well be content with his easy triumph in the University of London.

The Board of Guardians of the Worcester Union have determined to employ Surgeons instead of women to attend the midwifery cases in that union. A scandalous case of neglect or ignorance, where a woman was allowed to be in labour six days, stirred up the Board to this very wise determination. We hope, however, that the remuneration given by the guardians will be adequate.

Amongst the casualties of the week are a case of suicide by cyanide of potassium, the unfortunate man being a gilder, and a case, which occurred at the Gloucester gasworks, of fatal poisoning from the inhalation of sulphide of ammonium. A new process of manufacturing gas has been introduced at the gasworks at Gloucester, in which sulphide of ammonium is said to be liberated in large quantities.

Colonel Ewart's Report on Systems of Town Drainage, of which an account appears in another column, makes many persons wish that Colonel Ewart had been consulted by the Metropolitan Board of Works before adopting Mr. Bazalgette's gigantic system of tunnels.

HEALTH OF ST. MARYLEBONE.

Dr. Whitmore, in his monthly report on the health of the parish of St. Marylebone during October, 1868, says that the annual death-rate for the period, allowing for increase of population, was 22 per 1000. The two most prevalent amongst diseases of the zymotic class were scarlatina and measles; by the former twenty-one children were destroyed, and by the latter ten. Of all measures of hygiene which are best calculated to sustain the young, the aged, and the weak, during the inclement winter season, and to ward off attacks of cold, bronchitis, etc., an ample supply of good wholesome food and warm clothing are the most valuable and effective. Hundreds of the poor annually fall victims to chest affections, as they are termed, because they have not vital force within them sufficient to resist the destroying effects of a low temperature, and because the clothing which they wear is insufficient to keep up the animal heat. The 600 cows at present kept in the parish are in a most healthy condition. With but very few exceptions, the animals looked very plump, many of them fat, and no single instance of disease amongst them was found to exist. The food given to them appeared to be abundant in quantity, nutritious in quality, and many samples of milk which he inspected were very rich in all nutritive constituents.

"If milk dealers would only supply this important article of food in the same condition as it comes from the cow, I have no hesitation in saying that London milk—by which I mean milk obtained from cows kept in London sheds—would bear comparison in every respect with milk obtained from the country; how far the keeping of cows in London sheds is desirable or proper in a sanitary point of view is another question."

NOMENCLATURE OF SKIN DISEASES.

Those interested in the clinical study of diseases of the skin may perhaps be glad to know that a paper will be read by Mr. Hutchinson, on Wednesday next, at the Hunterian Society, of which one of the main objects will be to try to give more precision to the terms in use. The progress of this department of Medicine is perhaps more than that of any other liable to hindrance from the vague use of names and terms, and from the use by different authorities of the same name in different senses, and of different names for the same disease. We hope that the discussion which will probably follow Mr. Hutchinson's paper may be successful in helping us nearer towards unanimity on this point.

CHELSEA HOSPITAL.

The vacancy in the appointment of Principal Medical Officer of Chelsea Hospital, caused by the recent death of Deputy Inspector-General of Hospitals W. Lucas (half pay), is likely, we are informed, to be filled by Staff Surgeon J. A. McMunn, M.D., who has for some years been Deputy-Surgeon of the same establishment. As this appointment, hitherto considered one of the few prizes within reach of retired Medical officers of long standing and good service, will virtually remove Dr. McMunn from the executive ranks of the Department, it is probable that he will be placed on half-pay, if not immediately, at least on the expiration of the first period entitling him to claim it, in order to avoid injustice to the other Medical officers of the army.

DUBLIN QUARTERLY JOURNAL OF MEDICAL SCIENCE.

The editorship of this journal passes, we are informed, from Dr. G. H. Kidd to Dr. James Little, who has, for some years, been a frequent and able contributor to its pages. Dr. Kidd, who, since February, 1862, has very ably and successfully performed the duties of editor, finds that his Professional occupations prevent his continuing to do so. We have no doubt that the journal will maintain its well-earned high character in the hands of Dr. Little, who will bring out its next number in February 1869.

FROM ABROAD.—M. BROCA ON CLINICAL TEACHING—THERAPEUTICAL ACTION OF VERATRUM.

M. Broca, on commencing clinical lecturing at La Pitié, delivered a few observations conveying his idea of what this description of teaching should consist in. Owing to the unprecedented losses which the Faculty has sustained by deaths, he has attained a Clinical Chair with remarkable rapidity, it only being eighteen months since he gained admission into this body. He has thus already, as he observed, become one of the seniors, and in pursuance of a custom which has been established since the abolition of the *concours* of regarding the clinical chairs as a kind of hierarchical promotion for those holding the pathological chairs, he assumes his present post. That the arrangement in the present case will be justified by the result all seem to expect.

Clinical teaching, according to M. Broca's view, should be pathology in action, the practical exhibition of the abstract truths taught by pathology; and he thinks the field covered

by such teaching has been hitherto somewhat too limited. In the views of most of his predecessors the clinic played but a limited part, consisting in the mere recognition of the disease and the treatment of the patient. Diagnosis having in view treatment constituted the entire clinical teaching. This was how Roux understood it, who almost exclusively directed his attention to the performance of operations. Nearer our own time Jobert did not get much beyond this, and Velpeau himself gave an exclusive predominance to the determination and discussion of diagnosis—differential diagnosis by the mode of exclusion constituting the chief object of his lectures. M. Broca certainly does not desire to repudiate this method, and, if he were obliged to choose one to the exclusion of all others, this would be the one he would adopt. Happily he does not find himself placed in this alternative, for in his view clinical teaching extends over a wide horizon, embracing the whole range of instruction furnished by the patient, all which may spring up during the complete examination of a pathological condition, being within its grasp. Side by side with questions of diagnosis, prognosis, and treatment which every morbid fact naturally gives rise to, there are also questions of etiology, of anatomy, and of physiology both pathological and normal. None of these questions should be neglected, all that the observation of a patient can contribute calculated to throw light on science or practice being turned to account. As to the course to be observed, M. Broca proposes to lecture in the theatre three times a week during the winter session. In summer only one lecture will be delivered weekly in the theatre, the other days being devoted to examination and interrogation at the bedside; this arrangement being made in the interest of the patient, for whom examinations have not the same inconvenience in the summer that they have in the winter. Certain days will be reserved for microscopical investigations, M. Broca regretting, however, that the clinical services have not special assistants for this purpose, the *internes* being already too much occupied to admit of their undertaking this additional work.

The first patient upon whom M. Broca lectured gave him occasion to bring out an important point of pathological physiology. A wheel had passed along a man's thigh, and the limb was cold, no pulsation being felt below the femoral arch. Symptoms of gangrene soon appeared, and it became important in relation to amputation to determine the probable limits of this, as also the point of obliteration of the artery. A day or two after the admission of the patient warmth returned in the upper portion of the limb, and the question was whether it was thence to be concluded that the obliteration of the artery had taken place below this point, and that the gangrene of the deep-seated parts did not reach higher than this. On this point M. Broca observed there is a very prevalent error which it is of importance to remove, because it is of a nature to inspire a false confidence in severe cases, and leads to defective practice. It is generally believed that whenever there is a sudden obliteration of a chief artery such obliteration is necessarily followed by coldness of the entire limb. Nothing of the sort; and it is even not uncommon to find portions of the limb in which the temperature, so far from being diminished, is, on the contrary, increased, and that without justifying the expectation of the limb being saved. This arises from the fact that, consequent on the interruption of the circulation in the principal artery, a collateral circulation is rapidly established, which causes an influx of blood in the superficial vessels of the limb more considerable than in the normal condition. By means of the thermometer, the increase of temperature below the injured parts is easily proved in such cases. In the case in question, the man dying of pyæmia after amputation of the thigh, the femoral artery was found to have been torn through, the two segments being separated by several centimetres.

M. Oulmont, one of the candidates for the vacant membership in the section of Therapeutics, read at the Academy a memoir on the therapeutical action of veratrum viride, in continuation of a memoir read last year on its physiological action. He has employed the resinous extract made up into granules of one centigramme each, one of these being given every hour until vomiting takes place, this usually occurring after the third dose, although sometimes not until after the seventh or eighth. These short intervals are indicated by the fugitive character of the action of the medicine, and by the fact that this is not cumulative. Being aware of the elective action it exerts on febrile phenomena, M. Oulmont has administered the substance in cases of acute pneumonia, acute articular rheumatism, pleurisy, and typhoid fever. The following conclusions are drawn:—1. The veratrum acts directly by lowering the pulse and temperature, the former at the end of three or four hours diminishing by from twenty to fifty beats. The temperature lessens much more slowly, so that it is diminished by from a half-degree to 2° C. only after three or four days. 2. The dose requisite to produce these effects is from 3 to 7 centigrammes per diem, and for durable effects to be produced it must be continued during three or four days. 3. It exerts a very favourable influence in simple pneumonia, the mean duration of which is reduced by its aid to 6¾ days, while the mortality is less under this mode of treatment than under any other. Its action on the local condition is only indirect by arresting the progress of the disease and hastening on resolution. According to Dr. Kocter, of Berne, the mortality of pneumonia treated by veratrum is but 8·3 per cent., while it is 13·5 by the expectant treatment, 20·4 by antiphlogistics, and 20·7 by antimony. In complicated pneumonia its action is much less decisive. 4. Its action is far less satisfactory in acute rheumatism and pleurisy, while in typhoid fever its employment is contraindicated. 5. Accidents sometimes attend its administration, collapse sometimes occurring when this has been inopportune or too strong doses have been given. Singultus also not unfrequently occurs.

THE HEALTH OF THE NAVY.

Within a short period two large and valuable volumes treating of this subject have made their appearance under the careful superintendence of Dr. Mackay. The one deals with the health of the navy in 1865, the other in 1866, thus bringing the naval reports abreast of those published by the army authorities. Hitherto an enormous amount of material relating to disorders of various kinds prevalent in different parts of the world have accumulated at Somerset House without conferring any benefit either on the Profession at large or even on the navy and its Medical officers. Dr. Mackay's earnest and thorough labours convince us that this will no longer be the case, but that the experience of each officer will be utilised to the uttermost. The report for 1865 shows a very favourable condition of health in the navy, and that of 1866 exhibits a further improvement on that of 1865, although malignant diseases, especially cholera, were extremely prevalent during the period referred to. Cholera was also prevalent in the Mediterranean, espcially at Malta, in 1865, but did little harm to the navy; in 1866 it was more extensively diffused, but again was comparatively innocuous to our naval seamen. In this latter report attention is drawn to the good results of the Contagious Diseases' Prevention Act. Notwithstanding its comparatively limited sway in 1866, there was a reduction of venereal disease to the extent of 37·9 per 1000, 28 per 1000 being in syphilitic disease alone. On the Home station for the five years preceding 1866 the ratio of cases of syphilis had been as high as 101·3 per 1000, but in the year last referred to, although the Contagious Diseases Act was not during its whole period in full operation, the proportion was reduced to 69·1 per 1000—a highly gratifying result or coincidence.

Of several sets of diseases we get fuller details in these reports than in any other production. Take, for instance, syphilis as seen abroad, where it seems to be a much more formidable malady than it even is at home, the yellow fever of the West Indies and Africa, the Levant fever, Chinese dysentery, etc. Relating to the first of these—syphilis—we find in the Blue-

book for 1865 an admirable account of it as seen in the Japanese seas. In Japan it would seem to be more prevalent and more destructive than in almost any other part of the world, and until lately the native authorities, who retain absolute authority over the tea houses and suchlike places where the disease is acquired, refused to do anything for its prevention. We are, however, gratified to find, as Dr. Mackay in his introduction to the Blue-book of 1866 tells us, that steps have now been taken for preventing the spread of such complaints—a measure fraught with safety to the seamen, both naval and merchant, of this and other countries.

All the Medical officers unite in pronouncing the disease as acquired in Japan, and particularly in Yokohama, as most virulent in its character—in short, as we should say in accordance with the views formerly laid down in our Notes on Modern Syphilography, bad forms of the malady. Acting-Surgeon Hadlow, of the *Conqueror*, sends some most instructive details, and with reference to one matter his remarks are so instructive that we cannot forbear quoting them. He remarks that "rheumatism, unaccompanied by any form of skin affection or sign of constitutional disease, appears in 26 per cent. of the cases recognised as non-infecting, and in 33 per cent. of the infecting sores, being in the latter class of cases commonly associated with a more or less ill-marked roseola-like syphilide, but in other instances appearing alone, without any indication of secondary infection." Further, this rheumatism is no joke; it is the most frequent cause of invaliding after syphilitic infection, and the unfortunate sufferers are not unfrequently sent home fearfully crippled and distorted from its effects. What, then, is this rheumatism? is it specific in its character, depending on the constitutional syphilitic affection of which it is the local expression? From its frequency it can scarcely be a merely casual connexion which exists between the two, and although nothing is said of treatment, we can scarcely suppose that it could depend on mercury, seeing that it existed in cases of non-infecting as well as of infecting syphilis, and the former class of patients are nowadays rarely dosed with mercury. It is just possible that previous exposure may have predisposed seamen to this sequela, but even much exposure to inclement weather will scarcely account for a sequence so invariable. As the matter now stands, it presents a knotty problem to syphilologists, and a far more difficult one to those who contend for the invariable and direct connexion between rheumatism and lactic acid in the blood.

Some of the details as to small-pox are of interest. The disease being confined within such narrow limits, and its conditions being so easily regulated, a more accurate knowledge of the disease could scarcely be obtained. Relative to another disease extremely prevalent in eastern seas, and especially in Chinese rivers—we mean dysentery—Dr. Mackay makes a suggestion of which we highly approve—viz., that men should not be allowed to drink of the river water, tainted as this invariably is with innumerable contaminations, but that they should be supplied with distilled water. This idea nowadays, when steam is so extensively used, there can be no difficulty in following out; it is only necessary to avoid the use of impurities, such as grease, in the pipes connected with the boilers, and more than is necessary for the use of the ship may be soon collected. The use of pure water will undoubtedly diminish disease and mortality.

In the volume for 1866 there is no more instructive chapter than that which refers to the yellow fever on the West Coast of Africa; this appeared in an epidemic and frightfully fatal form, chiefly in the *Bristol*, the Surgeon of which ship, Surgeon W. G. J. Ayre, gives a most admirable account of the complaint, with tables of pulse rates, temperature, etc. The origin of this epidemic can be easily traced to infection from the *Isis* in Sierra Leone harbour. It did not spread among the men who had not been on board this vessel; hence the Surgeon concludes that this fever was malarious, or that yellow fever may sometimes be non-contagious in its character.

Besides carefully compiling the returns from each station, Dr. Mackay finds it his duty to make certain selections of papers to be published at full length in an appendix, which constitutes an important portion of each volume. In the volume for 1865, Surgeon T. J. Haran describes the physical geography, etc., of Somerset, Cape York, North Australia. Assistant-Surgeon G. W. J. Sutherland, of H.M.S. *Acorn*, deals with the meteorology, etc., of Shanghai; but of more interest to the bulk of the Profession are the contributions of that able naval Surgeon, Dr. J. D. Macdonald, who reports a case simulating epidemic cerebro-spinal meningitis; whilst Surgeon Haran contributes an account of a man wounded by an Australian spear, in whose pleural cavity the bone head of the weapon was found after death. Dr. Macdonald further contributes some interesting pathological cases relating to morbid conditions of the heart, brain, etc., which are illustrated by beautiful coloured figures, the work of the author. Deputy Inspector-General Salmon, of Woolwich, contributes two interesting Surgical memoranda. In the Blue-book of 1866 this important portion of the volume is still more extensive. It is introduced by a short circular note referring to precautions against cholera, after which follows an elaborate paper on the northern territory of South Australia, by Assistant-Surgeon Dr. Belgrave Ninnis, with the conclusion of that in the former volume by Surgeon T. J. Haran. At the present time, when the dietary of merchant seamen is attracting so much attention, the paper by Dr. Rattray, of the *Salamander*, on the influence of diet, climate, and long voyages on the health and diseases of seamen, cannot fail to be of service. Dr. Rattray has entered into the matter carefully and fully, wherefore his conclusions have all the more weight. Next follows a report on Greenwich Hospital, by Dr. W. R. E. Smart, Deputy Inspector-General, a most valuable contribution to our knowledge of the diseases of aged and infirm individuals. Equally instructive is the report of Deputy Inspector-General W. Macleod, M.D., on the Royal Naval Lunatic Asylum at Great Yarmouth; whilst a continuation of Dr. Macdonald's able pathological papers, in this instance also well illustrated, and dealing with diseases of the kidneys and heart, concludes the volume. No doubt the editor would rejoice with us were these volumes rendered more generally available for the service; for, curiously enough, it happens that they are not prepared for naval Medical men who would read and prize them, but for M.P.'s who never open them.

ANNUAL MEETING OF THE MEDICAL TEACHERS' ASSOCIATION.

(*By our Special Reporter.*)

The annual meeting of this body—the President, John Simon, Esq., in the chair—was held on the evening of Monday, the 16th inst., at the Middlesex Hospital, when the following office-bearers were elected for the ensuing year:—*President:* Sir William Jenner, Bart., M.D., D.C.L., F.R.S. *Vice-Presidents:* Campbell De Morgan, F.R.S., and William Allen Miller, M.D., D.C.L., F.R.S. *Treasurer:* Francis Sibson, M.D., F.R.S. *Secretaries:* Robert Bentley and Bernard Edward Brodhurst. *Other Members of Council:* Francis E. Anstie, M.D., Richard Barwell, E. Headlam Greenhow, M.D., and Alexander W. Williamson, Ph.D., F.R.S. The attendance was not so full as might have been desired. One of the first matters considered was the state of the funds, which was found to be far from satisfactory, owing chiefly to the somewhat heavy initiatory expenses. It was nevertheless recommended by the Treasurer that the Association should go on without increasing in the meantime the small annual subscription of its members. The propriety of obtaining a distinct place of meeting was also mooted. It was understood that in future the regular meetings should take place in the Medical Society's Rooms, Sir William Jenner kindly offering the use of his house for the meetings of the Council.

The principal business of the evening was, however, the reception and discussion of the report prepared by the Council of the Society as to the present conditions of Medical education in London and the constitution and relations of Medical schools. To this important document attention has already been drawn in these columns, in which, upon the whole, the conclusions of the Council were endorsed. (See the *Medical Times and Gazette*, November 7.) When, however, the report came before the Society, a disposition was shown hostile to certain portions of it. First, Dr. Greenhow proposed the adoption of the report *en masse*, leaving any discussion of it until this had been done; but it was thought better to discuss it clause by clause—no other plan seeming so good when a document of such extended length had to be considered. Its great length, indeed, was by many looked upon as a fatal blemish in a document intended to go before the world for the purpose of effecting certain definite ends. It was thought that six pages of foolscap were more than would be generally read, far less be acted upon. Sir William Jenner also objected that two totally different things, education and examinations, had been inextricably mixed up together, so that the report was

unnecessarily confused and unintelligible. To these it was urged, in reply, on the part of the Council, which seemed strangely disinclined to accept of any emendations or alterations in their report, that the document in question was not too long, if it was to carry conviction to the minds of the public, and that the subject of examinations had only been touched on incidentally in so far as they influenced curricula.

Preliminary matters having been discussed, the first of the nine sections into which the report was divided, and which referred merely to the initiatory resolution of the Society, the origin of the report, etc., was unanimously adopted. The second, however, referring to the basis of the document, did not meet with like approbation. Dr. Sibson, who seemed to have studied the document with much care, objected to the preliminary portion, which treated of "free studentship," on the ground that such a method of acquiring clinical knowledge was too defective to be adopted, and he was unwilling even so much as to hint at such a thing in their report. This excision would have the further merit of shortening a document much too long to be useful. Mr. De Morgan, on the other hand, thought it was good to show that the question of free studentship—the principle of acquiring knowledge where and how the student pleased—had been considered with reference to some subjects at least. In the report the principle was rejected as not feasible. Nevertheless, it was moved by Dr. Sibson, and seconded by Dr. Salter, "That this portion of the report be not adopted"—a motion which was carried by a small majority. Dr. Greenhow thought the course pursued was an unhappy one, which could only end in spoiling the report. He considered it would be better to send it back to the Council for reconsideration, with recommendations to the effect that certain portions should be omitted or altered. This was, however, overruled, as the report would necessarily be revised by the Council.

The third section, regretting the independent action of licensing bodies and the absence of any known minimum necessary for acquiring any or every degree, was unanimously adopted; but the fourth, which dealt with the regulations of the College of Surgeons and the Apothecaries' Society, was objected to as unnecessarily minute, and tending to give bulk to a too lengthy document. Dr. Sibson therefore moved its exclusion—a motion which was seconded by Professor Miller. Mr. De Morgan said it was intended to impress all, as many were unaware of the grounds of the Council's objections. Mr. Heath pointed out that some of the statements contained in this section, referring to the multiplicity of signatures required by the College of Surgeons, were not now borne out by facts—that alterations in this particular had recently taken place. It was finally resolved that the section should stand on being corrected in accordance with the actual condition of affairs.

Section V. of the report, which dealt chiefly with the needless excess of regulations as to study, was pretty sharply handled. First, as to a couple of sentences dealing with the question of systematic reading *versus* systematic lectures, Dr. Sibson thought this seemed to recommend reading instead of real practical work; the tendency nowadays was to make lectures practical, and practical work should be more insisted on. The question, said the President in explanation, was not between systematic and practical, but between two kinds of systematic work, one of which was as good as the other. To this Mr. Heath demurred in the teaching of anatomy, where familiarity with the very words employed constituted a great gain. Dr. Playfair also opposed the notion, as it totally ignored the personal influence of the teacher, a matter of no mean importance. Dr. Hyde Salter said that these sentences implied that reading was the same thing as listening to a lecture, so far as the acquisition of knowledge was concerned. In reality the two methods were totally distinct. A lecture was something intermediate between reading and a demonstration. A judicious lecturer could illustrate his various points, could impress more forcibly one fact than another of less importance—in short, could instruct better than a book. Even those who had written text-books supplemented them by illustrative remarks and observations.

At this point Mr. Gascoyen drew attention to a specially obnoxious clause at the beginning of the fifth section, which seemed to imply that teachers in Medical schools were accustomed to sell their signatures to certificates of attendance on their classes. It was pointed out that the attendance certified to was mere bodily attendance, and even this in many instances was not regularly registered. On the other hand, it was affirmed of many schools that the recommendation made by this Association, that three-fifths of the total number of lectures must be attended before a certificate could be granted, had been adopted, and that such a sentence really stultified the Association. After a good deal of discussion, a modifying word was inserted, and the sentence allowed to remain, whilst those relating to reading *versus* lectures were expunged.

The next objection raised was to the proposed division of studies laid down in Section VI. Dr. Sibson proposed that Surgical and Medical Anatomy should be spoken of as well as topographical and structural. There was some discussion as to the necessity of such an addition; but a more important question was straightway raised by Dr. Salter as to the division of the course of study advised. He pointed out that the student was directed to apply himself during the first year of study to botany, physics, chemistry, and zoology, and that he was not to be allowed to qualify in the second division—viz., anatomy and physiology—until one year after he had passed an examination on the first, nor on the third until two years after the second. In a course of four years, therefore, the period laid down, the student would perforce have only one year to devote to anatomy, a period altogether inadequate for such a study alone. Mr. Heath declared it could not be done; that the student would become disgusted by twelve months' continuous dissection, even if it did not injure his health. Mr. Charles Hawkins pointed out that a still greater practical difficulty existed in the impossibility of supplying material for dissection in such a period. After some further discussion, it was agreed to adjourn the meeting at this point. Before parting, Mr. C. Hawkins, in appropriate and becoming terms, proposed a vote of thanks to Mr. Simon on his resigning the chair. This was enthusiastically agreed to.

Before the next meeting (they henceforward occur on Friday) we venture to advise members to study carefully the draft of the report, and to attend the meeting in such numbers that it may go out to the world full of weight and authority.

REVIEWS.

The Variation of Animals and Plants under Domestication. By Charles Darwin, M.A., F.R.S., etc. Two vols. 8vo. London. 1868.

Anthropologie. Cours de M. de Quatrefages. Reported in the *Revue des Cours Scientifiques.* 1868.

La Variabilité des Espèces et ses Limites. Par Ernest Faivre. 1868. Paris: Baillière. London: Williams and Norgate.

[Third Part.]

(*Concluded from page* 566.)

After a brief notice of "The Good derived from Slight Changes in the Conditions of Life," especially in the case of plants, Mr. Darwin takes up the important subject of sterility from changed conditions of life. It has been long known that many animals, though perfectly tamed, refuse to breed in captivity. The most remarkable cases are those of animals kept in their native country, which, though perfectly tamed, quite healthy, and allowed some freedom, are absolutely incapable of breeding; and abundant evidence of the existence of such cases is afforded by Rengger, who in Paraguay specifies six quadrupeds in this condition, by Bates in his work on the Amazons, by many African explorers, etc. The most notorious case of this kind is that of the elephant. These animals are kept in large numbers in their native Indian home, apparently retain their normal vigour, and live to old age, yet have scarcely ever been known to couple, although both sexes have their periodical seasons of heat. In Ava, a little eastward, the females are kept in a half-domestic state, and are allowed to roam the forest; and in that country they breed frequently, in consequence probably of their greater freedom. Most of the members of the pig family—even the Red River hog from West Africa, and the peccary—have not unfrequently bred in the Zoological Gardens. Ruminants, from whatever climate they are brought, and most of the Carnivora (excepting the plantigrades), breed quite freely in this country. The tiger, however, rarely breeds in England, but there are several cases of the female tiger breeding with the lion, and it is a remarkable fact that many animals in confinement unite with distinct species and produce hybrids quite as freely (if not more so) as with their own species. The fertility of the carnivora in the Zoological Gardens has been much increased since they have of late years been more freely exposed to air and cold. As domesti-

cated rabbits, guinea-pigs, and white mice breed so abundantly in confinement in many climates, the same might have been predicated regarding the other rodents, but this is not the case. In the Zoological Gardens some rodents have coupled, but have never conceived; some have neither coupled nor bred; and a very few, as the porcupine, lemming, agouti, and chinchilla, have bred several times. The English squirrel has never been known to breed in confinement. Passing to Quadrumana, monkeys in confinement rarely breed, even if kept in their native land. Large as is the number of monkeys in the Zoological Gardens, there were only seven births recorded in the nine years' report, although they copulated freely. Birds in captivity vary extremely in respect to fertility. While the carnivorous birds (as hawks, vultures, and owls), parrots, etc., will not breed in a state of confinement, gallinaceous birds of many genera, the pigeon family, the ducks, and some of the smaller graminivorous birds (as the canary) breed freely. After showing that this barrenness cannot be due to loss of vigour, to a failure of the sexual instincts, or to change of climate or of food, Mr. Darwin comes to the conclusion that the loss of reproductive power "depends more on the constitution of the species than on the nature of the change; for certain whole groups are affected more than others." He concludes this subject with an observation which has an intimate relation with facts observed in the human race, and brought to light in trials in the Divorce Court. "It is by no means rare to find certain males and females which will not breed together, though both are known to be perfectly fertile with other males and females. The cause apparently lies in an innate sexual incompatibility of the pair. Several cases have been communicated to me in relation to horses, cattle, pigs, dogs, and pigeons. . . A female known not to be barren has been unsuccessfully paired seven or eight times with the same male, likewise known to be perfectly fertile."

As in the case of animals, so also in plants, sterility is found to accompany changed conditions of life. For the evidence on this subject we must refer to vol. ii. pp. 163-172.

We now come to the consideration of two very important subjects—selection and variability. The possibility of selection coming into action, either through the intervention of man or by natural causes, rests solely on variability; and this latter is caused, as we shall presently see, by changes in the conditions of life. It has probably never occurred to the majority of our readers that selection is a most difficult art, requiring "indomitable patience, the finest powers of discrimination, and sound judgment exercised during many years." The fundamental principle of selection mainly lies in the power which distinguished breeders exhibit of selecting scarcely appreciable differences which are capable of being transmitted, and which can be accumulated until the result is unmistakably recognisable. Our author divides the principle of selection into three kinds—viz., the *methodical*, the *unconscious*, and the *natural*—methodical selection being "that which guides a man who systematically endeavours to modify a breed according to some predetermined standard;" unconscious selection being "that which follows from men naturally preserving the most valued and destroying the least valued individuals, without any thought of altering the breed;" while natural selection "implies that the individuals which are best fitted for the complex and, in the course of ages, changing conditions to which they are exposed, generally survive and procreate their kind." The value of methodical selection and of the results which it has effected is sufficiently proved by our agricultural shows. "Our pigs during the last twenty years have undergone, through rigorous selection, together with crossing, a complete metamorphosis;" and, to a greater or less degree, the same may be said of our cattle, sheep, poultry, and silkworms.(a) With plants selection has been followed with equally good results; for example, the early maturity of peas has been very considerably hastened, and the beet plant, since its cultivation in France, has doubled its yield of sugar. It is difficult to give direct proofs of the results which follow from unconscious selection, but the indirect evidence is abundant. "In fact, except that in the one case man acts intentionally and in the other unintentionally, there is little difference between methodical and unconscious selection." Amongst other illustrations of the effect of unconscious selection as effected by the destruction of individuals having a peculiar character, Mr. Darwin quotes the diminished height of modern Frenchmen, all the tall men having been destroyed in the wars of Napoleon, and only the short ones left to perpetuate the race. How far this apparently fanciful view may be founded on fact we cannot say, but there can be no doubt that during the last half-century the standard height for the army has been lowered two or three times. Another strange illustration of "unconscious selection in the strictest sense of the word—that is, the saving of the more useful animals and the slaughter of the less useful"—is afforded by the Fuegians, who, when hard pressed by want, kill their old women for food rather than their dogs, on the ground, in their own phraseology, that "old women no use—dogs catch otters." Of natural selection, or the survival of the fittest, as affecting domestic production, we know little; but Mr. Darwin has collected a large number of facts "showing that natural selection often checks, but occasionally favours, man's power of selection." Colour has far more to do in affecting our domestic animals and vegetables than is commonly supposed. Professor Wyman, well known as an excellent observer, states that, on being surprised at all the pigs in a certain part of Virginia being black, he made inquiries, and found that these animals feed on the roots of *Lachnanthes tinctoria*, which colours their bones pink, and, excepting in the case of the black varieties, causes the hoofs to drop off. Hence the breeders select the black members of a litter for raising, as they alone have a good chance of living. Mr. Darwin cites a similar case as occurring in the Tarentino, where the inhabitants keep only black sheep, because the *Hypericum crispum* abounds there, and poisons white sheep, while it does not affect black ones. There is, moreover, a connexion between colour and liability to certain diseases and to parasites. Thus white terriers suffer more than others from the distemper. In certain American plum-trees there is a disease which only attacks those bearing purple fruit, and in Mauritius the white sugar-canes have of late years been attacked by a destructive disease, while the red canes remain unaffected. White chickens are much more liable to the *gapes* (which is caused by a parasitic worm in the air-passages) than dark-coloured ones; while, on the other hand, the silkworms that produce white cocoons resist the deadly fungus (which has recently made such havoc in France and elsewhere) better than those producing yellow cocoons. Cattle of a grey, white, or pale colour are much more troubled by insects than red, brown, or black cattle, and for this reason probably black cattle are always selected for work in the West Indies. Many other illustrations of the importance of colour in both the animal and vegetable kingdoms might be readily given. In the vegetable world many apparently very trifling differences are of importance, as the relative hardness of the shell and of the bark, the presence or absence of glands on the leaves, the difference in flavour or in the amount of nutriment (which causes some varieties to be more eagerly attacked by various enemies than others), etc.

The improvement of a breed by judicious selection is well shown in the case of the ass, which in this country is of little value, because, being usually bred on a small scale by poor people, there has been no selection, and hence distinct races have not been formed. But when selection is brought to bear all is changed. Near Cordova, where these animals are carefully bred, a good stallion ass will sell for £200; and in Kentucky asses imported from Spain have by careful selection produced descendants of fifteen or even sixteen hands high. A celebrated Kentuckian ass has been sold for a thousand pounds!

Such astounding results as these naturally lead to the question, what is the limit to the possible amount of variation? and consequently is there any limit to what selection can effect? The following is, in a condensed form, Mr. Darwin's view of the mode in which these difficult questions should be answered. In some lines of variation, as in the reduction of bone in some of our sheep, the limit has probably been reached. But, seeing the great improvement within recent times in our cattle, sheep, and pigs, and the enormously increased weight of our poultry, it would be dangerous to assert that perfection has been reached. Whether the limit of speed that was reached by Eclipse may ever be exceeded is, we think, doubtful, as the selection of the best horses for many generations has failed to produce his equal. Hardly any fruit has been more improved than the strawberry, yet a great authority, quoted by Mr. Darwin, holds that "we are far from the extreme limits at which we may arrive." It must never be overlooked that, to improve a breed, a large number of indi-

(a) In 1784 a race of silkworms was introduced into France, in which 100 out of 1000 failed to produce white cocoons; but now, after careful selection during sixty-five generations, the proportion of yellow cocoons has been reduced to 35 in 1000, and the full reduction is probably not yet completely attained.

viduals must be reared, and that those with the slightest defect must be rejected,(b) and that length of time is an essential element of success.

We now come to the subject of the "causes of variability" on which the principle of selection is based. Some authors regard variability as a necessary contingent on reproduction; others hold that it depends exclusively on the crossing of primordially distinct forms; while others, again, refer it to an excess of food in relation to the exercise taken, or to the effects of a more genial climate. That all these causes are effective is highly probable, but Mr. Darwin takes the broader view, "that organic beings, when subject during several generations to any change whatever in their conditions, tend to vary," the kind of variation depending far more on the nature of the being than on that of the change. Some writers believe variation to be so general that each individual differs from every other, and Mr. Darwin has adduced various instances supporting this view. That *we* are not able to recognise such differences is no proof that they do not exist. The Laplanders distinguish by name each reindeer from the others, although "they were like ants on an anthill" for numbers. A shepherd, after a fortnight's acquaintance with a flock of 100 sheep, has been able to recognise each, and, what is more remarkable, the able Dutch florist Voorhelm, who kept above 1200 varieties of the hyacinth, almost always could recognise each variety by the *bulb alone*.

Few of our readers are probably aware of the extent to which variation has been carried in the case of cultivated plants. "In the deserts of northern Africa the date-palm has yielded thirty-eight varieties; in a single Polynesian island twenty-four varieties of the bread-fruit, the same number of the banana, and twenty-two varieties of the arum are cultivated; the mulberry tree in India and Europe has yielded many varieties, serving as food for the silkworm; and in China no fewer than sixty-three varieties of the bamboo are used for various domestic purposes"(p. 256). From the numerous facts collected by Mr. Darwin he concludes that the variability of domesticated animals and cultivated vegetables may be caused by slight changes in the conditions of life, the most efficient single cause being excess of nutriment; that the power of changed conditions accumulates, so that several generations must be exposed to new conditions before any effect is visible; and that the causes which induce variability act on the mature organism, on the embryo, and on both sexual elements before impregnation has been effected.

No fewer than three chapters are devoted to the laws which govern variability. "These may be grouped under the effects of use and disuse, including changed habits and acclimatisation—arrests of development—correlated variation—the cohesion of homologous parts—the variability of multiple parts—compensation of growth—the position of buds with regard to the axis of the plant—and, lastly, analogous variation"(p. 293). We must content ourselves with giving an abstract of Mr. Darwin's summary of these chapters. Increased use or action strengthens muscles, glands, sense-organs, etc., and disuse, on the other hand, weakens them.(c) Increased pressure thickens the epidermis, and an alteration of food from animal to vegetable, or *vice versâ*, increases or diminishes the length of the intestine. Animals which for many generations have taken little exercise have their lungs diminished, and, as a consequence, the bony fabric of the chest modified. When the wings are little used, as in most of our domestic birds, these organs are slightly reduced, and induce corresponding changes in the crest of the sternum, the scapula, etc. By the term *correlated variation* must be understood that "when one part varies certain other parts always or nearly always simultaneously vary." In his "Origin of Species" Mr. Darwin brought forward a curious case of correlation which excited great general interest. He asserted that white cats, if they have blue eyes, are always deaf. He has since heard of a few exceptions to this apparently marvellous law, but not enough to affect its general accuracy. If one eye be not blue, the cat hears. In relation to this subject, Dr. Sichel (the eminent French oculist) gives the remarkable case of a cat in which the iris did not begin to grow coloured till it was four months old, and then it first began to hear. The wool and the horns of sheep vary together. Hairless dogs are deficient in their teeth, and pigs with little hair are liable to lose their tails; while over-hairy men have abnormal teeth, either in deficiency or in excess.

From this brief notice of the important law of correlation we turn to the most difficult part of our task—namely, to the consideration of Mr. Darwin's *Provisional Hypothesis of Pangenesis*, by which he proposes to explain "how it is possible for a character possessed by some remote ancestor suddenly to reappear in the offspring; how the effects of increased or decreased use of a limb can be transmitted to the child; how the male sexual element can act not solely on the ovule, but occasionally on the mother form; how a limb can be reproduced on the exact line of amputation with neither too much nor too little added; how the various modes of reproduction are connected, and so forth" (p. 357). To use his own words, "the hypothesis of pangenesis implies that the whole organism, in the sense of every atom or unit, reproduces itself." While physiologists generally maintain that every cell in the animal body, though to a great extent dependent on others, is in a certain sense independent, Mr. Darwin goes a step further, and assumes (freely admitting that it is a mere assumption) that each cell casts off a free gemmule, which is capable of reproducing a similar cell. These gemmules multiply and aggregate themselves into the sexual elements, buds, etc., and they are capable of transmission in a dormant state to successive generations. In a highly organised and complex animal they must be inconceivably numerous and minute. "Each unit of each part," says the author, "as it changes during development (and some insects undergo at least twenty metamorphoses), must throw off its gemmules. All organic beings, moreover, include many dormant gemmules derived from their grandparents and more remote progenitors, but not from all of them. These almost infinitely numerous and minute gemmules must be included in each bud, ovule, spermatozoon, and pollen-grain" (p. 402). "Reversion depends on the transmission from the forefather to his descendants of dormant gemmules, which occasionally become developed under certain known or unknown conditions. Finally, the power of propagation possessed by each separate cell, using the term in its largest sense, determines the reproduction, the variability, the development and renovation of each living organism" (p. 404). Thus not only are healthy gemmules diffused throughout the body, but likewise morbid gemmules, giving rise to hereditary diseases, malformations, etc.

The time has not yet arrived at which it is possible to decide with certainty for or against this hypothesis. In the meantime it gives us the clearest and most systematic explanation of the phenomena of reproduction and inheritance that has yet appeared. Let us, therefore, thankfully accept it as a provisional hypothesis (which is all that its distinguished author claims for it) "to be further tested, and only to be discarded when a more plausible one shall be brought forward."

At the commencement of this article we stated that we intended to notice the principal objections that have been brought forward in opposition to Mr. Darwin's views. We have not done so because, since the earlier pages of this review were written, the subject has been taken up by one who is pre-eminently qualified to give a judicial opinion upon it; and as Dr. Hooker's admirable address to the members of the British Association at their late meeting at Norwich has been diffused over the whole civilised world in the columns of the *Times* newspaper, it is unnecessary for us to go over the same ground.

We have placed M. de Quatrefages' Course of Lectures on Anthropology amongst the list of works heading this article, because, although he is a decided opponent of Mr. Darwin's views, both writers to a certain degree take up the same subjects. In his sixth lecture he discusses the different views that naturalists have adduced regarding the nature and significance of *species*. The doctrines on this subject are, according to him, (1) those of the positive school, who, like Linnæus, Buffon, and Cuvier, maintain the invariability of species; (2) those of the philosophic school, who, like Bacon (in his *Sylva Sylvarum* and *Nova Atlantis*), De Maillet (better known in the reversed form of Telliamed), Lamarck, etc., admit the transformation, or even the transmutation, of one species into others having no resemblance to it; and (3) those who believe in limited variability, represented by Geoffroy Saint-Hilaire, Faivre of Lyons, and others.

"The eminent zoologist Darwin" is placed by De Quatrefages "amongst the most illustrious partisans of the philo-

(b) Lord Rivers, when asked how he succeeded in always having first-rate greyhounds, answered, "I breed many and hang many."

(c) Considering that Mr. Darwin scarcely ever misses any existing illustration of his views, we are surprised to find no reference to the remarkable visual powers possessed by certain savage or semi-savage races. There is undoubted evidence that the unaided human eye has, on at least two occasions, witnessed the occultation of one of the satellites of Jupiter.

sophic school," and his views are compared and contrasted with those of Lamarck. In summing up the doctrines of the contending schools, he points out that the supporters of the absolute fixity of species are compelled to admit a certain degree of variability, and conversely that the supporters of variability admit a certain amount of fixity, and he endeavours to frame a definition that, to a certain degree, will be accepted by both schools. The following is M. de Quatrefages' definition:—"Species is the collection (*l'ensemble*) of individuals more or less similar to one another, who are descended, or who may be considered as descended, from a single primary pair by an uninterrupted succession of families;" and if naturalists would only agree to accept this or any other moderately accurate definition of the long-disputed term *species*, much future controversy would be avoided. As far as they are yet published, these lectures include the consideration of arguments in support of the invariability of species, the variability of the individual, variability of species, varieties, races, and the variations of cultivated vegetables and domestic animals. The lectures on our cultivated plants and domestic animals, as also M. Faivre's excellent little book, *On the Variability of Species and its Limits*, will afford an additional series of facts for Mr. Darwin's use in the preparation of the next edition of his work.

In conclusion, may we venture without offence to throw out a hint to the illustrious naturalist whose work forms the subject of this article? We all know with regret that his health has partially given way under his gigantic labours. Could he not find an associate to assist him in completing the remainder of his work? And who would be a fitter associate than his distinguished friend Dr. Hooker?

GENERAL CORRESPONDENCE.

ABUSE OF THE WORD "EMBOLISM.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Richardson inveighs with some reason against the misuse of the word "embolism," which, as you must be aware, is now very loosely applied by some of our brethren; but I cannot see any reason in his objections to the word if properly used, nor do I see how we ever are to have a clear appreciation of facts without special words to designate them.

Dr. Richardson won some of his earliest laurels in his researches in the separation of fibrine, in his explanation of the ancient "polypus" of the heart, and in the diagnosis of this condition as a cause of death. On these points he seems to me unassailable. But why should he repeat in 1868 what he said of Virchow in 1858?—viz., "His writings on this point were indeed perfect, but for one fault—viz., the use of terms, such as 'thrombus' and 'emboli,' which are quite unnecessary, and will only add more confusion to the Babel of Medical literature."

I ask your leave to point out that these terms have their uses. "Thrombus" is the Greek for "clot," and "thrombosis" for the act of clotting in the abstract. "Embolus" is the Greek for "plug." Now, considering that Medicine is a cosmopolitan profession, I really don't see why English, German, French, Italians, and Spaniards should not use a word borrowed from a language which all members of a learned profession are supposed to understand, and give it a special application to a special fact. If we compare the words "symbol," "symbolise," and "symbolism," with "embol," "embolise," and "embolism," we have, I think, a parallel and legitimate series of terms for (1) the concrete thing, (2) its use expressed by the verb, and (3) the conception as expressed by the abstract noun. Whether *embolia* would be better than "embolism" for the abstract notion I cannot say, but the latter suits the English better. That the words are wanted is shown by their currency; and further, I venture to say that few words will bring forth more practical fruits if properly used.

Doubtless, however, they are at times improperly used. "Embolus" ought to be restricted to a "plug" of clot, which being transported from veins to right heart and pulmonary artery, or from left heart to arterial capillaries, there produces plugging, or the state of "embolism." It is (in my judgment, and under correction of your numerous readers) wrong to use these words, as is sometimes done, to designate the phenomena so well described by Dr. Richardson of separation and concretion of fibrine in the heart or vessels *in situ* without transportation.

I am, &c. V.

London, November 17.

(a) Richardson on "Coagulation of Blood," etc. London, 1858, p. 413.

A CAUSE OF LEAD POISONING.

Letter from Mr. F. Taylor.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have had several cases of lead poisoning this autumn all arising from gingerbeer, containing tartaric acid, being fermented in the "bushel pans" so commonly used for kitchen purposes. Two years ago I had very many similar cases from wine, made from several acid fruits, being fermented in these pans. The glazing of the pans is produced by dusting them, whilst the clay is damp, with litharge and barley-meal previously to their being "fired" in the kiln. In all the cases I have met with, the glazing has been completely removed by the acid; and bichromate of potash added to the wine or gingerbeer has produced a copious precipitate of chromate of lead. It would be a great kindness if Medical men would warn the poor people to use oaken tubs for all purposes for which they now use these hurtful and by no means durable pans.

I am, &c.

Romsey, Hampshire, Nov. 17. Francis Taylor.

NOTE ON MR. POLAND'S CASE OF EPILEPTIFORM CONVULSIONS.

Letter from Mr. G. B. Morgan.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have just read in your journal of the 26th ult. the account of a case of epileptiform convulsions following a blow on the head, in which Mr. Poland trephined, and the boy recovered. Although recovery followed the operation, Mr. Poland says, "There was neither depressed bone nor fracture, nor appreciable disease in the scalp, bone, or dura mater."

I beg to offer you the notes of a similar case [see p. 585 of our present number] where an equally satisfactory result seemed to be due to the use of iodide of potassium.

I am, &c. G. B. Morgan,

Surgeon to the Sunderland Infirmary.

Sunderland, October 20.

A CASE OF VARICOSE VEIN IN THE FEMORAL REGION SIMULATING FEMORAL HERNIA.

Letter from Gopaul Chunder Roy.

[To the Editor of the Medical Times and Gazette.]

Sir,—Whilst visiting an outdoor Dispensary a patient was presented to me by the native Doctor as a case of femoral hernia. The disease being of rare occurrence, I examined it with interest. There was a protuberant swelling over the right femoral ring about the size of a man's fist. The history of the case was as follows:—

Sectaram, a Hindoo boy, aged 18 years, and a servant by occupation, stated that about three and a half years ago he observed a small swelling on the femoral region. It appeared spontaneously, and was not the result of straining, blow, or violent exercise. It has been increasing slowly, and has assumed at present the size of a man's fist, extending from the femoral ring upwards towards Poupart's ligament. The swelling becomes more protuberant whilst standing or walking, but disappears, or, as he says, goes in, whilst lying or pushed inwards. It has a soft elastic feel, and on manipulation subsides inwards, but is not entirely reducible. The portion left gives to the finger the exact feel of an intestine, without its gurgling sound or the impulse on coughing. It had never been painful or strangulated.

The history of the case, the site of the tumour, and the partial feel of it as above described, so exactly simulated a femoral hernia that it was not an easy task to distinguish the difference. I have on some occasions before noticed instances of inflamed tumours on the inguinal region mistaken for strangulated hernia, and even operated on for relief, when on opening the sac out came a quantity of clear or sanguinolent fluid from a hydrocele or hæmatocele, with the complete subsidence of the swelling. The difficulty is increased tenfold in cases like the present if there be supervention of inflammation in the wall of the tumour, and along with it pain and vomiting.

The data that enabled me to diagnose the case as varicosity

of the vein were the absence of gurgling sound on squeezing the tumour, and the non-existence of impulse on coughing. In all reducible herniæ the presence of gurgling sound proves the nature of the tumour beyond doubt, but its absence in all cases is not necessarily a negative evidence; for when the tumour is a small one, and the intestines empty, it is not unfrequent that we fail to obtain the characteristic sound. Hernia generally comes down at once on standing or coughing, but this used to swell out gradually within three or four minutes after reduction and assume its fullest size. It was visible, though much smaller, even when the patient was in ying posture.

It is usual to find in such cases varicosity of the vein for some distance downward in its course, but here the abrupt contour of the swelling served to add to the difficulty in diagnosis. As the swelling was seated just over the saphenous opening, I have no doubt that had such varicosity existed it might have been in the deep-seated veins of the thigh, and was consequently hidden from our sight. We frequently observe varicosity of the external pudic vein over Poupart's ligament, and simulating in the inguinal region a case of reducible inguinal hernia. A mould of such a case, taken by Dr. Fayrer in the Medical College Hospital, Calcutta, and preserved in the library, will show how delusive is the appearance, and how difficult is the diagnosis.

I am, &c. Gopaul Chunder Roy,
Teacher Nagpore Medical School.

Nagpore City Hospital, Sept. 22.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 10, 1868.

Mr. Samuel Solly, F.R.S., President, in the Chair.

A paper, by Mr. Henry Lee, was read on

EXCISION OF THE LARGER JOINTS.

The author gives a table of twenty-two cases in which excision of one of the larger joints was performed. The table includes three cases of resection of the head of the femur, and twelve cases of excision of the knee-joint. Out of the twenty-two cases death occurred in two cases only—namely, in the eleventh and fifteenth. In both of these diffuse suppuration in the cancellous structure of the bone had taken place. The author attributes the successful results obtained to the accidental circumstance of his having had a large proportion of cases in which the ends of the bones had been consolidated by previous inflammation, caused either by the presence of a piece of dead bone or by an abscess; and also to the fact of a large proportion of the cases of resection of the knee-joint having occurred in children. He considers that before the epiphyses are united to the shafts of the bones resection of the knee may be performed without injury to the cancellous structure of the long bones, and that in such cases, as well as where the cancellous structure has been previously consolidated, the great danger arising from purulent infiltration of the shafts of the bones is, in a great measure, avoided. The table presented is exclusive of a case of disease of the hip, and one of disease of the knee, in both of which immediate amputation was performed, as it was found during the operation that the bones were too extensively diseased for the operation of excision.

A paper, by Professor Humphry, was read on

THE RESULTS IN THIRTY-NINE CASES OF EXCISION OF THE KNEE.

This paper was a supplement to one published by the author in the *Medico-Chirurgical Transactions*, vol. xli., in which thirteen of the cases are related. Most of the remarks in that paper have been corroborated by his subsequent experience. The cases were all treated in Addenbrooke's Hospital. Twenty-eight recovered, gaining firm, sound, and useful limbs; two died, one from an attack of hæmatemesis, which seemed to have no particular relation to the operation; nine underwent amputation, of whom five recovered and four died. The operation was, in most instances, performed on account of synovial disease with ulceration of the cartilages and the bones, destroying the joint so as to leave no hope of its recovery to usefulness. In some it was performed for the purpose of removing a crippled useless joint from which the disease had subsided. The clean cut surfaces of the tibia and femur, if placed in good apposition and kept at rest, were commonly found to unite quickly and form a firm basis of support, so that the patient was able to walk, run, and work well; and there has been no liability to return of disease at the part in any of the cases. The limb should be kept straight; but even in the instances in which it became bent it was still very strong and useful. In the young subject, if the epiphysial, or growing, lines of the femur and tibia are left uninjured, the limb may keep pace in growth with the other limb, and generally does so, or nearly. In the cases in which the operation did not succeed, the failure was generally due to continued suppuration in scrofulous or unhealthy persons. Professor Humphry makes a single external semilunar incision across, beneath the patella, is careful to remove all the diseased bone and to leave the cut surfaces of the tibia and femur in good apposition, having taken pains to secure the bloodvessels by torsion. He pays great attention to the adjustment of the limb, in the first instance, with splints and bandages so arranged as to leave the line of incision exposed, and is very unwilling to disturb the parts afterwards. He not unfrequently allows an interval of five, six, or more weeks to elapse before he removes any of the bandages, thus securing primary union throughout the wound, or great part of it, in several instances. He does not allow the patient to leave the bed till firm union of the bones has taken place.

The President remarked that with experience his love for the operation increased. In earlier years he often lost time. The possibility of resecting the joint in case of failure the first time was also, he considered, a matter of importance. In one case in which he excised the knee-joint the lad, although healthy, did not get well, perhaps from the *nimia diligentia* of dressers, but he re-excised the joint, when the patient got well rapidly. This he had been induced to do by Sir William Fergusson's observations.

Dr. Jeffery Marston made some remarks on the army experience of the excision of joints. A short time ago the wrist-joint had been excised at Netley by Mr. McKinnon, after Lister's method, both in cutting and in dressing, with a most successful result. During the Crimean war a few operations of this kind had been performed in the British army. In the New Zealand war there had been six excisions of the head of the humerus, mostly secondary, all of which came to Netley, where they did well. Some were performed by longitudinal incisions, some by transverse or horseshoe-shaped openings. The first were much the best. In children it was perhaps just as well to remove the epiphysis.

Mr. Barwell regretted a want of details in Mr. Lee's paper. He had performed the operations several times, and generally had waited too long. It was important, in excising the hip-joint, to perforate the acetabulum, as thereby accumulated pus is often permitted to escape. The apparent shortening of the thigh arose from abducting the limb, and actual shortening would follow if, after the operation, the limb were kept in this position, not so if it were adducted.

Mr. Skey remarked that the results were very gratifying, as it was always gratifying to retain a limb which otherwise would have been sacrificed. Still, with every deference, and granting all power of selecting proper cases, certain objections occurred to him when the subject was brought forward. Only a conclave of Medical men could decide why thirty-nine cases could occur in a small Hospital like Addenbrooke's when there were not so many in St. Bartholomew's with more than 400 Surgical beds. In one small country Hospital a still greater disproportion was recorded. He gave every credit to the operators, but he did not think that he would have concurred in many of these operations. He had been brought up in Abernethy's school, who had been eminently successful in his constitutional treatment of chronic joint cases. He also regretted want of details. Another point was this:—Reference had been made to Mr. Jones, who trusted much to the after-treatment of his cases; but from the papers read this subject had been totally excluded.

Mr. T. Smith said the operation had been injured in the eyes of many by too enthusiastic men in the first setting off. They were much indebted to Professor Humphry for his protracted experience. St. Bartholomew's Hospital, like all old institutions, was intensely conservative, and most justly so. It therefore resisted the operation at first, until its officers saw grounds for its adoption. Now all perform it. On the whole, he thought the results good. He could only speak of

ten years' experience himself; but the oldest cases pleased him best.

Mr. Maunder asked in what cases were they to perform excision. Mr. Lee had laid down one general principle—viz., that it was a question of excision *versus* amputation. He thought that when there was a question of the latter, the patient was too far gone. They were therefore reduced to chronic conditions, into which the element of time enters. In a small minority only would the operation be performed. The after-treatment was important. It should be mostly local. The joint might be put up in plaster of Paris, with a splint behind.

Mr. John Wood said that he had seen many of those cases operated on in King's College Hospital, where constitutional treatment had not been neglected both before and after operation. In the gelatiniform degeneration of the knee-joint, treatment was of little avail. Many of the cases had been treated constitutionally elsewhere without good result. He remembered some who had been condemned at St. Bartholomew's to lose their limbs, and had come to King's College Hospital, where they were saved. This would explain why the smaller Hospitals had so many such cases. He would differ from the last speaker as to the questions of amputation and excision; for some of the worst-looking cases of knee-joint disease had done best, and some of the most promising had proved fatal. He heartily agreed with the practice of resection.

Mr. Lee and Professor Humphry having replied, and Mr. Walton having shown a patient on whom he had operated in 1858 for Elephantiasis of the Scrotum, the meeting separated.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 3.

Vice-President Sir H. Thompson, Knt., in the Chair.

Dr. Murchison, on behalf of the Committee on Morbid Growths, read a report on Mr. Birkett's specimen shown at the previous meeting. He stated it to be a fibro-plastic or spindle-celled sarcomatous tumour, not encephaloid.

Mr. C. Heath exhibited half a Tongue and part of the Mouth of a man, aged 60, who had for some time complained of pain in the organ. The jaw was divided, the floor of the mouth being affected, and the diseased portions were removed by the écraseur. A good deal of bleeding followed. The tumour appeared to be medullary rather than epitheliomatous. The patient has done well. Referred to Committee.

Mr. Heath also showed a Tumour of the upper part of the Face and Cranium, as well as a cast and sketch of the same. This enormous mass was removed from a woman aged 24, from whose orbit eleven years before a small growth had been removed by Sir William Fergusson. This did not involve the eye, and the woman soon recovered. She was well for seven years, when it began to grow again, and was again removed by Sir William. Their character was fibroid, but the second was softer than the first. The mass returned in a few months, and then grew very rapidly. When she applied at University College Hospital, nothing could be done for her. When first seen there was no cerebral disturbance, but a month after she had an epileptic attack, and fell from her bed, bruising the diseased parts. There was no return of these fits after this until her death, which occurred quite suddenly, she being quite well on the afternoon of its occurrence. The eyes were thrust out; the left kept its sight; the right, being the more projecting, had been removed. The brain was flattened above, the diseased mass lying in the anterior fossa of the skull. It had probably begun in the nostril. In texture it was like medullary cancer, but was rather something between a fibroid and lipomatous growth.—Referred to committee.

Mr. T. Holmes remarked that in many particulars this case resembled one which had been in St. George's Hospital under the care of Mr. Hawkins. The face in this instance was even more distorted than it was in Mr. Heath's case; there were distinct cerebral symptoms, and the sight was gone. She was long kept in Hospital, but was never unconscious. The tumour was enchondromatous, and pressed much on the base of the brain.

Mr. Hulke also remarked that the absence of brain symptoms was not unusual until quite a late period, and should therefore give no confidence to the Surgeon. He was convinced of the inutility of the knife alone in orbital growths. With caustics or the cautery combined with cutting, the results were much better.

Dr. Church exhibited a Stomach presenting a curiously mammillated appearance. This had been removed from a woman, aged 37, who had during life presented somewhat anomalous symptoms. She had suffered from anæmia, and latterly from vomiting, yet her appetite was good at first. Ultimately she became purpuric, and died apparently from the vomiting. Some fibrinous clots were found in the heart, whilst the interior of the stomach resembled the surface of the body in small-pox prior to suppuration. A few similar elevations were found in the duodenum, not elsewhere.

Dr. Church also showed an Aneurism of a Branch of the Pulmonary Artery opening into a vomica. The patient had profuse hæmoptysis, not so bad when seen as previously and after admission to the Hospital; no pure blood was passed. The patient died very suddenly, when the vomica was found filled with clotted blood, the aneurism ruptured, and the right bronchus plugged.

Mr. Holmes exhibited a Fibrous Tumour of the Scrotum, removed from a man, aged 51, who had been burdened with it from his youth. The right testicle appeared to be implicated, but was not. Latterly, the tumour became painful, and grew fast. Its consistence was not uniform, and, when removed, the testicle was taken with it.

Mr. Christopher Heath said he had shown one rather larger with a central cavity, such as would likely have been produced in Mr. Holmes's specimen.

Dr. C. Bastian showed an Aneurism of the Middle Cerebral Artery on both sides of the body. The woman was paralysed, and showed confusion of mind, with deficient articulation. She improved, but, four months after, became worse, and the hemiplegia became perfect, and she finally died comatose. The heart was tolerably healthy, but there was embolic infarction of the spleen and kidneys. The aneurism on the right side was pervious, and it had interfered on the first attack with the third right frontal convolution; the second time the effusion had been into the middle lobe. On the left side the aneurism contained coagula, and the left hemisphere was softened.

Dr. Bastian also showed some specimens exhibiting want of symmetry in the posterior cerebral hemispheres. The left posterior lobe had been shown to extend rather further back than the right, whilst the specimens showed a deep notch, non-existent, or only in small degree, on the left.

Dr. Murchison narrated a curious case. A man had been two days in the Middlesex Hospital. He had never been very strong, and two of his family had died of phthisis, but he had suffered from no hæmoptysis. His illness began two weeks before admission, with pain in the belly and vomiting. After a month there was swelling of the belly; after that, of his legs. He lost flesh, and had night sweats. When seen he was extremely prostrate, as if from acute tuberculosis; there was fluid in the peritoneum, but it seemed to be partly shut up towards the left side. There was dulness under the right clavicle and at the base of the lung. The urine was healthy, and the temperature normal. He died from convulsions ending in coma. The diagnosis was cancerous or tubercular peritonitis. After death a quart of turbid fluid was found in the peritoneum, and an enormous diseased mass was found to extend along the intestine from the pylorus to the jejunum, beyond which there were isolated plates of deposit. From this a creamy juice could be scraped. Nearly all the abdominal glands were affected in a similar manner, and there were numerous deposits exactly like cancer in the kidneys, the portal canals of the liver, the base of the heart, and the walls of the abdomen. It had not the appearance of cancer, but rather resembled a nuclear mass, like early tubercle. In both pleuræ was a fluid containing much oil and no lymph. There was a scar in the patient's groin.

Dr. Moxon did not think this was syphiloma, which was non-vascular. It looked rather like cancer, the structure of which was so variable.

Mr. Hulke had seen syphiloma vascular, as in a tumour from the skull.

Dr. Murchison did not think it syphilitic.

Sir H. Thompson thought the scar was rather evidence against than for its being syphilitic.

Referred to Drs. Sanderson, Cayley, and Moxon.

Mr. Fairlie Clarke showed a pendulous sebaceous tumour removed from the prepuce. One testicle was strumous, and the scrotum contained sinuses. A similar tumour existed in the scalp.

Mr. Spencer Watson exhibited a woman showing the sequel of Blood-cysts in the Thyroid. The cysts had repeatedly formed and been tapped.

Mr. Heath remarked that there was now a similar case under the care of Mr. Erichsen; it had been supposed to be carotid aneurism. The patient had fallen downstairs, and the swelling gradually increased.

Mr. Maunder said there was a similar case in the London Hospital.

Mr. Watson then showed a Tumour of the Right Testicle, which had formed three years ago. It was removed by Sir William Fergusson.

Dr. T. H. Green exhibited a fresh specimen illustrative of a Varicose Condition of the Small Intestine, removed from a patient who died in Charing-cross Hospital. The peritoneum was separated from the mucous coat.

Dr. Thomas Ballard brought forward a specimen supposed to be an exostosis of the external condyle of the femur, but which to him seemed rather to be the head of the fibula.

Mr. C. Heath said not so, or the head of the fibula was much altered from its usual shape. He could hardly conceive of such a mistake being made in operating.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, November 4, 1868.

Dr. Hall Davis, President, in the Chair.

(*Continued from page* 571.)

Dr. Braxton Hicks suggested that in this case, as in many others, between the two extreme views propounded a large amount of intermediate truth existed which was quite overlooked. He considered that for practical purposes cases of retroflexion were to be divided into four classes, which, however, ran into each other in every degree. In the first class he would place cases of congenital retroflexion where no pain had existed previously, and those in which, the flexion having occurred a long time before, all pain had completely gone off, every resisting part having accommodated itself to the change. It was impossible to say how many cases existed of this class, because, as they suffered nothing, they did not apply for advice, but the state was observed in looking for other troubles. In the second class, the retroflexion was *in transitu*; the supporting tissues were not yet fully stretched, so that, when any straining or quick action of the body ensued, the parts were put on the stretch, and pain produced. To this class the largest amount of relief is given by mechanical support. In the third class he would place those cases where to the retroflexion a state of congestion, hypertrophy, and tenderness, more or less severe, were added. If these cases were handled roughly per vaginam or with the sound, no doubt much mischief may ensue; but if the uterus could be replaced by the postural mode, or even by the sound gently used, then the uterus, being free from concussion against the sacrum, and the tension being taken off the ligaments, great relief would be obtained. The organ could be kept in position by Hodge's pessary, the action of which was not so much to push the fundus up as to keep the os uteri so far backwards that the retroflexion could not recur. In the fourth class he would include all those cases where the uterus was reflected, and either tied down by adhesions, weighed or pushed down by heavy tumours, or with a very tender ovary, etc., where the use of mechanical support would be generally more distressing than a means of relief.

Dr. Barnes believed that simple retroflexion was a cause of real and serious distress in many cases. He found that congenital retroflexion was more frequent than it was supposed to be by Drs. Routh and Hicks. Cases of severe suffering in single women due to it had come under his care. A year ago he was asked to see a young lady who had long been suffering from obstinate constipation. There being pelvic distress, he was requested to examine. There was decided retroflexion. The body of the uterus, turned back in the hollow of the sacrum, pressed like a ball-valve upon the rectum, impeding defecation, and after a time the intestines, from being constantly distended, had become paralysed. A Hodge's pessary gave quick relief, and gradually, the uterus rising into its place, the intestines regained power. It was therefore certain that inflammation or other disease of the uterus was not necessary to the production of retroflexion. A most common cause was childbirth or abortion. In many cases where he had been called in to treat secondary puerperal hæmorrhage he found retroflexion, and when the retroflexion was relieved, the hæmorrhage commonly stopped. After labour, if involution were retarded and the patient got up too soon, the uterus was apt to roll backwards, and, if not rectified at the time, the retroflexion became chronic, and various disorders ensued. To restore the body of the uterus to its place, Hodge's pessaries answered admirably. He concurred in what Dr. Savage had said about bringing out modifications of Hodge's pessary under new names. Hodge himself had made various forms. The one thing to remember was the principle. It was a lever, and must be made to float with the vagina; it should not be fixed. A common fault in the pessaries was that they were made too large, so as to stretch the vagina, which was destructive of the principle of the pessary. He thought the Hodge's pessary could often be used advantageously whilst there was inflammatory complication. By supporting the uterus in its due relations, the hyperæmic condition of the body was relieved by the freedom afforded for the return of the blood from the engorged vessels. It was by no means illogical to treat the epiphenomena, the consequences of the disease, first. It was a fallacy to disregard these, and to limit our attention to the presumed cause. In most conjunctures in Medicine we were compelled to treat the secondary complications. Indeed, it was only by observing and removing them that in many cases we were enabled to trace back and to discover the primary disorder.

Dr. Squire wished to protest against the use of the hysterotome as a means of depletion in these cases; injurious and dangerous results he had known follow its adoption; ovarian irritation also would subside under other remedies than bleeding and blistering, if the use of alcohol were prohibited. Involution of the uterus was greatly aided by lactation and retarded by alcohol, the use of which ought to be limited where lactation is not carried on. He could not consider the puerperal state as a disease of more than a week's duration, though careful management was necessary for at least a month longer.

Dr. Priestley said that he recollected the time when uterine flexions were denied a place in uterine pathology by some authorities, and even now eminent Practitioners were not in accord as to their frequency and importance—indeed, he was informed by Dr. Greenhalgh that so eminent a teacher as Dr. Churchill, of Dublin, had never as yet met with anteflexion in the unimpregnated uterus. He quite coincided with Dr. Barnes in reference to the frequency and severity of the local symptoms sometimes associated with retroflexions as their direct cause. He could indeed testify that within his experience retroflexion of the unimpregnated uterus had been productive of very grave symptoms. Uncontrollable chronic vomiting had in some cases been a prominent feature. In another case in which he had ascertained by examination that there was acute retroflexion of the uterus, the patient had for years been suffering from what appeared to be progressive paraplegia, until she lost almost entirely the power of walking. The use of a Hodge's pessary gave great relief; the patient began soon to walk little by little, and was now gradually regaining the use of her limbs. In this case there were no symptoms distinctly pointing to uterine derangement, and the womb was not in the least degree morbidly sensitive to touch. When patients experienced pain in the pelvis in connexion with uterine flexions, he felt confident that it was not always due to some superadded congestion or inflammation of the uterus—that it did not indeed always proceed directly from the uterus itself. In a lecture published some years ago he had pointed out that the cause of the attendant suffering was often to be found in the condition of the ovaries. In the cases where the results were felt in distant organs, pressure caused by the displacement could not account for the symptoms; but they were probably due to reflex effects upon the nervous system. He had no hesitation in recognising the classification suggested by Dr. Hicks. In treatment he pursued an eclectic course, dealing with each case in accordance with its own peculiar features. With respect to depletion as an occasional treatment, he preferred that moderate amount which would be just sufficient to relieve the congestion present, rather than the frequently repeated and larger bleedings alluded to in the discussion; and he could not regard depletion alone as a remedy for the displacement. In conclusion, he could bear willing testimony to the value of Hodge's pessaries in suitable cases.

THE CLINICAL SOCIETY.

FRIDAY, NOVEMBER 13.

Sir THOMAS WATSON, President, in the Chair.

THE following gentlemen were elected members of the Society :—Dr. Heywood Smith, Dr. F. R. Fairbank, and Mr. H. A. Reeves.

Dr. BRISTOWE communicated nine cases of

ASCITES

in male patients, not complicated with disease of the kidneys, heart, or lungs, in all of which the ascites either underwent marked diminution or entirely disappeared during the period of treatment. One of the cases presented the characters of tubercular peritonitis, but the others appeared to be dependent on disease of the liver or of its capsule. In six cases paracentesis had been previously performed once or twice. In all diaphoretics, purgatives, or mercurials had been given with more or less unsatisfactory results. In each patient the diminution of the ascites had occurred during the employment of a tonic plan of treatment, consisting in rest, careful attention to diet and regimen, combined with the continuous administration of chalybeates alone, or in combination with quinine. Throughout, the amendment of the constitutional state was as remarkable as the disappearance of the peritoneal effusion.

A short discussion followed the reading of the paper, in which the President, Dr. Pollock, and Dr. Davies took part.

Mr. C. HEATH brought before the Society a case of

SUBCLAVIAN ANEURISM.

The patient had suffered from an aneurism of the opposite side, which had undergone spontaneous cure. He considered the case unfit for operative interference; were the patient in better health, the distal ligature offered the best hope of success. After referring to various remedies which might be suggested, Mr. Heath said he had brought the case forward for examination, and to elicit an expression of opinion with reference to treatment.

Dr. DAVIES referred to the good results which he had known follow the local application of ice in similar cases. He thought it would be justifiable to attempt some operation which would be most advantageously practised with the help of antiseptics.

Dr. SANDERSON stated he found on examination that in the right radial pulse arterial pressure was diminished, and that the artery filled very slowly—results due to feeble heart action and want of elasticity in the artery. He considered the patient's prospects most unfavourable—the more so as a systolic bruit and intermittent pulse indicated serious heart disease.

Dr. BAEUMLER remarked upon the condition of the pupils as connected with the communicating fibres of the sympathetic; and

Mr. BRUCE drew attention to the question of amputation at the shoulder in cases of subclavian aneurism.

Mr. MOORE would leave the patient to the chance of a spontaneous cure, and, in reply to a question from Mr. Willett, stated that he thought the principle of introducing a foreign body, such as needles passed through the aneurism, a good one.

Mr. C. HEATH, in reply, observed he had never seen any good results from the use of ice in such cases as these.

Mr. MAUNDER read for Mr. Little a report of the case referred to at the last meeting, in which the femoral artery was tied for traumatic inflammation of the knee-joint. He referred to the safety with which the femoral artery might be ligatured when not previously diseased, and to the good results which followed the operation in the present instance.

Mr. BRYANT considered the operation worthy of attention, but he thought that it would be most serviceable in the treatment of large diseases which could not be removed, such as cancers, especially bleeding ones.

Mr. MOORE approved of the treatment in this case, and referred in illustration to a case in which good results followed acupressure of the brachial for the cure of acute suppuration deeply seated about the hand.

Mr. HILL mentioned several cases in which good results had followed treatment allied to that described by Mr. Maunder, and

Mr. WILLETT referred to a case showing the marked effect upon inflammation of ligature of the ulnar and radial arteries; at the same time he had seen cases like the one under Mr. Little's care, in which the patients had recovered rapidly, after letting out pus from the knee-joint, under ordinary treatment.

Mr. MAUNDER observed that he wished it to be understood that he advised the operation only in very exceptional cases.

The PRESIDENT announced that the Committee on Acupressure and Torsion would be much obliged for any facts or observations which the members of the Society might be good enough to supply them with.

In the report of Dr. Andrew Clark's remarks at the last meeting, for "limitation" read "unitarian."

NEW INVENTIONS.

SUCRE FERRUGINEUX DE CHANTEAUD.

(*Chanteaud, 50, Avenue de Wagram, Paris, and Dinneford, 172, New Bond-street, London, W.*)

WE often have occasion to praise the extreme neatness of the medicinal forms which the French pharmaciens supply us with. One of the latest of these is a ferruginous sugar prepared by M. Chanteaud and sent us by Mr. Dinneford. In appearance and taste it is an amber-coloured sugar candy in small crystals. In properties it claims to be a chalybeate *par excellence*, serving as aliment and medicine, destitute of irritating or constipating qualities, and suitable for the nursery and for the invalid's *cuisine*. In its nature it is said to be an oxide of iron in colloid form and entirely soluble, and yet not a salt, nor giving the blue coloration with the ferrocyanide of potassium.

> "So, the sick infant's taste disguised to meet,
> We tinge the vessel's brim with juices sweet;
> The nauseous draught his willing lip receives,
> He drinks deceived, and so deceived he lives."

NEW BOOKS, WITH SHORT CRITIQUES.

Spiritualism *versus* Positivism; being a Letter and a Challenge to G. H. Lewes, Esq., Professor Tyndall, *et hoc genus cœcorum*. By G. Damiani, Foreign Correspondent of the British Association of Progressive Spiritualists. London: James Burns, Camberwell. 1868. Pamphlet. Pp. 16.

*** The following bit will show the extent to which spiritualistic phenomena have advanced :—"In the present day, the modes of spirit-manifestation are almost innumerable in their variety. The 'planchette' came next in order after Miss Fox's 'telegraph;' and thus *written* communications were first introduced (a) Then the 'planchette' was improved upon, and the medium's hand invisibly guided in writing and drawing. Next the spirits themselves took to writing and drawing, *unassisted by human mediums*, and often without the aid of pen, ink, pencil, chalk, or colours. After this, they began to appear *personally and visibly* in the presence of numerous intelligent and scientific spectators (some few of whom I have already named). At the moment I write, the spirits are manifesting their presence in London, New York, and elsewhere by *sonorous audible sounds*, by words and sentences, spoken as one man speaks to another, not to mention other *physical* phenomena, such as the changing of water into wine,(b) and the conveyance into rooms of fruit, flowers, live birds, etc., the doors and windows of such rooms being closed meanwhile. These are facts well attested, sufficiently so to establish, as matter of history, *any* fact or collection of facts, and are neither 'unconscious cerebration, mental aberration, collective delusion,' or other philosophical no-explanation."

A Great Philanthropic Movement: Hot-air Baths for the People. Illustrated by the History of the People's Turkish Bath at Cork; with an Estimate of the Cost of Erecting such Establishments, and an Account of numerous Cases of Disease cured by Hygienic Means after having been given up at the Hospitals, the whole forming an important Question for the consideration of Ratepayers. To which is added a Paper on the new Earth Closets; the Introduction of Hygiene into Religious Institutions; Prospectus of the Hygienic Society of Great Britain and Ireland; the Kind Teachings of Nature. Price Twopence. London: J. Burns, Progressive Library, 1, Wellington-road, Camberwell, S.E.

*** This long title-page describes the cheap pamphlet sufficiently.

MURDEROUS ASSAULT UPON A MEDICAL MAN.—A patient of Dr. Hunter, of Lynn, named Colman, a young man of 22, and very much emaciated, being under the delusion that Dr. Hunter had been administering poison which was eating away his vitals, went to the Doctor's house on Friday in last week, and attacked him with a poker, striking him on the head several times, causing fearful wounds and bending the poker almost double. He then sprang through the window, smashing both framework and glass, and ran off, but was soon secured.

(a) The "planchette" is a flat piece of wood, some six or seven inches by four or five, heart-shaped, in which is a hole to receive a pencil, whilst underneath are small rollers, on which it moves. A sheet of paper being placed beneath the "planchette" and the medium's hand above, the instrument moves automatically, and pencil-writing is thus produced.

(b) Done through the mediumship of the Baroness Guldenstubbé, of Paris.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON. The following are the names of Candidates who passed the

SECOND M.B. EXAMINATION.

First Division.

Anderson, Tempest, B.Sc., University College.
Batt, Charles Dorrington, St. Bartholomew's Hospital.
Birt, Joseph, General Hospital, Birmingham.
Eager, Reginald, Guy's Hospital.
Haynes, Frederick Harry, St. Bartholomew's Hospital.
Hilliard, Henry Charles, Guy's Hospital.
Leech, Daniel John, Royal Manchester School of Medicine.
Loy, Thomas Richardson, University College.
Makens, John, Guy's Hospital.
Poore, George Vivian, University College.
Richards, William Alsept, King's College.
Ridge, John James, B.A., B.Sc., St. Thomas's Hospital.
Taylor, Frederick, Guy's Hospital.

Second Division.

Buckle, William Turberville, King's College.
Crowfoot, Edward Bowles, St. Bartholomew's Hospital.
Fiddian, Alexander Paull, King's College.
Kenyon, George Arthur, St. George's Hospital.
Langmore, John Wreford, University College.
McCarthy, Jeremiah (M.A. Dub.), London Hospital.
Wyman, John Sanderson, St. Bartholomew's Hospital.
Yeo, Isaac Burney, King's College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 17th inst. :—

Baines, Albert Henry, Leicester, of Guy's Hospital.
Barkas, William James, Newcastle-on-Tyne, of the Newcastle School.
Bell, John Albert, L.S.A., Rochester, of St. Thomas's Hospital.
Buckley, Samuel, Royton, Lancashire, of the Manchester School.
Carr, John, L.S.A., Scarborough, of Guy's Hospital.
Giles, John, L.S.A., Beaconsfield, of St. Bartholomew's Hospital.
Goodhart, James Frederic, L.R.C.P. Lond., Brighton, of Guy's Hospital.
Hill, John De Vere, Liverpool, of the Liverpool School.
Jones, John Thomas, L.S.A., Llanfyllin, Montgomeryshire, of Guy's Hospital.
Lawson, Archibald, M.D. New York, Halifax, Nova Scotia, of the King's College and New York Schools.
Moseley, Litchfield Jones, New Kent-road, of Guy's Hospital.
Nettleship, Edward, L.S.A., Kettering, of King's College.
Norton, John Alexander, Bristol, of the Bristol School.
Ravenhill, Thomas Holmes, Stonehouse, Gloucestershire, of the Birmingham School.
Rigg, Charles Frederic, Wigan, of the Manchester School.
Skinner, Stephen, M.B. Aber., Upper Bedford-place, of the Aberdeen and Bristol Schools.
Southam, John Binns, Manchester, of the Manchester School.
Viall, Edmund, Peckham, Surrey, of the London Hospital.
Wintle, Henry, Bristol, of the Bristol School.
Woods, George Arthur, L.S.A., Southport, of the Liverpool and St. Bartholomew's Hospitals.

It is stated that three candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for six months.

The following passed on the 18th inst. :—

Evans, Thomas Walter, L.S.A., Llanymawddwy, Merionethshire, of Guy's Hospital.
Field, Albert Frederick, L.R.C.P. Edin. and L.S.A., Canterbury, of St. Bartholomew's Hospital.
Fox, James Thornley, L.S.A., Manchester, of the Manchester School.
Glencross, Frederick John, L.S.A., Devonport, of St. Bartholomew's Hospital.
Hall, Francis De Havilland, Tottenham, of St. Bartholomew's Hospital.
Hurlstone, Adam Payton, Cheltenham, of University College.
Lewis, William Bevan, L.S.A., Cardigan, of Guy's Hospital.
Lyttleton, William Margrave, M.D. Coll. of Phys. and Surg. of New York, Dublin, of King's College.
M'Gill, Arthur Fergusson, Featherstone-buildings, of King's College.
Minter, Edward Withers, L.S.A., Southsea, Hants, of University College.
Pilkington, Henry Oldfield, Preston, of the Manchester School.
Rugg, Baron Alfred, Grove-road, St. John's-wood, of University College.
Smith, Thomas, L.S.A., Crawley, Sussex, of St. Bartholomew's Hospital.
Walsh, Patrick Charles, Boyle, Co. Roscommon, of the Dublin School.

On this occasion six candidates failed to acquit themselves to the satisfaction of the Court of Examiners, and were consequently referred to their Hospital studies for the usual period of six months.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 12, 1868 :—

Boyd, Herbert, St. Mary's Hospital.
Marsh, Francis Baines, 4, High-street, Bloomsbury.
Mondelet, William Henry, St. Thomas's Hospital.
Pedler, George Henry, King's College Hospital.
Sedgwick, Henry, 79, New North-road, N.

The following gentlemen also, on the same day, passed their First Examination :—

Collins, Edward Lorton, Guy's Hospital.
Griffin, Innis, University College.
Morrish, Richard Alfred, St. Mary's Hospital.

As an Assistant in Compounding and Dispensing Medicines :

Fain, William, High-street, Guildford.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BARNISH, W. C., M.R.C.S., L.S.A.—House-Surgeon to the Chorlton-upon-Medlock Dispensary, Cavendish-street, Manchester.

BLAKE, C. CARTER, Ph.D., F.G.S., Hon. F.A.S.L.—Lecturer on Comparative Anatomy and Zoology to Westminster Hospital School of Medicine.

KITE, W. J., M.R.C.S.—Officer of Health to West Bromwich.

MILITARY APPOINTMENTS.

ROYAL ARTILLERY.—Staff Assistant-Surgeon Samuel Gamble White, M.D, to be Assistant-Surgeon, *vice* James Kelly, appointed to the Staff.

22ND FOOT.—Surgeon Andrew Leith Adams, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

105TH FOOT.—Staff Assistant-Surgeon Alexander Anderson, to be Assistant-Surgeon, *vice* George White, who exchanges.

MEDICAL DEPARTMENT.—Assistant-Surgeon George White, from the 105th Foot, to be Staff Assistant-Surgeon, *vice* Alexander Anderson, who exchanges; Assistant-Surgeon James Kelly, from the Royal Artillery, to be Staff Assistant-Surgeon, *vice* Francis Madden, deceased.

BIRTHS.

BUTLER.—On November 11, at Ormonde House, Guildford, the wife of T. M. Butler, Surgeon, of a son.

FRANCIS.—On November 8, at Ilchester, the wife of Wm. Francis, Surgeon, of a daughter.

ELWES.—On November 16, at 2, Dorset-square, the wife of C. W. Elwes, M.D., of a daughter.

MURRAY.—On September 26, at Caine-road, Hongkong, the wife of Dr. J. Ivor Murray, F.R.S.E., H.M.'s Colonial Surgeon for the island of Hongkong, of a son.

PARK.—On November 15, at Hilsea, Hants, the wife of George Park, M.D., Royal Artillery, of a son.

SURRAGE.—On November 17, at Wincanton, Somerset, the wife of James Surrage, M.D., of a son.

WHITE.—On November 18, at Mostyn-road, Brixton, the wife of Dr. S. White, of a daughter.

MARRIAGES.

ANDREWS—BAIN.—On November 11, at the parish church, All Saints, Poplar, Thomas A. Andrews, Captain 1st West York Militia, of Scadbury, Kent, to Julia, only daughter of W. P. Bain, M.D., and granddaughter of the late Sir William Bain, R.N.

GUENTHER—M'INTOSH.—On November 16, at St. Mary's, Birnam, Albert C. L. G. Guenther, M.A., Ph.D., M.D., to Roberta, youngest daughter of John M'Intosh, Esq., of St. Andrews.

MACNAMARA—GOODMAN.—On November 10, by licence, at St. Francis Xavier's, Liverpool, Laurence J. N. Macnamara, M.D., to Frances D'Urban, the seventh daughter of the late Major-General Stephen Arthur Goodman, C.B. and K.H.

MORLEY—WEBSTER.—On November 5, at All Saints, Campton, Frederic Morley, M.R.C.S., of Portsmouth, youngest son of the late John Morley, Esq., Bicker, Lincolnshire, to Annie, only daughter of George Webster, Esq., of Shefford, Beds.

WILLS—RICHARDS—On November 18, at St. Clement Danes, Strand, Thomas George Greek Wills, second son of Joseph Wills, Plymouth, to Lizzie, fourth daughter of the late Joseph Richards, Surgeon, of Oxford-terrace, Islington, late of St. Clement Danes.

DEATHS.

ALLEYNE, FRANCIS GEORGE, youngest son of the late J. H. Alleyne, M.D, Gloucester-terrace, Hyde-park, at 58, Hereford-road, Bayswater, on November 12, aged 28, deeply lamented.

CAMPBELL, BARBARA GIBSON WILLIAMSON, the beloved wife of Dr. John Campbell, R.N., at Knaphill, Woking, Surrey, on November 15.

DAVIS, A. WALL, M.D., formerly of Presteign, Radnorshire, at Loppington Vicarage, Salop, on November 15, in his 80th year.

HAMILTON, Rev. JAMES, younger son of the late Professor Hamilton, M.D., of Edinburgh, at Pau, on November 9, aged 52.

KINGSTON, FRANCIS HOUSE, Surgeon, at Harpenden, Herts, on November 2, aged 80.

NISBETT, VERNON INNES HADLOW, third child of R. Innes Nisbett, M.R.C.S., at Milton-road, Gravesend, on November 14, aged 4½ years.

PHILLIPS, EDWARD, M.D., M.R.C.P., and J.P., at Whitmore-park, near Coventry, on November 9, aged 51.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Easingwold Union.—The Easingwold District and the Workhouse are vacant; area 13,630; population 3309; salary £42 per annum.

APPOINTMENTS.

Alderbury Union.—John Winzar, L.S.A., M.R.C.S.E., to the Fifth District.

Bideford Union.—Richard C. Hoyle, M.R.C.S.E., L.S.A., L.R.C.P. Edin., to the Buckland Brewer District.

Blandford Union.—Thomas Fielding, M.D. Glas., M.C. Glas., L.S.A., to the Third District.

Dr. Walter William Miller has been elected Mayor of Eye for the fifth time.

Death of M. Sichel.—This eminent oculist, so well known by his "Iconographie Ophthalmologique," has just died.

Incubation of Small-pox.—M. Laboulbène, of the Hôpital St. Antoine, relates the particulars of seventeen carefully observed cases which he believes authorise him to conclude that the period of incubation of variola lasts from twelve to fifteen days.—*Union Méd.*, Nov. 14.

Poisoning by Rum.—An inquest has been held on a woman four months advanced in pregnancy who is said to have died at Barnsbury-road from apoplexy, produced by drinking rum and beer.

Gas.—At the meeting of the Association of Medical Officers of Health this evening at 7.30, Dr. Odling will read a paper on the combustion of gas in private houses. Gas testing is becoming more and more an occupation for Medical men.

Havre Exhibition.—Messrs. Condy and Co., of Battersea, have obtained two silver medals at this exhibition: one from the Maritime department, and another, with special vote of approbation, from the Naval Medical Congress.

Dr. R. King, of Hull, will read a paper, at the meeting of the Medical Society of London on Monday next, "On the Carbolic Acid Treatment as tested in the Hull Infirmary."

The Medical Officership of Health for St. Pancras.—Several possible candidates have been spoken of for this appointment, amongst whom are Dr. B. W. Richardson, Dr. Webb, Mr. N. Radcliffe, Dr. Balmanno Squire, and Mr. Massey Harding. Dr. Green, who already holds the place as Dr. Hillier's substitute, will, we hear, undoubtedly be a candidate.

We are requested by the publishers of the *Quarterly Journal of Microscopical Science* to state that that journal will continue to be published as usual by the Messrs. Churchill, and edited by Dr. Lankester and Mr. E. Ray Lankester. The only change consequent upon Dr. Lankester and Professor Busk ceasing to edit the *Transactions of the Royal Microscopical Society* will be that the *Transactions* of that Society will not be published separately in the pages of the journal.

Medical Club.—An adjourned general meeting was held at the Club on Friday, Nov. 13, Sir William Fergusson, Bart., in the chair. The following report of the committee and the new and amended rules were unanimously adopted. The committee report that as the Club was originally started on the express understanding that the members should not be liable for any debts incurred in carrying it on, they are advised that this principle cannot be departed from without entirely changing the constitution of the Club, and they strongly recommend that no alteration should be made in this respect. The new and amended rules were unanimously agreed to. To enable the committee to make arrangements for the continuance of the Club without increasing the subscriptions of the original members or rendering them liable for any debts that might be incurred in carrying it on, it was decided to establish a guarantee fund for the next two years to meet any excess of expenditure over income that might arise. A list of the subscribers to the guarantee fund was presented, and included 125 names, representing about £300. Several members expressed a confident opinion in the continued success and prosperity of the Club. It was unanimously resolved to make it in every respect worthy of the Profession, and as soon as possible to place it upon a much more enlarged basis, either on the principle of the ordinary committee clubs or under the provisions of the Joint-stock Companies Act. A vote of thanks to the chairman was carried by acclamation.

Dr. Cumming, of Belfast, in his inaugural address as President of the Ulster Medical Society, remarks:—"It is well known that the benevolent mind of Berkeley, one of the most acute of modern metaphysicians, was filled with the notion that in tar water, made by pouring a gallon of cold water upon a quart of tar, he had found a panacea for all the ills of humanity. So profoundly was he impressed with the importance of his favourite remedy, that we find him declaring—'As the old philosopher cried aloud from the housetop to his fellow-citizens, "Educate your children," so, I confess, if I had a situation high enough, and a voice loud enough, I would cry out to all the valetudinarians upon earth, "Drink tar water."' He even attributed to this wonderful fluid a subtle influence on the development of the intellect. 'Nor is it only useful,' he says, 'to the bodies of infants; it has also a good effect on their minds, as those who drink it are observed to be remarkably forward and sprightly. Even the most heavy, lumpish, and unpromising infants appear to be much improved by it. A child there is in my neighbourhood, of fine parts, who at first seemed stupid and an idiot, but by constant use of tar water grew lively and observing, and is now noted for understanding beyond others of the same age.' When we remember that this passage was published in 1752, when Cullen and William Hunter were teaching Medicine and anatomy, we shall have no reason to doubt that, on their own ground, the Physicians of the day were more than a match for the metaphysicians."

The Royal Society.—The following is the list of Fellows of this Society nominated for the different offices and seats in the Council at the forthcoming election:—*President:* Lieutenant-General Edward Sabine. *Treasurer:* Dr. W. A. Miller. *Secretaries:* Drs. William Sharpey and G. G. Stokes. *Foreign Secretary:* Professor W. H. Miller. *Other Members of the Council:* F. A. Abel, Esq.; Sir B. C. Brodie, Bart.; Dr. W. B. Carpenter; J. Lockhart Clarke, Esq.; *Frederick Currey, Esq.; Warren De la Rue, Esq.; Sir William Fergusson, Bart.; W. H. Flower, Esq.;* Captain Douglas Galton; J. P. Gassiot, Esq.; *John Hawkshaw, Esq.; John Marshall, Esq.; Joseph Prestwich, Esq.; Captain G. R. Richards; Archibald Smith, Esq.;* and Lieutenant-Colonel Alexander Strange. Those gentlemen whose names appear in *italics* were not members of the last Council. The election will take place on November 30, and, it is stated, without any opposition.

Examinations at the Royal College of Surgeons of England.—The present session for the examination of candidates for the diplomas of Fellowship and Membership of the Royal College of Surgeons of England was inaugurated on the 14th inst. with the addition of Medicine to the other subjects heretofore required of these gentlemen, notwithstanding which it does not appear that there is any diminution in the number of candidates from the corresponding period of last year, when the number who presented themselves for the primary or Anatomical and Physiological examinations amounted to twenty-one, of these six were rejected; on the present occasion there were twenty-four, of which number, as we stated last week, no less than one-third were referred to their studies. For the pass or Surgical and Pathological examination there were in November, 1867, exclusive of one under the old regulations, the same number as on the present occasion—viz., sixty-seven. On the former occasion eleven were rejected, and on the present, which was brought to a close on Thursday last, there were twelve referred to their studies for six months, and nine whose diplomas are retained at the College until they shall have passed an examination in Medicine in that institution or in some other recognised for that especial purpose. Of the sixty-seven candidates it is stated that twenty-six already possessed one or more Medical licences. As the questions submitted to the candidates on their pass examination will, no doubt, on this occasion be read with peculiar attention, we subjoin correct copies:—*Anatomical and Physiological Examination* (November 7, from 1 to 4 o'clock p.m.)—Candidates must answer at least four out of the six questions. Answers to less than six questions will not be received before half-past 3 o'clock:—1. Name the boundaries of the axilla; also the vessels and nerves which it contains, and state their relative position. 2. Describe the act of deglutition, and name the muscles which are engaged, as well as the influence which they exercise in its different stages. 3. The uterus: Describe its position and its ligaments, also the divisions of the organ, its cavity, and the openings into it. (The ovaries and the Fallopian tubes need not be included.) 4. Explain the mechanism by which the blood of the fœtus is brought into relation with that of the parent and made fit for nutrition; and state the changes which the fœtal blood thereby undergoes. 5. Describe the lachrymal organs—viz., the gland, its position, connexions, ducts, and nerve; also the excretory apparatus, the position, size, and structure of its several divisions. 6. Explain the process of absorption by blood-vessels. *Examination on Surgical Anatomy and the*

Principles and Practice of Surgery (November 14, from 12 to 3 o'clock p.m.)—Candidates must answer at least four out of the six questions. Answers to less than six questions will not be received before half-past 2 o'clock. 1. What is the usual cause of fracture of the lower end of the radius? Describe the deformity produced by the fracture, and the proper method of treatment. What is the common result of unskilful management? 2. Name the structures necessarily divided in amputation of the arm at the shoulder-joint. 3. What is talipes equinus? What structures are in fault in that deformity? State in detail the treatment to be pursued to effect a cure. 4. State the position and direction of an incision to reach the anterior tibial artery in the middle of the leg. Name the structures divided, and those separated in order to place a ligature on the vessel. 5. What are the indications of peritonitis in a case of strangulated hernia, continuing or occurring after the replacement of the bowel? What is the treatment to be adopted? 6. State the morbid conditions of the larynx in which tracheotomy is necessary as part of the treatment. *Examination on the Principles and Practice of Medicine* (November 14, from 3.30 to 5 o'clock p.m.)—1. What are the symptoms by which typhoid fever is chiefly characterised? What are the appearances detected in the body after death from typhoid? What are the chief distinctions between typhoid and typhus? 2. What are the symptoms and signs which characterise the different stages of pneumonia? How would you distinguish the disease from pleurisy and from bronchitis? What is the mode of preparation, and the chemical composition, of hydrargyri subchloridum, ferri sulphas, and acidum hydrocyanicum dilutum (British Pharmacopœia, 1867)? What is the composition and the proportion of the more important ingredient in the following preparations (B. P., 1867), and for what purposes, and in what doses, would you employ them?—Pilula saponis composita; pulvis cretæ aromaticus cum opio; liquor morphiæ acetatis; liquor arsenicalis; vinum antimoniale.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At a meeting of this College, held on the 12th inst., it was stated by the President that a deputation had, on the 2nd inst., waited on the Lord Advocate in regard to the operation of "The Sale of Poisons and Pharmacy Act," passed during the last session of Parliament, and that he had since received a communication from his lordship, stating that the Act was not a Government measure, but was promoted by several members of Parliament, to whom the Government gave facilities, as it was considered, upon the whole, to be a good measure; that the striking out of the words "legally qualified Practitioners," in clause 16, seemed to his lordship to inflict a hardship on Medical Practitioners in Scotland, of which they might justly complain. The Lord Advocate stated that it was probable the effect, in Scotland at all events, was not perceived, the Bill having been carried through hurriedly during the last days of the session. His lordship considered that, if the effect of it is to prevent a Medical man from selling or dispensing medicines mentioned in Schedule A, the operation of it may be injurious to the population of the outlying districts in Scotland, who depend almost entirely on their Medical attendants for a supply of medicines; and that if, upon further consideration, it be held that the 16th Clause leads to the above result, his lordship was prepared to do what he could in order to get this matter put right. The President further stated that, having carefully examined the Act, in relation to the powers of the College granted by their various Royal Charters, and especially by the Charter of 1851, which ordains and declares that the College may grant diplomas or licences qualifying their licentiates to exercise and enjoy all rights of practice in the arts and sciences of anatomy, surgery, *and pharmacy*, commonly enjoyed by the Fellows of the College, he was of opinion that the licentiates were thus constituted legally qualified apothecaries, and therefore that nothing contained in the Act extended to or interfered with their business. At the same time, to put the matter beyond doubt, the College resolved to procure the opinion of counsel, and also to take steps to co-operate with other licensing bodies in order to obtain an amendment of the Act, if necessary. The deputation also brought under the consideration of the Lord Advocate the position of Poor-law Medical officers, and the desirability of their being put on the same footing towards the parochial board as that of inspectors—viz., subject to removal from office only with the sanction of the Board of Supervision. His lordship was strongly of opinion that the allowances of parochial Medical officers should be adjusted independently of the supply of medicines, and did not think it a proper system, with regard either to the Medical officer or to his pauper patients, that he should be remunerated upon the footing of being obliged to contract for and supply medicines for an annual sum. His lordship considered that the present system of appointing Medical officers—viz., that they are either annually elected or removable at the pleasure of the local board—required reconsideration, and that they may fairly claim to be put upon the same footing as inspectors; and added that he had been so impressed with the importance of this that he had wished to incorporate in the Public Health Act of 1867 a clause having the above effect.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The alleged practice of homœopathy in the Aberdeen Infirmary shall be considered next week.

Ajaccio.—Thanks. We hope the corrigenda were seen to at our office. We are glad that Richardson's lectures are appreciated, and shall be glad to receive any cases in corroboration or otherwise of his opinions.

W. D. Crichton.—We were not guilty of that mistake, nor would it be part of our duty to mention a candidate's religious opinions.

Medical Officer Billericay Union.—Write to the Superintendent at St. John's House, Norfolk-street, Strand, or to the Rev. T. P. Dale, Great Northern Hospital.

P.—*Saleratus* is a word often found in American cookery-books, and is a contraction of *sal aëratus*, a name of carbonate or bicarbonate of potass. The bicarbonate of soda is used in this country with flour, eggs, milk, etc.; but bread and cakes made with these materials have a close, soapy taste. There is nothing like yeast or some other kind of *leaven*.

An Old Student, Manchester.—Possession of the Licence of the Society of Apothecaries will, of course, exempt you from an examination in Medicine at the College of Surgeons. At the examination just concluded for the diploma of Membership no less than twenty of the candidates had passed the Hall.

Provincial Medical Schools.—The complainants have misunderstood our correspondent, who drew attention to the official return furnished to the Government Inspector of Provincial Anatomical Schools by the very persons making the complaint. Of course it is understood that there are other than anatomical pupils at the various schools, and the annual report has remained unchallenged until now.

The Vice-Registrar of the Manchester Royal School of Medicine, Mr. Samuel Stone, informs us that the number of students pursuing their Professional studies in the Manchester School is 73, and not 63 as given in some journals. This total of 73 does not include "occasional" students. Sixty-three of the pupils are entered for dissection, and this may have led to the error. There has been a very marked increase of fresh men this year for the full course of Medical study.

Pancreatic Emulsion.—We lately noticed the circumstance that a most improper use had been made of the name of a Physician at Birmingham, in an advertisement of a medicinal preparation. We now have to remark, with regard to an advertisement of Pancreatic Emulsion in a Hastings paper, in which the name of a London Physician was most prominently and unprofessionally introduced, that this advertisement was neither authorised by Messrs. Savory and Moore, the manufacturers, nor by the Physician in question; but that it was the spontaneous work of the proprietor of the paper, in order to give a spurt to his advertising business. As we said when we first noticed the matter, it is the Physician who is the party injured by this unwarrantable use of his name, which it is impossible to prevent totally, but which we learn in this instance has been put down by the threat of legal proceedings against the proprietor of the paper.

THE LATE MR. JUMP.

The following subscriptions have been received by the Rev. G. W. Winter, Litcham:—

	£	s.	d.
Rev. W. A. W. Keppel	10	0	0
Per T. M. Kendall, Esq.	5	0	0
T. Palmer, Esq.	5	0	0
Miss Morse	5	0	0
Mr. Cook	2	0	0
Dr. Mills (Norwich)	1	0	0
Mr. Chamberlin	2	2	0
Mr. J. V. Chamberlin	1	1	0
Mrs. R. Thompson	2	2	0
Mrs. Boyce (Ashill)	10	0	0
Rev. C. Campbell	3	0	0
Rev. J. Arthy (Caistor)	1	0	0
Mrs. Arthy (Caistor)	1	0	0
Mrs. Jary	1	0	0
Anonymous	0	9	0
Miss S. Jex-Blake	1	0	0
Mr. Chubb (Torpoint)	0	4	6
Rev. V. Raven	1	0	0
T. S. Guppy, M.D., Falmouth	1	0	0
F. G. Johnson, Esq., Norwich	5	0	0
Per ditto ditto	3	0	0
Mr. Carter, Litcham	1	0	0
Mr. Wiffin, Tittleshall	1	0	0
Mr. Betts, Tittleshall	1	0	0
Mr. Jno. Rix, Tittleshall.	1	0	0
Mr. F. Bird (E. Lexham)	1	0	0
Mrs. Jas. Sutton	1	0	0
"To the Fatherless and Widow"	5	0	0
P. (Lynn)	1	0	0
J. B. (Edinburgh)	1	0	0
M. B. D., Norwich	2	2	0
Q. E. D.	1	1	

An Operation for the Staggers.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Would you think the following extract from "Northumberland and the Border," by Walter White, worth your insertion?

"Cumbrian farmers maintain a cattle dentist, and with manifest advantage to the health of their flocks; and some among them have surprising skill in treating sheep afflicted with the staggers. This disease is caused by the presence of a hydatid, the Tænia Cœnurus, in the brain; the skull becomes soft over the spot where the intruder lodges, and then the farmer taking his knife cuts out a disc of the softened bone, and, inserting a roughened quill into the brain, draws forth the cruel enemy, replaces the bone, and binds up the wound. I saw some sheep, with their heads in bandages, which had been thus treated, and had a talk with a young farmer who told me that most of his cases survived the operation."

I am, &c. H. B.

Suppression of Saliva.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I should feel obliged if you would give or procure me some advice in a case of suppressed salivary secretion. The patient, a quaint old French lady of 77, states that eight months ago she suffered about three weeks from some febrile affection apparently, and has since then been suffering from dryness and soreness of the tongue. On examination the mouth, uvula, tonsils, and pharynx appear quite healthy, but the mucous membrane is perfectly dry like pink satin, that on the tongue with longitudinal rugæ. Salt and sugar remain undissolved and quite tasteless on the tongue, the former causing slight uneasiness. The patient sips cold tea to relieve the feeling of dryness and the clinging together of gums, cheeks, and tongue. The teeth are all gone. There is no discoverable opening of the parotid ducts. Under the tongue are two papillæ where the sublingual ducts might be looked for, but they appear impervious. There does not seem to be any marked ill effect on health. The old lady is wonderfully well and cheery. Is there anything to be done?

I am, &c. A. G. B.

P.S.—What is the chloromethyl now so much used in preference to chloroform? Is it Dr. Richardson's bichloride of methylene CH_2Cl_2?

*** Has "A. G. B." recommended glycerine and water as a wash for the mouth?

COMMUNICATIONS have been received from—

Mr. P. Le Neve Foster; Mr. T. Stokes; Dr. Richard Neale; Mr. L. S. Little; Mr. Thomas Hunt; Dr. John Whitmore; Dr. Robert Elliot; Dr. Archibald Reith; Dr. Lory Marsh; Mr. R. Cooper Todd; Mr. Francis Taylor; Dr. Sedgwick; Senex; Dr. Lowe; Mr. H. Bromley; Mr. Wilmot; Mr. James Robertson; Dr. Hitchman; Dr. J. W. R. Mackie; Mr. W. D. Crichton; Dr. J. W. Tyler, of Mynpoorie; Dr. Humphry Sandwith; Mr. Daniel Stone; Dr. Jago; Dr. A. G. Bartley; Mr. A. W. Wallis; Dr. T. Radford; Mr. J. Chatto; Dr. Day; Dr. Lionel S. Beale; Mr. A. Poland.

BOOKS RECEIVED—

Tilt's Handbook of Uterine Therapeutics and of the Diseases of Women—Mair's Statistics of Unnatural Deaths in Madras and other Presidencies and Provinces in India—Dominion Medical Journal, No. 3—Carson's Principles of Phrenology—American Journal of Insanity, October, 1868—Dr. Arlt on Retinitis Nyctalopica—Report of the Board of Works for the Whitechapel District—Dental Journal, No. 147—Report of Murray's Royal Asylum, Perth—James on Operations for Cicatrices after Burns—Clark's Researches on the Intimate Structure of the Brain—Report of the Worcester Pauper Lunatic Asylum—Berkeley Hill on Syphilis—Browne on Phrenology.

NEWSPAPERS RECEIVED—

Carlisle Patriot—La France Médicale, No. 90—Carlisle Journal—Aberdeen Herald—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 14, 1868.

BIRTHS.

Births of Boys, 1143; Girls, 1137; Total, 2280.
Average of 10 corresponding weeks, 1858-67, 1918·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	766	740	1506
Average of the ten years 1858-67	728·0	693·9	1421·9
Average corrected to increased population..	..	..	1564
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	6	37	2	4	8	1	..
North ..	618,210	4	14	12	4	6	19	5	..
Central	378,058	..	4	14	..	4	1	1	..
East ..	571,158	..	8	29	1	4	21	4	..
South ..	773,175	4	6	24	1	9	9	3	..
Total ..	2,803,989	8	38	116	8	27	58	14	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·054 in.
Mean temperature	40·7
Highest point of thermometer	47·4
Lowest point of thermometer	28·4
Mean dew-point temperature	36·5
General direction of wind	N.N.E.
Whole amount of rain in the week	0.06

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 14, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Nov. 14.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Nov. 14.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2280	1441	1516	47·4	28·4	40·7	0·06	6
Bristol (City) . .	167487	35·7	108	75	*70	..	..	..	..	..
Birmingham (Boro')	352296	45·0	231	171	139	45·8	30·0	39·4	0·03	3
Liverpool (Borough)	500676	98·0	392	290	297	..	..	..	..	..
Manchester (City) .	366835	81·8	258	208	*202	46·0	28·0	38·7	0·17	17
Salford (Borough) .	117162	22·7	95	59	78	47·7	28·1	39·5	0·08	8
Sheffield (Borough).	232362	10·2	163	122	121	46·0	31·5	40·1	0·14	14
Bradford (Borough)	108019	20 3	94	55	57	..	..	..	..	..
Leeds (Borough) .	236746	11·4	275	120	155	47·0	30·0	40·6	0·07	7
Hull (Borough) .	108269	34·4	65	50	59	47·0	27·0	38·9	0·35	35
Newstl-on-Tyne, do.	127701	23·9	96	68	51	45·0	30 0	39·0	0·42	42
Edinburgh (City) .	177039	40·0	120	85	99	44·7	30·0	37·8	0·10	10
Glasgow (City) .	449868	88·9	311	262	286	..	..	..	..	..
Dublin (City and some suburbs) .	319085	32·8	177	157	163	52·0	26·7	41·4	0·22	22
Total of 14 large Towns . . .	6391080	34·7	4665	3163	3283 Week ending Nov. 7.	52·0	26·7	39·6	0·16	16
	(1863)					Week ending Nov. 7.				
Vienna (City) .	560000	..	..	..	277	..	..	52·0	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·054 in. The barometrical reading increased from 29·76 in. at the beginning of the week to the high reading of 30·46 in. on Friday, Nov. 13.

The general direction of the wind was N.N E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

November 21. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Dr. Ballard, "Remarks on the Prevalence of Scarlatina in London." Dr. Odling, F.R.S., "On the Combustion of Gas in Houses."

23. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. Mr. Francis Mason will show a successful Operation for Cleft Palate in a Child aged 5 years. Mr. Maunder, "On Primary Excision of the Joints, with Exhibition of Cases." Dr. Kelburne King, of the Royal Infirmary, Hull, "On Carbolic Acid and the Antiseptic Treatment in Surgery."

24. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society of London, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Althaus, "On the Physiology and Pathology of the Fifth Pair of Cerebral Nerves." A Paper by the late Dr. Hillier, "On Congenital Hydronephrosis."

25. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Hunterian Society, 8 p.m. Mr. Hutchinson, "On certain Forms of Skin Diseases."

26. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

27. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

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Combine Cleanliness, Efficiency, and Convenience.

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ORIGINAL LECTURES.

RECENT EXPERIENCE IN OVARIOTOMY.

Clinical Remarks at the Samaritan Hospital, October 28, 1868.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to the Queen's Household.

Gentlemen,—Since last October I have completed the operation of ovariotomy in this Hospital in thirty-six cases, besides one case in which I performed the operation successfully for the second time on the same patient. Of the thirty-six women, thirty-one recovered and five died. And it is a remarkable fact that in *every case* in which the pedicle was long enough to enable me to use the clamp the patient recovered. There were thirty of these cases—thirty clamp cases in one year without a single death. In two cases I used the cautery. One of the patients recovered, and one died. In four cases I tied the pedicle, and returned it into the cavity of the abdomen after cutting off the ends of the ligature. All these four patients died. Two of them must have died, I think, in whatever manner the pedicle had been treated. They were almost hopeless cases, and the operation was done as a forlorn hope. In one case the patient was sinking fast from septicæmia, a cyst filled with fœtid fluid and poisonous gas having been washed out repeatedly, but ineffectually, with carbolic acid, and it was at last removed with only the very faintest hope of saving life. In the other case, extensive pelvic adhesions and disease of both ovaries had been pretty accurately made out, and had led to repeated tappings rather than ovariotomy. But at length, when tappings became of no avail, the cysts were removed, with some slight hope but with far greater apprehension. A clamp could not be used in either case. The pedicles were too short. The cautery might have been used; but the pedicles were of the kind where the cautery is often ineffectual in stopping bleeding—broad, thin, membranous attachments, with large vessels. In such cases the ligature succeeds well in stopping bleeding; but whether the ends are left hanging out through the opening in the abdominal wall, or are cut off short and returned with the pedicle, the results in my hands have been almost equally unsatisfactory. Other operators have been much more satisfied with the ligature than I have been, and everyone must be guided very much by his own experience. But when I look back over the work of the past year in this Hospital, where all the patients have been treated in all other circumstances under similar conditions, and find no single death in thirty clamp cases, but every one a recovery, while of six cases treated otherwise five die, you will hardly wonder that I use the clamp whenever I can, especially as very similar results have been obtained in private practice. It is true, as I have just said, that two of these five deaths would probably have happened even if I had been able to use a clamp. But three of the deaths I attribute principally, or entirely, to the fact that, as I was unable to secure the pedicle outside the peritoneal cavity, I was driven against my will to the cautery or the ligature. Twice I used the cautery. In one it stopped all bleeding, and the patient recovered. In another it only stopped the smaller vessels, the larger having to be tied, and this patient died; so that her death might be added to that of the four who died after the return of the tied pedicle. Or if, as I think it is fair to do, we put aside (so far as the treatment of the pedicle is concerned) the two cases which probably must have died however the pedicle had been treated, we have three cases where death followed the use of the ligature; and, so far as I can judge from observation of similar cases, these three patients would probably have recovered if the pedicles had been long enough for a clamp to have been applied and fixed outside the peritoneal cavity.

I have often been asked here, What becomes of a ligature and of the tissues strangulated by the ligature when closed up in the peritoneal cavity? And I have from time to time given my reasons for believing that ligatures of fine pure silk are dissolved or disintegrated, and cannot be found after a few weeks. I have also shown that a pedicle secured by a silk ligature may be found some days afterwards either (1) surrounded by coils of adhering intestine, or (2) as the centre of a purulent cavity, or (3) apparently very little altered by the ligature, or else (4) absolutely dead or gangrenous. All these different conditions I have actually seen, accompanied by more or less evidence of peritonitis, and depending more, I believe, on the general health of the patient and the condition of her blood than upon any little difference in the material or thickness of the ligature or the mode of its application.

Some very careful experiments on animals have recently been made in Germany which add to our knowledge of this subject. You may find a full account of them in the number of Virchow's *Archiv* for last July in a paper by two professors in Breslau, Dr. Spiegelberg and Dr. Waldeyer. Their experiments were arranged in two series:—1. Excision of portions of the horns of the uterus of bitches, leaving the ligatures in the peritoneal cavity; and 2. Removal of portions of the uterus by the galvanic cautery. The conclusions of the experimenters are that small foreign bodies may be left in the peritoneal cavity without danger, and that strangulated and cauterised tissues do not become gangrenous and are not injurious to neighbouring parts, provided only that the abdominal cavity is perfectly closed.

Now let us see how far the experiments bear out the conclusions. And first as to the changes which foreign bodies themselves undergo when left in the peritoneal cavity.

Ligatures, either of silk or hemp, up to about the twenty-first day, scarcely show any change, except some softening of the hemp. "Between the particular fibres which compose the ligature thread, a number of young cells insinuate themselves, separating the threads from each other in some places in a remarkable manner, and evidently penetrating from neighbouring parts. After a longer time, the fibres are in this manner completely separated from each other, the knots loosened, the threads totally unravelled. Where a ligature had cut through, in several cases its track was marked by the remnants of single fibres."

Then as to the changes produced by the ligature in and about the parts where it is applied. The Breslau Professors found the ligatures either "(1) closely encapsuled by newly formed cellular tissue; or (2) free in the peritoneal cavity, having slipped off from the tied parts; or (3) free as if swimming in a small cystic cavity of the stump." I translate the word *Schnürstücke*, or the end of the pedicle between the spot where it has been divided and the spot where the ligature is applied, as *stump*, because, for want of a better term, we say "the stump of a pedicle" when we wish to describe that part of it which is surrounded by a ligature or enclosed between the blades of a clamp.

These authors also use two other words which, I think, may be usefully adopted here—*mesometrium* and *mesovarium*. The former implies what we term the *broad ligament*—a bad term, as it is not a ligament, but a fold of serous membrane, which, while holding the uterus in its place, still allows of considerable motion. It would be just as proper to call the folds of peritoneum which keep the different portions of the intestines in their places *ligaments*, as the folds which support the uterus. One we all call *mesentery*, and parts of it meso-colon, sigmoid meso-colon, and meso-rectum. So it will be very convenient and save some mistakes if we bring into common use the terms *mesometrium* and *mesovarium*.

But, returning to the observations on the capsulation of ligatures, we find an account of an interesting case where a ligature had surrounded the body of the uterus, which was cut away nearly an inch beyond; and on the twenty-eighth day the ligature was found sunk into the substance of the uterus, which it had not entirely cut through. The fibres of the ligature were surrounded on all sides by new granulations, and there was not a trace of mortified tissue elements to be found either within or around the ring of the thread. In another case, where ligatures were applied to the uterus before cauterisation, microscopic examination fourteen days afterwards showed one of the ligatures closely surrounded by granulating tissue, the cells of which lay in great numbers between the fibres of the silk. Not a particle of mortified tissue could be found anywhere. "Ligatures or vessels are found after four weeks enclosed in perfectly developed connective tissue. Looking on the mesometrium, small smooth nodules were observed, corresponding in size to the ligatures; but no difference could be found anywhere in the smoothness of the serous membrane covering the knots and that in the neighbourhood. It appeared as if the character of the serous membrane upon the outer surface of the connective tissue enclosing the knots had been completely re-established, and the knots had been simply imbedded between the two layers of the mesometrium."

In one case, where a ligature had completely slipped off from the part which it had surrounded, and had been free in the

peritoneal cavity, it had become firmly connected with a neighbouring coil of intestine by means of young cells springing up from the serous membrane which had penetrated between the fibres of the thread, so that there was almost an organic union between the surface of the intestine and the knot of the ligature.

Where a ligature had to cut through a thick substance—as the body of the uterus or one of its horns—the track of the ligature could be distinctly seen on section, with help from a strong lens, as a fine grey line. It began as a slight indentation of the peritoneal coat corresponding to the place where the ligature first caught. As early as the fifth day this indentation had become so shallow as to be in no proportion to the deeply grooved ring round the tissues powerfully constricted by the ligature. Under a higher magnifying power, the delicate line is seen to be formed by a streak of new cells, which mark the track of the ligature; but no trace can be seen of mortified particles of tissue. "It appears, therefore, that a ligature divides tissues in a very gentle manner, as if the tissue elements become loosened and separated before it while new cells are formed, and the gap behind it closes, so that the divided surface is scarcely ever exposed, at least within the peritoneal cavity. The first occurrence after the application of a ligature is evidently the union of the two borders of the ring cut by the ligature. In this way the thread is soon shut off from communication with surrounding parts, and then lies completely shut up in a circular canal. We have seen this very clearly in two post-mortem examinations made three days after ovariotomy. There were already abundant groups of new tissue sprouting up from the neighbourhood over the ligatures, which had cut deeply into the pedicle, and almost completely covering it. In the new granulation tissue numerous blood-vessels can be discovered very early, so that the transition to permanent tissue is very soon effected."

The authors conclude from their experiments that ligatures enclosed in the peritoneal cavity do not lead to any evidence of acute local peritonitis, and, so far as the tissues of the uterus and mesometrium are concerned, can hardly be regarded as foreign bodies. They nowhere induce processes of mortification in these tissues; but, on the contrary, are enclosed and encapsuled on every side by them—in dogs as soon as the eighth day.

We now come to some very interesting observations, well worthy of careful consideration, upon the changes in the surface of the divided parts of the uterus. After a few days—from four to six—no free divided surface could be seen. Surrounding portions of the mesometrium, bladder, or coils of intestine rapidly adhered to it. In one case after nine days numerous blood-vessels were observed running between the coats of the bladder and the uterus. In another case, after twenty-one days, the spot from whence an ovary had been removed could not be detected, so perfectly smooth and free from any cicatrix was the posterior abdominal wall where the ovary had been. In another case, six days after operation the cut end of the left horn of the uterus was found soldered between two coils of intestine. The mesometrium was drawn in between them and united with their coats and mesentery. The divided horn of the uterus itself was also partly adherent to the intestine.

The most complete and extensive adhesions of the uterus were always with its own mesometrium. This was always observed, even when other organs were also adherent. The cut surface of the uterus falls upon the neighbouring mesometrium; new cells spring up from the latter and unite with the granulations from the uterine surface. Afterwards retraction of the new-formed granulation tissue draws the stump of the uterus more and more within the folds of the mesometrium until it is completely surrounded. A very free vascular communication has been observed between their united surfaces. The authors never observed any divided surface either free or with shreds of gangrenous tissue about it.

Similar conditions were observed in the two ovariotomy cases just alluded to. The divided surfaces of both pedicles were on the third day perfectly fresh, without any gangrenous appearance. In the first case, where both ovaries were removed, both pedicles were free and directed uwards; in the second case the divided surface of the pedicle was in contact with the peritoneal covering of the psoas magnus, with which it was connected by new cells, and without any trace of gangrene.

Passing on to the consideration of the effects produced by the ligature on the part enclosed by it—the stump—the authors say that when a blood-vessel is tied the strangulated end of the vessel dies and is thrown off with the ligature. Hence the rule not to tie a vessel far from its cut end, but as near as it can be done with certainty to stop bleeding. So that when it was proposed to tie a pedicle of an ovarian tumour and leave ligature and stump in the peritoneal cavity, it was feared that there would be great danger from the death of the strangulated stump. At the same time, if the stump were left very short by cutting away the tumour close to the ligature, it was feared that the ligature might slip off, and internal bleeding take place. The authors consider that their experiments prove these fears to be exaggerated—at least they establish the fact that in dogs there is no gangrenous change in the stump, nor any trace of mortification either on the divided surfaces or on the parts behind the ligature. In the case where the divided end of the uterus adhered between two coils of intestine, the stump had contracted to a nodule hardly as large as a pea, consisting of a part of the uterine wall with its mucous membrane everted, and containing all its structural elements, including the utricular glands, completely unaltered. The openings of these glands had thus been brought free in the peritoneal cavity.

Larger stumps were enveloped in folds of the mesometrium. Their canals were almost always pervious, and in some had become dilated into a sort of cyst with muco-purulent contents. Sometimes the ligature-knots lay within these cysts, the texture of the walls remaining almost unaltered, and the mucus- and pus-corpuscles showing very little retrograde metamorphosis. In most cases there remained a narrow communicating opening between the cavity in the stump and the rest of the uterus. In two cases the cavity of the stump was obliterated and filled with young granulation tissue, in which no epithelium of the uterine cavity could be found, although there were remnants of utricular glands. All this proves that the textural alterations take place by simple retrograde metamorphosis, fatty degeneration, and gradual absorption, with a formation of cells which become permanently organised tissue, but without the occurrence of any violent inflammatory or gangrenous changes.

The authors have not much to say about the changes in the surfaces cauterised. Only three animals were subjected to experiment, and these were killed on the sixth, fourteenth, and twenty-sixth days after the application of the cautery. On the sixth day the cauterised surface of the central part of the uterus appeared quite fresh, beset with numerous small brown-black particles of animal charcoal, not softened, but firm and hard. At a depth of two to three millimetres, the uterine tissue was coloured reddish, as if from imbibition of the colouring matter of blood. The uterine cavity was shut off from the peritoneal cavity, but rather by the firm agglutination of the tissues of the cauterised surface than by granulations, none of which could yet be seen. The microscope showed the tissue of the cauterised part to be unaltered, the vessels dilated, and many of them filled with clot. The colouring appeared to be due to blood-corpuscles and diffused colouring matter of the blood. All these changes, however, were circumscribed, and might easily have gone on to complete restoration. Much more extensive alterations were found on the two cauterised surfaces of the uterine horns. These were so completely surrounded by folds of the mesometrium that they could not be seen until these folds had been dissected off. At only one spot of the left horn near the cauterised surface, an opening was found as large as a pin's head, which opened into the dilated cavity of the horn. About two centimetres distant from the cauterised surface, the mucous membrane and the muscular tissue of the uterus were softened and gangrenous. Shreds of mucous membrane lay in the cavity, the walls of which were formed merely by serous membrane and the adherent mesometrium. The vessels, even to the smallest, were completely blocked up by clot. The gangrenous process about the cauterised parts appeared to be due to the extension of clot in the vessels; but all was encapsuled by the mesometrium. No pus was found in the peritoneal cavity, not even near the small opening which communicated with the uterine cavity. A successful result might therefore have been expected. It was obtained in the two following cases.

After fourteen days the cauterised surfaces of the central extremity of the uterus, as well as those of both horns, were all completely encapsuled by mesometrial folds. The central extremity of the uterus was firmly united to the posterior wall of the bladder by perfectly organised connective tissue. The cauterised surface of the right horn was firmly united to a coil of small intestine.

On the twenty-second day repair was found to be most

complete. The cauterised surface of the body of the uterus was bound to the posterior wall of the bladder by a fibrous band. The cauterised surface of the mesometrium was everywhere smooth; nothing could be seen to show that a piece of it had been separated by the cautery from the horns of the uterus. The cauterised spots on the uterus were smoothly encapsuled, and the only traces of the cautery were minute remnants of animal charcoal. These fragments of charcoal lay in a firm fibrillated connective tissue which closed the uterine cavity. The epithelium of the uterus and the other elements of the uterine wall were perfectly preserved.

I am indebted to Dr. Maslowsky, of St. Petersburg, for two papers which he kindly sent me, one from the ninth volume of Langenbeck's *Archiv*, and the other from the *Berliner Klinische Wochenschrift*, which contain observations corroborative of those by Spiegelberg and Waldeyer. In one successful case Dr. Maslowsky removed both ovaries, treating the right pedicle by the cautery and the left by ligature, returning both into the peritoneal cavity. And he made twelve experiments on rabbits, dogs, and cats, removing the horns of the uterus and the omentum, sometimes by the galvanic cautery and sometimes by redhot irons, in order to study the process of capsulation of the eschar after its enclosure within the peritoneal cavity, and the share which the white blood-corpuscles have in this process. As these corpuscles take up vermilion from the blood, Dr. Maslowsky injected vermilion into the jugular vein at different periods after his experiments, in order to trace the corpuscles in any product of inflammation.

Microscopic examinations of the animals at different periods, from fifteen hours to seventy days after operation, proved that the eschar on the uterine horns and on the omentum is first covered by effused fibrine, and is afterwards united by membrane with surrounding organs. "The fibrinous exudation contains many round cells charged with vermilion, and some nucleoli free from vermilion. It soon loses its fine fibrillar structure, and is changed into a finely granular mass. The round cells with vermilion assume an oval form, and then spindle-shaped cells are also seen without vermilion. Some cells contain black nucleoli not composed of vermilion; afterwards these may be seen between the fibres. As the capsulation becomes more complete, the oval cells which contain vermilion become long and then spindle-shaped. And I have sometimes observed that the ends of two spindle-shaped cells coalesce, and at once form a fibre. In the new-formed membrane, capillaries are seen as soon as the fourth or fifth day, and on the tenth or twelfth the vessels may be easily injected. I have also seen in the membrane newly formed elastic fibres and scaly epithelium, both free from vermilion. The false membranes have a similar structure. It is therefore an undeniable fact that the white blood-corpuscles participate in the formation of the new membrane which covers the eschar and unites it with surrounding organs."

The eschar made by the galvanic cautery consists of animal charcoal and blood pigment. The particles of animal charcoal are partly lying in the eschar, and are partly enclosed in surrounding connective tissue. When red-hot iron is used, the eschar also contains particles of oxide of iron, some of which are also found enclosed by the elements of connective tissue. It is proved that the black specks are really iron by the ordinary chemical reactions. The mucous membrane of the uterus near the cauterised part was suppurating, and the pus-corpuscles contained vermilion.

Dr. Maslowsky also made a number of observations on the mesentery and mesometrium of frogs and rabbits, in order to ascertain the precise changes which the vessels themselves, and the blood circulating in them, undergo after the application of the cautery. From twelve to twenty-four hours before examination, vermilion was injected into the jugular vein. The frogs were immobilised by woorara, the rabbits narcotised by opium. The results of the microscopical observations are as follows:—

"*a.* The end of closed arteries is contracted immediately at the cauterised part, but at some distance from it the artery is dilated. The canal of the veins is affected exactly in the reverse manner.

"*b.* The blood in the vessels contains black particles from the heated iron, and separates itself distinctly into a layer of white blood-corpuscles, which are near the cauterised spot, and a layer of red blood-corpuscles, which are further away.

"*c.* In the closed arteries after two days the movement of the column of blood is maintained. A part of the blood, with the black particles of the cauterised artery mixed in it, reaches back towards the trunk of the vessel. The movement of the blood in cauterised veins is only kept up for a very short time. There is complete stagnation, not only in the cauterised vein itself, but it extends further up to the junction with larger veins.

"*d.* The black particles are taken up by the white blood-corpuscles. This can be seen most distinctly in the vessels where stagnation of the blood is not complete.

"*e.* The migration of white blood-corpuscles, partly containing vermilion and partly black particles, begins twenty thirty, or sixty minutes after cauterisation. They are first seen in the veins into which the cauterised vein opens; afterwards in the veins near the cauterised part. Very few white corpuscles migrate from the arteries. In frogs, as the mesentery is very broad and transparent, this migration can be observed for three days; in rabbits only for six or eight hours.

"Similar changes in the vessels and migration of white blood-corpuscles I have also observed after ligature of mesenteric vessels, and after burning away part of the tongue in the frog. When entire portions of mesentery are burnt away, the same alterations occur, but to a much greater distance.

"A hot iron shaped like a bird's bill, so as to enter for some distance into a vessel, was used in three cases, and I observed a migration of white blood-corpuscles charged with black particles, which chemical reaction proved to consist of oxide of iron.

"It is therefore certain that particles of iron from the iron cautery may be transmitted with the white blood-corpuscles into different tissues."

These recent observations are, I think, of sufficient importance to justify me in having brought them before you at such length. But I cannot feel encouraged by them, as the authors have been encouraged, to look upon either the cautery or the ligature, or any *intra*-peritoneal method of dealing with the pedicle of an ovarian tumour, as equal, far less as superior, to the clamp or to any other *extra*-peritoneal method. In some respects the experiments are satisfactory, as they tell us what really does take place when a ligature or an eschar is shut up in the peritoneal cavity; and they teach us that, when we meet with any extraordinary difficulty in endeavouring to secure a pedicle outside the peritoneal cavity, we may resort to the cautery or the ligature, not, as hitherto, in nearly complete ignorance as to what we may expect afterwards, but with a pretty accurate idea of the process of repair and of the dangers which may attend this process. If we could hope in diseased women for the same series of changes as have been observed in healthy dogs and rabbits, we might agree more completely with the conclusions of the German experimenters. But it is one thing to remove a piece of a uterine horn, or a healthy ovary, or a bit of omentum or mesentery, from a dog or a rabbit, and a very different thing to remove a large uterine or ovarian tumour from a woman whose general health has been more or less affected by the growth of the tumour, probably by repeated tappings, and the conditions of whose pelvis and abdomen have been greatly altered by the pressure of the tumour or the adhesions which it has formed with surrounding parts. Even in healthy dogs and rabbits where the ligature or the cautery was considered in the above experiments to have been most successful, we have seen that adhesion of the tied or cauterised part to the bladder, to intestine, and to neighbouring folds of peritoneum, has been the rule. And I have placed upon record cases where adhesion of the tied or cauterised pedicle to intestine has led to fatal strangulation. Even if not *fatal*, such adhesions are more likely to be permanently *injurious* than the mere adhesion of a pedicle to the abdominal wall.

Such experiments as we have been considering have great value, and I am one of the last to underrate their interest or importance; but we must not allow any conclusions drawn from them to shake convictions which actual practice on suffering women impresses upon us. And the more I see of ovariotomy, and the more I am driven by the peculiarities of any case, or encouraged by the reported successes of others, or guided by the desire to avoid certain obvious and unavoidable disadvantages of extra-peritoneal methods of dealing with the pedicle, to resort to cautery or ligature, the less am I satisfied with the results of these methods, the more reluctant am I to employ them, and the greater is my confidence in the clamp and the principle of the extra-peritoneal method.

I had intended to discuss at some length the important question of operating in very unfavourable cases—cases almost hopeless—as I have done here lately, and shall soon be driven to do again, by the feeling that it is almost impossible to resist the prayer of a dying woman to try and save her life. But

this subject is of sufficient importance to receive undivided attention, and I hope very soon to enter upon its consideration with you.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE II.

OF THE GERMINAL MATTER OF THE TISSUES—DIFFERENT CHARACTERS OF LIVING BEINGS DUE TO INHERENT POWERS OF GERMINAL MATTER—CHARACTERS AND PROPERTIES OF FORMED MATERIAL DEPENDENT ON VITAL POWERS OF TISSUE—GERMINAL MATTER OF CUTICLE, HAIR, HORN, NAIL, ENAMEL, DENTINE—OF SECRETING CELLS, SECRETIONS, SECONDARY DEPOSITS, FAT, STARCH, ETC.—OF CILIATED CELLS—OF PIGMENT CELLS—SALIVARY CORPUSCLES.

We have discussed the general characters of the germinal or living matter, and it has been stated that the living matter of the tissues of man and the higher animals cannot be distinguished from that of the lowest simplest beings in creation. Living matter exists in very large proportion wherever growth is active, and it invariably precedes the production of tissue and every other kind of formed material.

Difference of Structure.

On taking a general survey of living things, the untrained student is impressed by the very wide and apparently irreconcilable differences in appearance and general characters exhibited by the multitudes of living forms familiar to him. A starfish and an ox, a butterfly and a fish, an oak and a medusa, seem to differ from one another at least in as great a degree as any one of them differs from a stone, from water, or from air. But, on the other hand, after careful and prolonged study, the student becomes so familiar with the many points in which these things resemble one another that soon it becomes difficult for him to believe that they are not very closely related; and this view is much strengthened by more careful research with the aid of very refined methods of investigation. He discovers essential points in structure in which all agree, and although they differ from one another so enormously in dimensions, he soon finds out that the elementary parts of which the textures of all are composed differ but very slightly in size. He ascertains that certain phenomena connected with their increase are common to them all, and when he comes to examine each at a very early period of its formation, he finds the resemblance so close that he erroneously concludes they are all identical at first, and that the ultimate divergence is due rather to the different circumstances under which each is evolved from the homogeneous than to any inherent peculiarities, properties, or powers. There is a period in the development of every tissue and every living thing when there are actually no *structural* peculiarities whatever—when the whole organism consists of transparent, structureless, semi-fluid living germinal matter—when it would not be possible to distinguish the growing moving matter which was to evolve the oak from that which was the germ of a vertebrate animal. Nor can any difference be discerned between the germinal matter of the lowest, simplest, epithelial scale of man's organism and that from which the nerve-cells of his brain are to be evolved. Neither by studying germinal matter under the microscope, nor by any kind of physical or chemical investigation known, can we form any notion of the nature of the substance which is to be formed by the germinal matter or the ordinary results of its living. But it is childish to assert, as some have done, that the character of the material produced depends alone upon the conditions under which life is carried on, simply because an alteration in the conditions in some cases determines an alteration in the result. The *natural* or inherent power of the germinal matter alone renders the production of any formed material possible. And what are we to understand by the nature, or power, or property of living germinal matter? With what is it comparable? Clearly not with the properties of non-living matter, for these belong to the matter itself, while *living* properties are transferred from one particle to others with the utmost rapidity, and the very same matter may exist with or without its *vital properties*. By no alteration of conditions of which we have any conception can a given portion of matter which has once passed from the living to the dead state be restored to the living condition.

Of Formed Material and Tissue.

The material called tissue, exhibiting a definite structure, is not simply deposited, like a crystal, from a solution of the same substance, nor does it result from the fibrillation, vacuolation, or stratification of a previously homogeneous fluid or viscid mass, or by the aggregation and coalescence of little particles precipitated from an albuminous fluid, but it is invariably formed from living matter as this ceases to manifest its vital properties. Every particle of matter that is to become tissue must first pass through the living state, and the properties, characters, and composition of the tissue will be determined partly by the internal forces or powers of the living matter acting upon the elements of which it is composed, and partly by the external conditions present at the time when these pass from the living to the formed state.

The formed material or matter resulting from the death of germinal or living matter under certain conditions varies remarkably. It may be a fluid holding certain peculiar substances in solution, like bile, a viscid matter like mucus, a perfectly transparent structureless membrane, or a material exhibiting a definite structure. To the latter the term tissue is usually applied. Tissue may consist of a scarcely visible web of very delicate fibres, holding in its meshes a perfectly transparent fluid containing but a trace of solid matter. It may exhibit well-defined characters, like cartilage, bone, etc., or it may manifest peculiar and very remarkable properties, like muscle and nerve.

In illustrating the arrangement of the germinal matter of the tissues, I shall select examples from many different animals widely separated from one another zoologically.

Germinal Matter of Epthelial Textures.

Cuticle or Epidermis.—The most external texture of the body, the cuticle or epidermis, is composed entirely of cells or elementary parts, some of which are being constantly removed from the free surface, while new ones grow up from below. These cells are called epithelial cells (*ἐπί*, upon; *θάλλω*, to sprout). In the cavity of the mouth, on the tongue, and lining the fauces, epithelium exists, which, although closely resembling that of cuticle, is softer and much more easily investigated.

At an early stage of development it is not possible to distinguish the masses of germinal matter which are to form the cuticle from those which take part in the development of the true skin with its nerves, vessels, glands, hair, and adipose tissue. And at the deep part of the cuticle, even in old age, will invariably be found numerous naked masses of germinal matter which exactly resemble those present at a very early period of development.

Suppose we examine a portion of adult cuticle. The oldest part of this structure is on the outside, and the youngest, or that which has been most recently formed, is situated nearest to the blood, whence the elementary parts or cells draw their nutritive supply. If we make a perpendicular section of this structure and place it under the microscope, we shall find that in different parts of it the cells present very different characters. The deep portion which is nearest to the vessels consists of small masses of germinal matter surrounded only by a trace of very soft formed material. These are situated very close to one another. A little above this the masses have a more definite arrangement, and each oval mass of germinal matter, now grown larger, is surrounded by a thin layer of formed material like an external membrane. Still nearer the surface the elementary particles are seen to be larger, both germinal matter and formed material having increased in quantity. As we approach the free surface, the cells become more or less flattened, and the germinal matter is much reduced in proportion. The formed material is harder and more condensed. Lastly, the oldest elementary parts upon the surface, which are rubbed away in great numbers, and possess no germinal matter whatever, seem to be composed entirely of cuticular substance or formed material. They have ceased to grow, and are no longer *capable of growth*. They are dead.

If equal portions of the most superficial and deepest strata of cuticle be taken, the proportion of germinal matter to the formed material will be found much less in the former than in the latter. At the deep aspect, where the elementary parts are being produced, the *germinal matter is abundant.* Upon the surface, where only old ones, which are about to be cast off, are found, *the germinal matter is reduced to a minimum, or has altogether disappeared.* Consider how these particles of cuticular epithelium grow. Here is a little mass of germinal matter which grows and then divides into two; each of these subdivides, and so on. Now, each of these little bodies absorbs nutriment from the surrounding fluid. It increases in size. The older particles on its surface are altered, and appear to be converted into a hard substance, which is improperly described as a membrane (cell-wall). As it approaches the surface, the hard material, cuticle, deposited layer within layer, becomes thicker and thicker, until at length the mere trace of germinal matter which remains in the centre, being too far removed from the source of nutritive supply to increase, perishes; and the elementary part, in the form of a flattened scale of dry cuticle, having by this time reached the surface of the body, is cast away, while its place is taken by others which grow up from below.

Hair, horn, and nail are epithelial structures, and if we examine the cells or elementary parts at the bulb, base, or growing portion, we shall invariably find numerous small masses of germinal matter like those situated at the deep aspect of cuticle. It is in this situation that the germinal matter divides and subdivides, and the new cells which are formed push before them those previously developed. In the fully formed hardened cells of these structures the germinal matter has completely disappeared, but in those near the growing part it can always be readily demonstrated by the aid of the carmine fluid. The structure and mode of growth of these tissues are well illustrated in the long, ragged, hair-like processes found upon the summits of the filiform papillæ in the central part of the dorsum of the human tongue, for the individual cells can be distinguished in almost every part of the hair-like process; and as they are not closely matted together, as in the hair, nail, and horn, their arrangement can be very satisfactorily demonstrated. The germinal matter can be seen, not only in the young growing cells at the base, but in those that are mature in the lower part of the shaft, and with a little management the constituent cells can be isolated from one another and examined separately. Several beautiful specimens of epithelium from the mouth have been passed round in the microscopes. In specimen 23 the germinal matter is beautifully distinct and well coloured by the carmine fluid, while numerous new centres (nucleoli) can be discerned which are more intensely coloured than the rest of the germinal matter. The formed material is perfectly destitute of any colour whatever. These cells afford a good example of the advantage of the staining process.

(To be continued.)

CLINICAL LECTURE
ON A
CASE OF DEATH FROM CHLOROFORM.(a)

By Dr. BILLROTH,
Professor of Surgery at the Vienna University.

It is customary to divide chloroform-narcosis into certain stages, but these, both in regard to the mode and the rapidity of their sequence, vary much in different individuals. In the first stage, the patients are usually thrown into a state of *excitement*, which chiefly influences the psychical and motory spheres, for I know of no case in which excitement of the sensitive nerves through chloroform has produced hyperæsthesia. In only quite exceptional cases are the nerves of the senses abnormally excited, and subjective personations induced. Commonly, the motory stimulation is so combined with the psychical that mental images are conjured up, in consequence of which the individuals conceive the idea that they are fettered or impeded in their actions, and execute movements for their liberation. The psychical stimulus exhibits itself in various ways in different individuals, just as drunkenness will render one man quarrelsome or violent, another loving and maudlin, and a third melancholic. Purely individual conditions thus exert great influence. The motory effects, besides the struggles due to psychical influence, are chiefly of a spasmodic character, exhibiting themselves in convulsive movements of the muscles of the extremities, and especially of the muscles of deglutition and mastication.

Anæsthesia commences in this stage, but the patients are usually restless, and sometimes so unmanageable as to require to be restrained by three or four men, so that any of the more delicate operations could not be undertaken. When I inhale chloroform myself, I am sensible at this stage of a tremendous feeling of internal restlessness, vibration and beating at the fingers' ends, and of an overpowering sense of the loss of all capacity of will or action. So little tractable are most patients in this stage that we have to carry them into the next—that of *tolerance.* The convulsions cease, and there is muscular quietude. The mental disturbances continue, but they have lost their connexion with the motory apparatus. The condition of dreaming is set up, and, just like in sleep, when the narcosis is slight, vivacious images are attended by movements; when this is deep, all spontaneous motion ceases. This condition of deep sleep is the most favourable one for operations, and the one we seek to maintain.

To this succeeds the *paralytic* stage, in which all traces of the power of movement have ceased; for while during the stage of tolerance reflex movements are not infrequently met with, now there is absolute rest. Only breathing and the heart's pulsation continue, and if the narcosis be too prolonged even these will become paralysed. The possibility of making a practical use of chloroform depends entirely upon the fact that the muscles of the extremities and of the trunk are first, and those of the heart and respiration last paralysed. This paralytic stage is seldom resorted to for therapeutical purposes, and it is so chiefly for the reduction of old dislocations or the rupture of anchyloses. Between this paralytic stage and paralysis of the heart there is, however, always a large interval, the passage of the one into the other not usually taking place suddenly. The cessation of respiratory activity is announced first by stertor, and then by irregularity or incompleteness of the respiratory movements; and that of the heart by the gradually approaching feebleness and slowness of the pulse—the respiration ceasing prior to the action of the heart.

The practical rules for the employment of chloroform are founded upon the observation of these stages in thousands and thousands of cases. Yet there are individuals who, standing apart from all such rules, after a few inhalations quickly perish. It is said of such that they have an idiosyncrasy as regards chloroform. And there is no reason why this should not be the case, or that all persons should be alike sensible to the action of chloroform, while the various other narcotics act so differently on different individuals. Enormous individual differences, in fact, exist as to sensibility to the action of poisonous substances employed as medicines. Thus, I am attending a lady in whom one-eighth or one-sixteenth of a grain of morphia excites such suffering, uneasiness, and vomiting, that, in spite of the severest pain, she dares not take it; and yet upon any of us such a dose would produce scarcely any effect. Another patient, for whom a mixture of half a drachm of iodide of potassium in six ounces of water was ordered, after every spoonful was seized with aphonia and a splitting headache, and when I persuaded her to continue the medicine, after a few spoonsful the entire head became erythematous, and weeping, discharge from the nares, with cough, etc., ensued. So belladonna, in the dose of $\frac{1}{120}$ grain, may induce symptoms of poisoning. In cases in which individuals manifest such excessive sensibility to chloroform that a few inhalations prove fatal without any premonitory symptoms, we are powerless, although even in these artificial respiration must not be neglected. Much stress is laid upon the purity of the chloroform employed, and rightly so; but whether impurity produced by products of decomposition is dangerous has not been proved. Chloroform that has been kept long and exposed to the light always contains free hydrochloric acid and chlorine, and although this may not be dangerous, it should not be employed, for patients cannot inhale it, as it immediately induces severe coughing, burning in the throat, and constriction of the larynx. These symptoms, as well as one's own sense of smell, lead us to reject it. Whether some material that is specifically dangerous is generated in chloroform by long keeping is unknown; but that chloroform is very variable, both in its smell and its effects, no one can doubt who has had much to do with it.

Danger may arise in all the stages of chloroform-narcosis.

(a) We some time since adverted to the fatal case that occurred in Professor Billroth's practice at the Vienna Hospital, and we now present an abstract of his interesting clinical lecture.

During that of excitement violent muscular efforts may give rise to apoplexy, especially in individuals with disease of the heart, rigid arteries, or emphysema. Of most consequence in this stage, however, are the contractions of the muscles of mastication and the posterior muscles of the tongue. By means of the stylo-glossi and the glosso-pharyngei, the tongue is drawn spasmodically backwards, pressing the epiglottis down so as to mechanically close the aperture of the larynx. Such patients become blue in the face, and die suffocated, not through the direct action of the chloroform, but from the mechanical privation of air. Such cases have been often observed in the Klinik, rendering it necessary to force open the mouth with Heister's speculum and draw out the tongue. When the narcosis is continued too long, there is danger of paralysis of the heart and sudden collapse. It is a rule not to prolong the narcosis when the upper eyelid allows itself to be raised without any muscular resistance. Individuals in which this can be done only at a late period, or perhaps not at all, and in whom a paralytic condition of the respiration takes place simultaneously with muscular quietude of the extremities (which happens especially in drunkards), require to be watched with the greatest care. There are subjects in whom complete muscular quietude can never be attained. Before the utter stagnation due to paralysis of the heart and respiratory muscles is brought about, there are changes due to the paralysis of the muscles of the face to be observed. The jaw sinks, the features become corpse-like, and the face pale, and we have the facies Hippocratica before us; and so characteristic is this change of physiognomy that, once seen, it can never be forgotten. It is therefore of the greatest importance that the face of the patient should be well watched. Another warning sign is that the blood, during an operation, either ceases to flow from the arteries or is of a dark blue colour.

The case we met with yesterday does not, in my opinion, belong to this category, as it did not give the impression so much of a case of intensely aggravated chloroform poisoning as of one of sudden collapse—a view rendered probable also by the very anæmic condition of the individual. This man, twenty-six years of age, but looking much older, had, while drunk, cut his finger with a china pot, and, according to account, lost a great deal of blood. At all events, when he came to the Hospital two or three days after, his anæmic appearance was remarkable, and this condition was further shown by his excessive sensibility to pain, leading to the belief that one of the digital nerves might be exposed. It was on this account chloroform was given, and all at first went on as usual. Convulsive movements ensued, and, as during these, neither an examination nor operation can properly be performed, the chloroform was continued, with the object of attaining the stage of tolerance. But as soon as the convulsive movements had ceased, the patient assumed the appearance of a corpse. The mouth was opened, and the tongue drawn out in the belief that closure of the larynx had produced the effects observed. This did no good, and the contraction of the stylo-glossi and the constrictores pharyngis prevented the passage of a catheter into the larynx. Tracheotomy was at once performed, and a canula passed in, but all in vain. The narcosis had lasted a very short time, and, at the autopsy, there was scarcely any smell of chloroform. Evidently, a sudden collapse had occurred, his condition giving the impression of a deep swoon. It is a rare thing for a healthy man to die during syncope, although this happens with old people and during convalescence, and especially after pneumonia. Death from sudden collapse is also met with after typhus. I am under the impression that the present case was one of such collapse, occurring during the narcosis, in consequence of anæmia. Generally there is not much learned from the autopsies of those who die from narcosis. The blood is pretty constantly found not to be coagulated, and sometimes of a cherry-red appearance. This non-coagulation of the blood gives rise to numerous consequences, which formerly were supposed to be characteristic of death from chloroform, such as hyperæmia of the posterior part of the lungs, kidney, and spinal marrow, etc., which are really post-mortem appearances due to the fluidity of the blood. In the present case these appearances were present, although the heart and large arteries were strongly contracted, and almost empty of blood. The heart is found in different conditions. In animals it is commonly dilated, especially the right ventricle, but in the present case, as in all anæmic subjects, it was strongly contracted. There is no distinctive sign of death from chloroform, and if an individual were killed by it, and no other non-medical proof of this existed, the anatomist would not be in a position, from the condition of the body, to declare that this had been the case. Even the odour of chloroform is a worthless sign, for Rokitansky states that the brain especially sometimes gives out an odour exactly like that of chloroform without any ground for supposing that this substance had been employed.

With respect to the administration of chloroform, the employment of the chloroform inhaler constitutes the best, the quickest, and most convenient mode. The singular idea that a mixture of chloroform and ether is less dangerous than either of these substances used separately has been abandoned. Above all things, never administer chloroform alone, but always have at least one assistant with you. When there is rattling in the throat, blueness of countenance, and irregularity of breathing, remove the apparatus, and throw open the windows and doors so that plenty of air may gain access to the patient, which is further to be aided by forcing the mouth open and drawing forth the tongue—a manœuvre often attended with the best effects. Let the patient, and especially if there are not plenty of assistants at hand, always be in the lying, not the sitting, posture. The dashing the surface with cold water or applying ammonia can only be of service when the narcosis is slight enough to admit of the excitement of reflex movements; but in the paralysed condition all such means are only a dangerous loss of time. Here artificial respiration must be at once resorted to, and executing this by mouth to mouth, with compression at the lower part of the thorax, is a preferable procedure to Marshall Hall's method. It is true that in this mouth-to-mouth procedure much of the air passes into the stomach; but the plan, with all its disadvantages, is found practically useful, and, at all events, resorting to it is better than doing nothing. The access of air may be facilitated by passing a catheter into the larynx, which, in the paralysed condition, is as easy as after death. A great part of the air passes out again by the side of the catheter, but a considerable portion enters the lungs in tolerable force. When the catheter cannot be introduced, tracheotomy should at once be performed, and a large canula passed in. Artificial respiration must be exercised in a regular rhythmical manner, and its efficacy as much depends upon the respiratory movements being forcible enough as upon the admission of the oxygen to the blood. In this case, artificial respiration was continued for half an hour; but really after from ten to fifteen minutes of inefficacious efforts all hope had ceased. The duration of the asphyxia is not, however, always easily estimated; for at such a time the watch is not looked at, and seconds become minutes and minutes hours. Stimulating the phrenic nerve by means of electricity is undoubtedly a useful means for exciting the respiratory movements; but unfortunately an apparatus is seldom ready when wanted.

Fortunately, we may regard death from chloroform as a very rare occurrence, and one becoming more rare every year. Reckoning that, during my fifteen years of clinical teaching and the two last years of my student life, I have been present at two administrations of chloroform per diem (which is a low and certainly not an exaggerated estimate), I shall have witnessed 12,500 cases of narcosis, and this is the first fatal one I ever saw. We must regard chloroformisation as an operation by means of a chemical agent, as with arsenic, chloride of zinc, etc., and compare its results with those of other minor operations. I am convinced that the mortality statistics after the application of leeches, blistering, cupping, and bleeding (through erysipelas, Hospital gangrene, tetanus, etc.), is greater than 1 in 12,500; but no one on that account has thought of prohibiting these means, and the use of chloroform cannot be prohibited because of these seldom-occurring fatal cases. The psychical impression which such a death produces is, by its very suddenness, a very powerful one, and exerts especial influence upon those who have not been accustomed to see men die before their eyes. Unfortunately, we have in Surgery only too often occasion to be convinced of the incompleteness and the impotence of our present amount of knowledge. A mere cut of a finger, especially if this opens into a joint or the sheath of a tendon, may give rise to phlegmonous inflammation, which during the last twenty years has caused far more deaths than chloroform. Urged by the patient's vanity, we remove a small tumour from a man's scalp, and he dies of erysipelas, or another dies from tetanus brought on by some slight injury—perhaps only the prick of a thorn; and, as regards the cause and action of these circumstances, we are as ignorant as we are regarding death from chloroform.

But while such cases are sad to reflect upon, they should not, any more than the one of yesterday, lead us to despair in

our art and means of investigation, nor to settle down in desponding resignation. Let them act as a great warning cry of nature, rousing us, ashamed of our hitherto pigmy efforts, to renewed action and restless labour.

ORIGINAL COMMUNICATIONS.

NOTES OF

PRACTICE AMONGST THE OUT-PATIENTS AT ST. THOMAS'S HOSPITAL.

By EDWARD CLAPTON, M.D.,
Assistant-Physician to the Hospital.

The out-patients of a large London Hospital necessarily afford great opportunities for the observation of diseases. The practical results are, however, very different from those to be obtained from the treatment of in-patients. The large numbers who are seen and prescribed for in a comparatively short time preclude the possibility of very minute or critical examinations, except in some few cases. The fact that these patients are obliged to come from their homes to the Hospital each week makes it evident that acute diseases are seldom seen, and that such, indeed, are unfitted to be thus treated. The want of control over the out-patients during their week of absence, the impossibility of knowing how far they have attended to directions, and taken what has been prescribed—their failing to continue their attendance when they are better, or when they have become too severely ill to leave their homes—all this shows the very great difficulties which lie in the way of those who endeavour out of such materials to form any really useful and practical deductions, or to base any trustworthy statistics.

On the other hand, no other practice so well gives one an accurate knowledge of prevailing disorders and types of disease, a habit of rapid diagnosis and prescribing, and an ability to detect broadly out of so great numbers what treatment best succeeds for particular complaints, and especially epidemics. I have often noticed that prevailing attacks of the same disease require different treatment at different times, and I am quite sure that it is impossible, as a rule, to treat diseases successfully at all times according to the rigid directions of any author, however eminent.

I need hardly say that among these patients one can only take notes of cases of such obvious diseases as plumbism, struma, diabetes, thoracic affections, and the like. It would be worse than useless to endeavour to obtain any experience by trusting to the numerous and anomalous subjective symptoms so fully dilated upon (if permitted) by the nervous, the hysterical, and the hypochondriacal, as well as by that large class of persons who infest the London Hospitals—viz., malingerers, club-impostors, and pharmacomaniacs. No other class of monomaniacs are, in my opinion, to be compared in numbers to the latter, who are never happy unless they are perpetually swallowing large quantities of physic! The regularity of their attendance is remarkable, and I have more than a suspicion that some of them attend simultaneously at different Hospitals, and swallow all they get from each.

I commence with the consideration of cases of

Plumbism.

It is supposed by many that the various affections arising from lead-poisoning nearly always spring from inhaling or handling white lead—the carbonate of lead—but some of the worst and most distinctive cases which I have met with have occurred in persons who handle lead in the metallic state, or who absorb it in some other form than the carbonate. They were either plumbers, or printers, or glass-blowers. In three instances they were cooks working in a kitchen where steam escaped through leaden pipes. Perhaps the most remarkable case was that of a man who had been shot in an American brawl, and in whose cheek a portion of a leaden bullet had lodged for nearly a year, frequently causing a good deal of local irritation, and at last acute plumbism and mania. I have rarely seen ill-results ensuing upon the therapeutical administration of lead, but the patients under its influence are carefully watched, and instructed to attend twice instead of once a week. The majority do certainly acquire their diseases by inhaling the carbonate of lead; but, as a rule, these cases were not of so chronic a character or so difficult to cure as those from other causes, such as constantly handling lead, in which the symptoms are generally those of arthralgia and hyperæsthesia of various parts, and sometimes of palsy of the extensors of the wrists, but seldom acute colic. The following are a few of the cases (very briefly described) which have recently occurred at St. Thomas's Hospital:—

J. W., aged 39, an engine-fitter, had been for a month or two engaged in fitting pipes by means of white lead. Symptoms were tympanitic abdomen, tenesmus, a white furred tongue, a slow small pulse, and a blue line along the gums. Had similar attacks twice previously from the same cause. Was ordered magnesiæ sulphatis ʒij., acidi sulphurici diluti ♏x., tincturæ hyoscyami ♏xx., aquæ menthæ piperitæ ʒj., ter die. Was soon well.

J. T., aged 33. Had been a leather-dresser until ten months ago, when he was employed in extensive white-lead works. Symptoms were nausea, constipation, enterodynia, neuralgic pains, especially in lumbar region, a brownish-white fur on tongue, a small quick pulse, and a very distinct blue line, especially on the upper teeth, which were greatly decayed. Ordered hydrargyri subchloridi gr. ij., opii gr. ss. horâ somni. Magnesiæ sulphatis ʒij., acidi sulphurici diluti ♏xv., ex aquâ menthæ piperitæ ter die. Was very ill for some days, and only slowly recovered under quinine and iron treatment.

C. D., aged 32, a painter. Suffering from a combination of plumbic neuralgia and gonorrhœal rheumatism. Had for a long time aching pains in various parts, and recently contracted gonorrhœa. Has now slight gleet and intensely acute pains in the joints. Deep blue line on gums. Ordered potassii iodidi gr. iij., liquoris potassæ ♏xx., pulveris cubebæ ℈j., mucilaginis acaciæ ʒij., ex aquâ ter die. Pulveris ipecacuanhæ compositi gr.v. omni nocte. Required no alteration of treatment, and was well in three weeks.

J. S., aged 43, a man cook. Suffering from a severe attack of icterus of a week's duration. Employed in an underground kitchen of a London railway terminus, where there are a number of leaden pipes conveying steam. Had suffered severe tormina and constipation for several days before being jaundiced. A deep blue line on the gums. There was no other way of accounting for the introduction of lead into the system except by the steam escaping through several holes in the leaden pipes. Ordered pilulæ hydrargyri gr. v., extracti hyoscyami gr. v. statim. Haustûs sennæ compositi ℥ij. post horas quatuor. Magnesiæ sulphatis ʒj., sodæ bicarbonatis gr. x., ex aquâ menthæ piperitæ ter die. A hot bath. For several days the griping pains increased, and the jaundice did not lose its intensity. On the following week was ordered hydrargyri subchloridi gr. ij. alterâ nocte. Magnesiæ sulphatis ʒj., infusi rosæ acidi ʒj., ter die. After this he rapidly recovered.

A short time ago two other cases of a similar character attended as out-patients—viz., cooks employed in a kitchen at another London terminus, both of whom had dropped wrists, general debility, and an ictero-plumbic appearance. They both stated that they were obliged to inhale steam all day which escaped from leaden pipes.

J. K., aged 49, a labourer. Suffering from acute colica pictonum of five days' duration; the third attack. His occupation entirely consisted in making leaden pipes, and involved constant standing over molten lead. The present attack was preceded for two days by vertigo, languor, anorexia, and slight alvine flux. Acute constipation, attended with great pain, then set in. Blue line very distinct. Ordered magnesiæ sulphatis ʒijss., infusi rosæ acidi ʒjss., ter die. Pilulæ hydrargyri gr. v., pilulæ rhei compositæ gr. v., alterâ nocte. For several days he became much worse, and recovered very slowly under the influence of sulphates and tonics.

G. H., aged 29, a painter. Suffering from epileptic fits, occurring about once in a fortnight, severe in character, and of three years' duration. A distinct blue line on the gums. Ordered zinci sulphatis gr. ij., ferri sulphatis gr. ij., magnesiæ sulphatis ʒss., ex aquâ menthæ piperitæ ter die. Subsequently the sulphate of zinc was increased by degrees to twenty-four grains for a dose. The sulphate of magnesia was reduced to fifteen grains, and then omitted. There had not been a single fit whilst under treatment—a period of five months—and the blue line almost entirely disappeared.

W. D., aged 32, a painter. Had for some time laboured under frequent attacks of cephalalgia and vertigo, and twice from epilepsy. Had several attacks of colic during the last ten years. Is very feeble, and has an exceedingly plumbo-cachectic appearance. Ordered potassii iodidi gr. vj., syrupi ferri iodidi ʒj., infusi calumbæ ℥jss. ter die. Improved rapidly in all respects, and will probably be soon well.

A case of insanity, of two years' standing, in a painter came under my notice the early part of this year, and was similarly

treated. He was well, and able to resume his ordinary duties in three months. He had never suffered from obvious lead disease, but a blue line denoted the existence of lead in the system.

In considering the treatment of cases of lead-poisoning, we are naturally led to reflect on the exact *modus operandi* of their chief remedies—the suphates and iodides. In the one case we are supposed to render the lead more or less inert by inducing its most insoluble form, and in the other to eliminate it after having first rendered it as soluble as possible. It is not, however, as a simple iodide that the lead is thus rendered soluble, for we know that the iodide of lead is an insoluble salt, but as a double salt—probably the iodide of lead and potassium, which is very soluble. The actual condition in which lead exists in the system after absorption is not easy to determine. As regards the inhalation of the particles of carbonate of lead, any organic acid will set free the carbonic acid, and form a soluble salt, which is taken into the circulation, or perhaps the carbonate is rendered soluble in the lungs by excess of carbonic acid. When the metal is constantly in contact with any portion of the skin, especially if there be any degree of friction, as we find in plumbers, compositors, etc., it is either absorbed in a molecular state or becomes acted upon by some organic acid, or it may be absorbed through an abraded surface. It was probably by the action of some organic acid that the piece of leaden bullet in the cheek in the case already alluded to was acted upon, and thus induced so intense an attack of lead-poisoning, the bullet not having become regularly encysted as generally happens. There was no other way of accounting for the introduction of lead into his system. Cases have been recorded in which colic was produced by leaden bullets having been swallowed. The fact is that lead has a greater affinity for animal matter, as well as a stronger tendency to combine with organic acids, than perhaps any other metal has. Witness the way in which various animal tissues, colouring matters, neutral matters, and organic matters generally are so readily thrown down by subacetate of lead. Thus it is, no doubt, that the blood deterioration is induced. The action of the lead on the various principles in the blood day by day exerts this influence, until at last the true saturnine cachexia is developed; and as soon as this has reached the utmost limit of which it is capable, the lead begins to be deposited in various solid tissues, as the brain, liver, muscles, and skin, either in the form of suboxide or of the metal itself in a molecular state. When redissolved, and again circulating in the system, as by the action of iodides, it is by the intestinal canal and by the skin, the latter especially, that the effort of elimination is exerted; but still the lead cannot attain any form which can be completely exhaled by the skin, and so is deposited in its tissue. We know that sulphureous baths will cause the surface of the body to be discoloured in the most marked manner, and this doubtless is the reason. Not long ago I tried the effect of the sulphureous bath in two cases of chronic plumbism of a severe character, the one having been treated with iodide of potassium, the other with tonic and purgative sulphates. In the former instance, the skin was here and there decidedly blackened, in the latter not appreciably so. In the former, the lead was no doubt freed from various internal organs by being rendered more soluble and directed to the skin; in the latter, fixed in a still more insoluble form. Very much has still to be learnt in respect of these points, but unfortunately the means of investigation are limited. The great requirement of the day is a right knowledge of the chemistry of the living fluids, both in health and in disease, and also of the chemical changes which the various medicinal substances undergo in the living organism. I hope that the new Clinical Society will give an important impetus to investigations of this nature. As to the blue line on the gums in plumbism, I have seldom found it absent except in those who have lost their teeth. It is often continued along the teeth for some distance, and much more distinctly so in the case of decayed teeth. It has a very different appearance from discolorations from other causes. In several oil- and colourmen I have noticed a deep mahogany-coloured stain on the gums and teeth. In a recent communication I have shown that those who suffer from the poisonous effects of copper have a very distinct green stain on the teeth, and this has subsequently been amply verified by the attention of several others being directed to this point and by my examination of many other workmen in connexion with copper and brass works. I find that the powder which the artificial flower makers use, and which produced symptoms of copper-poisoning, with a deep green stain, in a case which I described, is emerald green or the aceto-arsenite of copper. The diagnosis of paralysis from lead-poison is always easy. In nearly all cases the history readily elucidates the cause, and there is the blue line on the gums; but the chief distinction is that in all other forms of paralysis there is more or less anæsthesia as well as loss of motive power; but in that from lead there is always more or less hyperæsthesia. I have at the present time under my care an out-patient suffering from dropped wrists, having precisely the appearance as though of plumbic origin, but in reality induced by a violent blow on the back of the neck. He has considerable loss of sensation in his arms, as well as loss of motion. With respect to the treatment of chronic cases, then, the great object is to get the lead out of the system. Nervine tonics, galvanism, chalybeates, and blood restorers are all useless unless some mode of elimination has been previously or is simultaneously effected. Iodides, purgatives, and sulphureous baths are the most reliable, though the latter are difficult of application. Some cases of dropped wrists are exceedingly obstinate, but galvanism, iodide of iron, and purgatives seldom fail in effecting a cure. I do not at all approve of the plan of placing the arms and hands in splints for the whole day, as is the fashion, as I am convinced that frequent friction and gentle exercise of the muscles of the arm form a most important element in treatment. As to acute lead colic, which consists in paralysis of the muscular fibres of the intestine with acute irritation of the sensory nerves, there can be no doubt the sulphates, anodynes, and purgatives are the right remedies. The sulphates are obviously for the purpose of diminishing the solubility of the lead, and this, we know, is equal to diminishing its poisonous influence. Such purgatives should be given as castor oil, which as an oil may also assist in combining with the lead in a form the more easily eliminated, or as those which increase alvine secretions —*e.g.*, mercury, salines, etc., the abdominal pain being greatly increased by such purgatives as act only on the muscular coat —*e.g.*, colocynth, aloes, senna, etc. Patients may be thus cured of colic, but not of plumbism, as long as the lead remains. To rid this, iodides, purgatives, tonics, and baths must be persevered with for some time. Sulphates, therefore, are more appropriate for the treatment of acute cases, and iodides for chronic. I have seen more than one case in which iodide of potassium, given for lead palsy, had to be omitted for a time in consequence of inducing acute enterodynia almost amounting to colic, in the same way as this drug has so often caused salivation in patients who have previously been mercurialised.

DR. BARNES ON CRANIOTOMY.—REPLY TO DR. RADFORD.

How best to deliver in cases of pelvic contraction below two inches conjugate diameter is a question that falls so fairly within the debateable territory claimed on the one side by Craniotomy, on the other by the Cæsarian section, that difference of opinion is only natural. No opinion has greater authority with me than Dr. Radford's. It was only after a careful study of the facts, aided by personal experience, that I ventured to take the opposite side. Dr. Radford takes exception to that passage in my lectures (*Medical Times and Gazette*, Oct. 31) in which it is said "Dr. Osborne's contention was hotly disputed by Dr. Hull, who, nevertheless, ended by proving satisfactorily that it could be done"—*i.e.*, that, by removing the calvarium and canting the base edgewise, it was quite possible to deliver a full-sized child through a conjugate diameter measuring an inch and a half only.

Now, I admit that Dr. Hull did not prove Dr. Osborne's point to his own satisfaction. His whole object was to discredit Dr. Osborne, and this object was pursued with a fierceness inconsistent with candour, and not redeemed by his eminent ability. Some of his experiments, made on purpose to prove that Dr. Osborne was wrong, do show that it is possible to draw a head deprived of the calvarium, *sideways* through an aperture not larger than that stated.

Dr. Radford further objects to the testimony of the late Professor Davis on the ground that the Professor's experiments were made on blocks of wood made to imitate contracted pelves. Certainly it is not safe to conclude that because a child has been drawn through a wooden block measuring an inch and a half across, it may in like manner be drawn through the pelvis of a living woman. I do not rely upon these experiments, nor do I take Dr. Davis's opinion to be exclusively based upon them.

What I rely upon is the testimony of Burns, Hicks, and my own experience, which assure me that "by adopting this method (of removing the calvarium and bringing the base through edgewise) a full-sized head may be delivered with safety to the mother through a pelvis measuring even less than 2·00″ in the conjugate, provided there be 3·00″ in the transverse diameter." Nor do I shrink from the responsibility of adhering to the connected sentence: "I go further, and declare that it is perfectly unjustifiable to neglect this proceeding, and to cast the woman's life upon the slender chance afforded by the Cæsarian section."

Dr. Radford asserts his belief that the comparative statistics of the mortality in extreme cases of deformity delivered by craniotomy and by Cæsarian section would support his conclusion. To this I need only reply by asking—Where are such statistics to be found?

OVARIAN TUMOUR—EXPLORATORY INCISION—SINGULAR POSITION OF BLADDER.

By RICHARD NEALE, M.D. Lond.

November 3, 1867.—Mrs. H., married, no children, aged 45, has been suffering for several years from great abdominal enlargement, which latterly has increased and causes great discomfort. Complexion highly jaundiced; bowels greatly confined; secretion pale; urine passed very frequently, normal. Examination discovered a tumour filling abdomen, apparently freely movable, except in upper regions where it was not separable from hepatic dulness. The case had been under the care of several ovariotomists and others in London during different periods, and while some advised an operation, others as strongly dissuaded her from any attempt at removal of the tumour. Finding her health rapidly failing, and anxious to adopt any measures that held out a chance of relief, after careful consideration and consultation with Mr. Baker Brown it was decided to make an exploratory incision, and, if possible, to remove the tumour. The patient and her friends were most fully informed of the uncertainty as well as of the dangers of the operation.

December 3.—Under chloroform an incision was made in the mesial line (after introduction of catheter), commencing one inch below umbilicus to one inch above symphysis pubis. On carefully dissecting down, layer by layer, to the tumour, a very puzzling state of things presented itself. After opening the peritoneum it appeared as though there was still another layer of altered serous membrane covering tumour; the finger introduced met with universal adhesions. The incision was then carried up above and around umbilicus, so as to avoid an umbilical hernia of omentum. The hand being then introduced met with such strong and universal adhesions, anteriorly, posteriorly, and laterally, that no attempt at extraction was justifiable. Silver wire sutures were therefore introduced, and the patient put to bed. The next day she had recovered from the effects of the chloroform and shock of operation.

4th.—Nurse introduced catheter a few hours after operation, which was followed by a drachm or two of blood and water. This morning nothing came through catheter; the wound looking healthy, but discharging at the lower end clear pellucid inodorous fluid, very difficult to assert to be urine, but evidently too free for serum, as there was no ascites. Later in the day its urinous nature was clearly established by its odour. A long male catheter was now introduced and passed easily up to umbilicus, and thence was visible through the abdominal incision. The nature of the accident at once became clear: the tumour had in its growth dragged up the bladder to umbilicus, and an incision had been made through the coats of the bladder to the extent of an inch or an inch and a half. The patient was left perfectly quiet, the wound being covered with sponges soaked in carbolic acid lotion, which was the only dressing used during the whole convalescence, and which effectually destroyed all bad odour and kept the parts wondrously healthy.

9th.—Consultation with Sir W. Fergusson, who advised delay for a week or two to see how far nature would restore the wounded part. All the urine has up to this period passed through abdominal incision.

30th.—External incision had nearly healed, except opposite incision in bladder; it was reopened for several inches, and the thickened everted edges of the wounded bladder were pared and brought together with fine wire sutures, and then the external incision was closed with stronger sutures.

January 10, 1868.—Perfect union has taken place except over the most prominent part of abdomen, where tension has been too great. All water is now passed per urethram, except on one or two occasions when the bladder, from over-distension or straining, has burst in one spot the size of a pea; this aperture has gradually closed, and now all is secure. The coats of the bladder are clearly visible through aperture in abdominal walls, and transude a moisture sufficient to damp a pad placed over the wound.

April 10.—The patient is up and about, much better than before the operation, and is about to go into the country. Abdomen decidedly reduced in size; general health improved; external wound contracted, but not closed. Objects to edges being pared and a stitch put in unless really necessary; inconvenience so slight that it is not considered advisable to do so.

October.—Has been North visiting a sister, whose sudden death much distressed her. On her return to London I found her much changed, abdomen greatly increased in size, distress both from pressure on bladder and bowels great. Spirits greatly depressed, feeling her end approaching. Death took place from pressure on diaphragm and general asthenia.

Post-mortem Six Hours after Death.—Body much emaciated, jaundiced. Wound of parietes measured one inch diameter, circular. Scarcely any trace of line of incision. Portion of bladder exposed, reddish, moist. Section of abdominal walls: Only the scalpel could separate adhesions of peritoneum and tumour, which latter filled the whole abdomen as one huge immovable mass. Externally it appeared divided into three distinct portions or cysts, one superior, similar in shape and colour to a greatly hypertrophied liver, full of a dark grumous biliary-looking fluid, equal to two pints. Right and left hypochondria were filled with two large cysts, each containing a pint to a pint and a half of purulent fluid. Centrally a hard fibroid tumour attached to the anterior surface or fundus of uterus, to which the bladder was closely adherent, reached to the umbilicus. The bladder was converted into a tube eight inches in length by one to one and a half inches in diameter laterally, but antero-posteriorly inner coats meeting being crushed between the tumour and abdominal walls. Coats not thickened, but thrown into rugæ, capable of little if any expansion, and could not contain more than two ounces of fluid. No trace of wound made in December, 1867. A careful examination of the tumour could not be made. It was believed that the upper cyst was connected with the liver, but the parts were so matted together that precise information could not under the circumstances be obtained. The interest of the case chiefly lies in—1st. The unusual position of the bladder. 2nd. The perfect recovery of that organ after an extensive wound. 3rd. The great benefit of the exploration upon the general health and growth of the tumour for a time. 4th. The great advantage of carbolic acid dressings, which was noticed by all who were associated with me in the case. 5th. The fact that, on account of the universal adhesions, no urine was effused into the peritoneal cavity.

St. John's Wood.

SKETCH OF LIMA HOSPITALS.

By ALEXANDER YULE,

Surgeon H.M.S. *Martin*.

As it might interest some of your readers to know a little about the Medical arrangements of distant and semi-barbarous regions, I here present this short and rough sketch. Were it not for seeing every now and then in the daily papers that there is a revolution in Peru, we should never know or think about the country. Peru is a so-called republic, changing its government about every six months, situated along the central and western shores of South America. It was originally a colony of Spain, but severed from the mother country, and has now a government and capital city of its own. The capital is called Lima, and contains a population of 170,000. As we are going to speak about St. Andrew's Hospital and Lima "Medical University," we may as well commence without further preliminary.

The chief Hospital for males is that of St. Andrew's, and originally constructed by the Spaniards. In their day it was very small indeed, but it has since been so altered and extended as to bear little resemblance to what it originally was. The building is one-storied, the wards large, airy, and well lighted.

There is accommodation for 637 patients. At some periods of the year the inmates considerably exceed that number. The wards are divided into Surgical and Medical, each with its separate staff of attendants. The floors are all laid with asphalte—a good provision against damp; besides, this arrangement produces an appearance of cleanliness that could not be surpassed by the whitest-scrubbed wood. An occasional brushing and light washing can do more to insure all that can be desired than daily scrubbing of wooden floors, with impurification of the atmosphere, and perhaps retention of poisonous exhalations from sores or from the bodies of fever patients.

The part of the Hospital we are about to mention can in nowise be commended—*i.e.* the portion constructed by the Spaniards. Luckily there are only two such wards. Around these two wards are galleries, on and underneath which are beds with patients; up the centre, and between the galleries, there is a row of beds with narrow passages on either side. These wards are wretched in the extreme, overcrowded, and gloomy; for all the windows are over the galleries, and they are few in number and far between. As for the patients underneath the galleries, their faces can hardly be distinguished. Here, too, there is a sickly odour and an oppressiveness in the atmosphere, evidently produced by air charged with animal effluvia and carbonic acid. The extreme emaciation of the patients, their anguish-stricken countenances, doubly increased by their surroundings, convey ideas far from pleasing. The greater number of cases here are those of dysentery, remittent and intermittent fevers. It is well that the Hospital in other parts is totally unlike this.

1. There are separate Surgical wards.
2. There is no separate ward for fevers.
3. Cases of syphilis are sent to the galleries in the Spanish wards.
4. There is a separate ward for children.
5. A ward for Chinamen.

The ward we now enter—a Surgical one—is ample, wide, and lofty. The beds are arranged on either side, leaving a broad passage in the centre. The walls are decorated with pictures, chiefly scriptural; and from very large windows abundance of light is diffused. In the central passage there is a table (on which lie prescription books, etc.), which, being unfolded, can be used for the performance of Surgical operations. The nursing is conducted by "Sisters of Mercy," who, by their cleanly appearance and intelligent countenances, seem peculiarly fitted for such a place. The bedsteads are made of iron, and have no curtains. At the top of each bed there is a ticket, with patient's name, age, disease, and date of admission written upon it.

Cases of syphilis in all its forms seem to be very common, especially affections of the bones of head and face.

Fevers.—The reason why cases of fever are not isolated is evident, for in Peru the contagious and infectious fevers of England are extremely rare. Small-pox, to be sure, is very common, and rages sometimes with great virulence. All cases suffering from that disease are treated in a special Hospital. These Hospitals are situated in localities well clear of the town and human habitations. Vaccination is practised and enforced by law, but, on account of the intense ignorance of the lower orders, the law is often evaded, and the most disastrous results accrue; for sanitary science is utterly ignored here, and, although cases are removed, compulsorily if need be, as soon as possible to Hospital, yet, such is the state of filth and overcrowding in those places where the disease arises, that its spread is but imperfectly checked.

Typhus fever is almost unknown, whilst enteric fever uncomplicated by remittent is very rare.

Cases of diphtheria are not unknown, and scarlet fever of a very malignant type is very common among the poor and ill-fed.

Yellow fever every now and then breaks out in Lima and Callao, the latter of which is the seaport of the capital, and is seven miles distant, having communication by rail with the former. Yellow fever at this time(a) is very prevalent both in Lima and Callao. It is evidently imported, and in this case appears to have been brought from Panama, and is the fag-end of the West Indian epidemic. Let us trace the course of the fever. First it appeared in the West Indies, then crossed the Isthmus of Panama, went upwards along the coast of Mexico, and downwards, by the shores of South America, to Callao, and from Callao to Lima. Between Callao and Panama there is constant intercourse by means of the Pacific Steam Navigation Company's steamers, and, from what we know of yellow fever, it might just as readily be conveyed in the cargo as by one of the passengers. The last outbreak occurred about ten years ago, and had then probably a similar origination. We will here give a few reasons for our belief that it is an importation and not a disease of the country, and that, after a time, it gets utterly extinguished until more of the virus is imported. The conditions for the development of yellow fever are absent here.

1. There is no rainy season; in fact, rain never falls.
2. The temperature is never excessive.
3. On account of the dryness of the climate, decomposition of vegetable matters by heat and moisture is not so energetic as in those places where yellow fever prevails. Vegetation is neither rank nor profuse. Peculiarities in soil, atmosphere, aud vegetation are perhaps the reasons why yellow fever is developed in some parts of the globe and not in others, where conditions of heat, moisture, and vegetation are apparently alike. At any rate, long-continued heat and moisture are intimately connected with outbreaks of yellow fever. Both these conditions are absent in Lima and Callao.

At this time there were no less than 500 cases of fever in Hospital (1865), remittent and intermittent. This is the unhealthy season, April, May, June (autumn), and the Hospital is always crowded. Cases of remittent fever are less common than those of intermittent; frequently the two merge into each other, those that commenced as the one ending as the other, and *vice versa*. The type of the remittent fever is frequently of great malignancy, and is quite as fatal as typhoid fever in England—fatal collapse ensuing suddenly, from which it is impossible to rally the patient, the skin becoming deeply jaundiced, and purpuric spots appearing on the limbs and body.

The children's ward is very pretty, and well ventilated. Cases of all kinds are jumbled together—scarlet fever, measles, etc. How this arrangement answers we cannot say.

The Chinamen's ward is very commendable in every way, but the melancholy expressions of the sons of the celestial empire amply attest their want of faith in Medicine and their thorough belief in the deadliness of disease. Chinamen are very subject to the fevers of the country, especially on first landing; on account of the superaddition of great nostalgia—a peculiarity of these people—the mortality amongst them is considerable.

Phthisis is just as prevalent here as in England; likewise every form of scrofulous disease. People with tubercular lungs, if natives of Europe, thrive well in this climate. I have myself known of two cases of well-marked incipient phthisis cured by residence here. Frequently, however, if the patient return to England, the disease returns likewise. Amongst the natives consumption is very destructive, and that form of it which is called acute, or galloping, is often seen. On going through the Hospital we could see the long and dreary list of scrofulous affections of lungs, joints, eyes, etc. Those that can afford it, when seized with symptoms of phthisis, resort to the interior, where the mountain air soon restores them to health. There are some districts among the Cordilleras where, if the disease is not very far advanced, a cure may be relied upon. There the temperature is cool, the air dry, and the sky unclouded. To those with less means at their command, the Chinca islands are a favourite resort. These islands are a few miles from the coast, and distant from Callao about ninety miles. The climate is dry, the temperature equable and warm. The air is loaded not with odours "of orange flowers and spice," but of guano; while clouds of it, on a gusty day, are blown about everywhere. Be that as it may, patients with indubitable signs of phthisis improve there. We may from that presume that ammonia, as it is presented by the guano islands to the lungs of consumptives, is rather beneficial. With regard to the statement that consumption is cured by residence in mountain districts, its real truth is very equivocal. On a return to whence they came, the unhappy patients have but too often a repetition of their old malady. I imagine that no change of climate will cure consumption permanently or frequently unless the patient, for the remainder of his days, remain in the climate that has afforded him benefit.

But to return to the Hospital. All the nurses are Sisters of Mercy, and they keep the Hospital accounts and dispense the medicines.

The next feature connected with the Hospital is not so pleasing a one. Close to one of the wards, and opening into it, is the deadhouse; that, in its turn, opens into the dissecting-room, which last opens into the anatomical lecture-room. Such an arrangement cannot but be prejudicial to the inmates

(a) 1868.

of the wards. The anatomical class-room is a miserable and filthy-looking place. We need not say that it is intensely odoriferous of decayed humanity. The walls are graced by anatomical plates (English and French), the usual skeleton stands by the door, while on a side table are many dried specimens, and on the black board a demonstration of the peritoneum. The table, on which the subject lies, is made of wood. The subject is green, and stinks horribly, while the wooden table is sodden and disgusting to look upon. The floor of the room is earthen, and altogether the place is well worthy of a visit from an "inspector of nuisances." Anatomy does not seem to flourish here, and the lecturer says that he trusts mostly to dried specimens. He is wise, if all his subjects are like the one we behold. One is surprised at this laxity in the teaching of anatomy, considering that subjects can be procured at all times in great abundance. Inertia or laziness, the national characteristic of those in tropical climates, may be an explanation of this. Where we find this neglect, it is very problematic indeed if true Medical science is in these parts in a much better condition. Let us enter the dissecting-room. Here bodies are hacked, not dissected, and only one or two students are to be seen. The foul odour is beyond description, and the earthen floor is slippery with decomposed fluids. All the tables are made of wood. The students seem to do much as they please. Some are amputating toes and feet, and if I am not mistaken I saw a gentleman who had just amputated the head and neck going away with his part. Let us hence and see what the Medical University is like.

The Medical University building is a few hundred yards from St. Andrew's Hospital, and is of considerable size. The building has a centre, two wings, and an open space in front. It is two-storied, and there are balconies around it. The lecture-rooms, library, and museums are in the lower story. Here and there we see students pacing up and down, or sitting in chairs conning their lecture-notes or some novel; others are in their rooms having a siesta—*i.e.* a midday snooze—in which the Peruvian indulges more than once a day.

There is one very useful museum, open always to students, for the elucidation of various matters connected with the study of Materia Medica, Surgery, and anatomy. There are models for exercising students in the application of bandages and other Surgical appliances. In glass cases are specimens of Surgical instruments, chiefly French. There are likewise wax models of internal structure of ear and eye, with preparations showing the distribution of the nerves and arteries of head, neck, and limbs. There is a museum of natural history, but as we know nothing of the subject we cannot offer an opinion as to its merits. In a room off this museum is a collection of wax models, showing all the forms of venereal disease—primary, secondary, and tertiary. All the complications of midwifery practice are likewise shown here. We now enter the library, which has an air of gloom akin to the darkness that prevailed when the works we see before us were published. The books are old and dusty, numbering about 7000, the most of them in Latin, with some in German, French, and Spanish. We look in vain for an English book. Our eyes are at last gratified by seeing "Graves's Clinical Medicine." On discovering this, the old Dean of the Faculty (who was showing us round) became quite enthusiastic, and said, "This one great Englishman I revere; he taught me more than all." The Dean, unfortunately, knew not a word of English, and what is here is a translation of his words.

The Medical curriculum extends over five years, and no one can get a degree until he reaches the age of 26. The number of students that on an average attend is fifty, and of these the greater number board in the University. We are now shown the room where examinations are held. There is nothing remarkable about the place. A long table, covered with green cloth, occupies the centre; a few varnished bones and preparations lie on it. Around are old oaken chairs, with very high backs. The walls are graced by pictures of the Deans that have presided over the University in former days. The present Dean looks quite peculiar (in his portrait lately placed on the wall) amidst his antique predecessors. The dress has changed, but the stethoscope (in the present Dean's picture) is a telling truth of the advance and change for the better in Medical science. Besides this Hospital of St. Andrew, which receives none but males, there is the female Hospital of St. Anna.

The Hospital is of modern construction, and one-storied throughout. Its general arrangement is the same as that of St. Andrew, but it contains no galleried wards. The number of beds is 300. The floor is of asphalte. The bedsteads are of iron, with this difference from those in the male Hospital—viz., the being furnished with curtains. These are not so objectionable after all, for they are closely rolled up to the bedposts, being only made use of when privacy is required. The beds are arranged on each side of the ward, leaving a central passage with tables for medicine bottles and prescription-books. Each patient has fully 1500 cubic inches of breathing space.

1. There is no separate fever ward.
2. There is a separate ward for syphilis.
3. A Surgical ward.
4. A ward for children.

Each ward in this Hospital, as well as in St. Andrew's, contains from forty to sixty beds. The wards have an eminently clean and lively appearance. On the walls are pictures, and on the window-sills earthen vases filled with flowers.

The bed covers are of a snowy whiteness, and the nurses, by their neat appearance and gentleness of manner, seem to be everything that could be desired. Good nursing, they say, is half the battle in disease, and assuredly, if the other half of the battle is as well conducted, I should think that the results would be excellent.

The syphilitic ward is well filled, and, as in St. Andrew's Hospital, tertiaries seem very common.

We now come to a ward for the treatment of female children (from 3 to 10 years of age). The ward they occupy is a perfect picture of what ought to be. The many smiling faces attest to the comfort of the little inmates. Here are toys of every description, and we see a little book on one of the beds filled with flaring pictures, with the title "Gato en Botas"—in English, "Puss in Boots"—so that the infant Peruvian mind luxuriates with as much gusto on such productions as does his compeer in England. There is likewise a small glass case filled with sweets of every kind, evidently to make the physic go down well.

Now for the infants' ward. The mothers of the children are admitted along with them. Here we have patients from a few days old to two or three years. I must say the usual quietness of a Hospital is not maintained here. The puling and occasional boisterous roaring of the inmates is far from pleasing to the ear. We now depart, and walk through a dispensary the like of which we never saw, everything being so neat and clean. Behind a counter with a surface like a mirror, a Sister of Mercy is busy dispensing. We now pass the Hospital office, where an elderly dame with huge tortoise-shell spectacles on nose, and in the fantastic dress of a Sister of Mercy, is seated at a desk on a three-legged stool, writing in a ponderous ledger. After walking round the beautiful grounds of the Hospital, we take our departure, highly pleased with everything.

Fracture of the Pubis from Muscular Action.—A woman, aged 43, engaged in lifting stones weighing more than 150 lbs. from the bottom of a boat on to the adjacent quay, while raising one of them, lodged it against the pubis, and then elevated it to the quay, which was thirty or forty centimetres above her, by mustering all her force, and thrusting it up with the aid of the abdominal muscles. She felt a sharp tearing pain in the left groin, but heard no crepitation. She continued her laborious task for the rest of the day, and all next day was wheeling stones in a barrow. Next day, after a long walk, she fell down exhausted, and was brought to the Nantes Hospital. She was treated first for paraplegia, until careful examination detected a crepitation, when she was placed in a Surgical ward. On first inspection, M. Letenneur perceived no deformity in the pelvis, nor was there any pain except on moving. The lower limbs were powerless. On carefully examining the body of the left pubis, a projection was found just external to the spine, which formed the internal fragment of the fractured pubis, the external fragment being a little depressed. Pressure here gave pain, and on examination *per vaginam* a slight displacement of the descending ramus could be felt. On the patient turning on the right side, a very audible crepitus was heard, and this she could reproduce at will, although it could not be excited by pressure. A gymnastic girdle was fastened firmly round the pelvis to the great relief of the patient; and in about a month, notwithstanding intervening attacks of erysipelas and diarrhœa, consolidation had become quite complete, a difference of level of not more than half a centimetre existing between the two fragments. Walking had become quite easy.—*Rev. Méd.*, Sept. 30.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 28, 1868.

ARMY MEDICAL DEPARTMENT REPORT FOR 1866.

A change has been made in the arrangement of these reports. In former issues the sanitary portion appeared separately, but in the present number it is appended to the statistical returns of stations, so that the connexion between sanitary improvements or deficiencies and the health of the troops at each station, as shown by the statistical results of the year, may be more obvious. This change of arrangement probably accounts for the publication of the report being somewhat later than usual this year.

The average strength of the troops in the United Kingdom during the year 1866 was 70,292; the admissions into Hospital amounted to 59,966; the deaths from all causes both in and out of Hospital were 676; the average number constantly sick was 2942, and the number of invalids 2118.

The relative proportions of admissions, deaths, mean daily sick, and of discharges by invaliding during 1866 and the preceding six years, are shown in the following table:—

Ratio per 1000 *of Mean Strength.*

	Admitted.	Died.	Constantly sick.	Discharged as invalids.
1866	853	9·62	41·85	30·13
1860—1865	993	9·30	51·26	38·07

The admissions into Hospital, the number constantly non-effective from sickness, and the discharges by invaliding in 1866, were greatly under, but the mortality was slightly above, the average. Compared with 1865, a decrease of about one-tenth has occurred in the admissions and mean daily sick, and an increase of one-twelfth in the deaths, and a decrease of one-sixth in the invaliding. The reduction in the proportion of admissions is most marked in venereal and miasmatic diseases.

Rate of Admissions per 1000.

	1860 till 1865.	1866.	Decrease.
Venereal diseases	325·6	258 5	67·1
Miasmatic diseases	207·2	163·5	43·7

The reduction has also extended, though in a much less degree, to affections of the integumentary and respiratory systems. On comparison with the results for 1865, a reduction of admissions is found in the same classes.

Rate of Admissions per 1000.

	1865.	1866.	Decrease.
Venereal diseases	282·8	258·5	24·3
Miasmatic do.	183·9	163·5	20·4

The increase in the mortality has not been confined to any one class. It has been greatest in tubercular and miasmatic diseases. The mortality from the former had in 1865 been considerably below the average, amounting to 2·48 as compared with 3 30 per 1000, the average for the preceding five years, showing a decrease of ·82. In 1866 it was 2·97 as compared with 3·17 per 1000, the average of the preceding six years, showing a decrease of ·20.

"There is nothing more remarkable in connexion with this class of diseases than the very trifling amount of variation during the last four years in the proportion both of cases and deaths, including those of men absent from their corps, when the observation extends over the whole force serving at home. The ratio per 1000 of mean strength in each year, from 1860 to 1866, has been as follows:—

Tubercular Diseases.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
Ratio per 1000 of strength admitted into Hospital	17·8	18·1	19·5	16·9	16·4	17·3	16·9
Died	3·47	3·34	3·67	2·99	2·94	2·48	2·96

"It will be observed that a marked reduction in the proportion both of cases and deaths took place in 1863. This was probably the result of the alteration in the system of invaliding introduced in the early part of that year, by which men were sent to the head-quarters of the district when considered by the commanding and regimental Medical officers unfit for service, instead of being retained till the period of the half-yearly inspection, and then sent to the invalid depot. It will be observed that since that regulation came in force, the admissions and deaths have been lower than formerly, but, with the exception of a reduction in the deaths in 1865, have varied little from year to year."

The admissions have been considerably below the average of the six preceding years at all the groups of stations, except Dublin and the Depot Battalions, where the reductions were very trifling. The mortality was above the average in the Dockyards and Arsenals, the Camps, Dublin, Depot Battalions, and other stations. At Dublin the higher rate of deaths occurred chiefly from miasmatic diseases.

Eruptive fevers were less prevalent than in 1865 at all the groups of stations. There occurred of—

	Admissions.	Deaths.
Small-pox	38	1
Chicken-pox	13	0
Measles	70	0
Scarlet fever	47	5

The largest number of cases of small-pox occurred in London; of scarlet fever in London and at the Curragh; and of measles at Warley and Chatham; but at none of the stations could the diseases be said to have been epidemic among the men.

Paroxysmal fevers, the results of former tropical service, were more frequent than in 1865 in the Dockyards and Arsenals and in the Depot Battalions; but fevers of this type were not a cause of much sickness.

Continued fevers still show a decreasing rate of admissions at all the groups of stations. The highest proportion occurred in London and the large manufacturing towns.

Dysentery and diarrhœa caused a higher rate of admissions at almost all the groups of stations. This probably arose from the general prevalence of cholera during the third quarter of the year. Cholera appeared in England in the end of June, and prevailed pretty generally among the civil population. Among the troops there occurred seventeen cases and thirteen deaths. Six of the cases and four of the deaths occurred in Dublin; three cases, all fatal, occurred at the Curragh and Newbridge; three cases and two deaths at Woolwich, one fatal case of bilious cholera at Portsea, one case at Parkhurst, one in London, one at Preston, and one at Lucan, all of which ended in recovery. Three men absent from their corps died at Clackmannan, Liverpool, and in Ilford Gaol respectively. The admissions were in the proportion of 0·24 and the deaths of 0·18 per 1000 of the strength. These results afford evidence of the value of the precautionary measures adopted on the first appearance of the disease in this country.

Enthetic diseases caused 258·5 admissions per 1000 of strength, showing a decrease, as compared with 1865, of 24·3 per 1000. There was a very marked increase in this class of disease at Canterbury, Colchester, and Dover.

At Colchester—which stands at the head of the list of rela-

tive prevalence, in this respect changing places with Dublin, which occupied the same prominent position in 1865—there occurred 451 admissions into Hospital for venereal diseases per 1000 of strength. There was an increase also at Chatham and Sheerness, Portsmouth and Gosport, Fermoy, Woolwich, and at Warley. At all the other large stations the proportion was lower than in 1865.

"The number of men constantly in Hospital for venereal diseases amounted to 1138, or 16·19 per 1000 of mean strength, being a reduction of 1·87 per 1000 on the proportion of the preceding year. The loss of service during the year from these diseases was equal to that of the whole force in the United Kingdom for 5·91 days, and the average period the cases remained under treatment in Hospital was 22·86 days."

By continuing the comparative table which we compiled in our notice of the Report for 1865, it will be seen that the gradual and steady reduction in the prevalence of venereal diseases which we then noted is still maintained.

Year.	Rate per 1000 of strength admitted for venereal affections.	Proportion constantly sick per 1000 of strength.	Equal to loss of service of the whole army for	Average duration of cases.
			Days.	Days.
1860	369	23·69	8·6	23·5
1861	354	23·45	8·5	24·1
1862	330	22·24	8·1	24·6
1863	307	20·28	7·4	24·
1864	291	19·10	7·	24·
1865	283	18·06	6·5	23·3
1866	258	16·19	5·9	22·8

So that, in seven years, the proportion constantly in Hospital from venereal diseases has been reduced by nearly one-fourth, and the country has attained a gain equivalent to the services of the whole army for nearly three days.

On subdividing the cases into two general groups of syphilitic and gonorrhœal diseases, the following results are obtained for each group :—

1866.	Admissions into Hospital.	Average constantly sick.	Ratio per 1000. Admitted.	Ratio per 1000. Constantly sick.	Loss of service to whole force.	Duration of cases in Hospital.
					Days.	Days.
Syphilitic group .	9809	756	139·6	10·76	3·93	28 13
Gonorrhœal group .	8361	382	118·9	5·43	1·98	16·68

These results, compared with a similar table in the Report for 1864, show a marked reduction in the syphilitic group, as regards the proportion admitted and the mean daily sick, and a very trifling reduction in the gonorrhœal group; and, as a natural consequence, the loss of service to the whole force has been diminished chiefly in the former group :—

1864.	Admissions into Hospital.	Average constantly sick.	Ratio per 1000. Admitted.	Ratio per 1000. Constantly sick.	Loss of service to whole force.	Duration of cases in Hospital.
					Days.	Days.
Syphilitic group ..	12343	965·6	168·5	13·18	4·81	28·55
Gonorrhœal group ..	8953	433·6	122·2	5 92	2·17	17·68

The duration of the cases under treatment, however, shows a different result, the gonorrhœal cases having undergone a reduction of one day, and the syphilitic only rather less than half a day.

The diminution in the prevalence of this class of diseases cannot be attributed to the action of the Contagious Diseases Act. In the sanitary observations on this subject we find it stated that the time during which the amended Bill has been in operation is still too short to admit of our drawing any deductions from the experience of 1866.(a) It is considered that the limited application of the Act tends to defeat its objects, and that the mere erection of a Lock Hospital in any neighbourhood would rather attract the sufferers from these diseases to the places where there existed the best chance of attention being paid to their wants and sufferings. At Aldershot, where the Act did not come into force until April 12, 1867, there was a decrease of 69, and at Devonport and Plymouth, where the Act was in operation from October 8, 1866, of 43 per 1000 of strength, in venereal diseases, as compared with the results of 1865. The necessity for an extension of the Act to London itself is shown by the fact that the Foot Guards stationed at London and Windsor would, if placed in their proper position, stand ninth in the list showing the relative prevalence of venereal diseases at twenty-four large military stations, there having been among them 311 admissions from such causes per 1000 of strength. With the exception of Dublin, the Irish military stations stand low in this list, as does also Edinburgh, the only Scotch station concerning which the information is given.

There were forty-eight deaths by accidents, being in the proportion of ·69 per 1000, which is slightly above the average; twenty-four of these deaths were from drowning. There were twenty-seven deaths by suicide, being in the proportion of ·39 per 1000, which is ·11 above the average of the preceding six years; eighteen were by firearms, five by cut-throat, and the remaining four by hanging, drowning, poison, and precipitation on a line of rails before an advancing train. One man of the 1st Battalion, 13th Regiment, was hanged for murder.

Diseases of the circulatory system caused 636 admissions and 87 deaths, being in the proportions respectively of 9 and 1·23 per 1000 of strength, and less by ·7 than in 1865. The rate of admissions is the same as the average of the preceding six years; but the deaths are more numerous by ·32. This increase, however, depends most probably upon the actual causes of death being more accurately returned. The deaths were principally from internal aneurisms, valvular disease and hypertrophy of the heart.

We have as yet no means of accurately comparing the death-rate in the civil and military population from this class of diseases, but it certainly appears to be unduly high in the latter. There can be no doubt that the present style of pack, which still presses as an incubus on the shoulders and pectoral muscles of our soldiers, has a large share in causing diseases of the heart and large vessels among them; but, at the same time, it must be admitted that syphilis and intemperance are potent factors. Inspector-General Lawson contributes a very valuable paper on the causes of aneurism and diseases of the heart among the troops in South Africa, in which he institutes a comparison between the civil and military death rate. He concludes that aneurism is eleven times more fatal among the troops at home than among the male population of the same age, and that general affections of the heart are also more fatal in the proportion of ·50 to ·45 per 1000, and that, were those discharged from the service on account of cardiac disease retained until their cases terminated as in civil life, the ratio of mortality would be considerably higher. This is a important subject which we hope to see further elucidated, as "the etiology and prevalence of diseases of the heart among soldiers as compared with the civil population of those countries in which they are called upon to serve, and the means of prevention or mitigation," are the questions proposed for the first competition for the Alexander Memorial Medal and Prize of the respective value of £5 and £50. This valuable prize is to be awarded once in every three years to the executive Medical officer on full pay who shall write the best essay on a subject to be selected by the Executive Committee in Military Medicine, Surgery, or Hygiene. The competing essays are to be sent in on or before December 31, 1869. Terms and directions are fully detailed in the present volume of the departmental reports.

(To be continued.)

(a) Dates on which the Contagious Diseases Act of 1866 was put into operation :—Portsmouth, October 8, 1866; Devonport, October 10, 1866; Sheerness, October 20, 1866; Woolwich, November 14, 1866; Chatham, November 19, 1866; Aldershot, April 12, 1867. (From returns published by the Metropolitan Police to the Select Commitee of the House of Lords on the Contagious Diseases Act, session 1867-68.)

MIDWIFERY TEACHING.

In a late article we commented on the prevalence of vesico-vaginal fistula as a test, to some extent, of defective doctrine and insufficient instruction in midwifery. Teachers of erroneous doctrine have now passed away, but the other evil remains. The whole body of obstetric teachers in London have expressed their unanimous opinion to the Committee on Medical Education of the General Medical Council, "that the actual means of study and the share devoted to it in the present curriculum are insufficient."

There is no branch of practical Medicine of which the elements can be better taught by lectures, illustrated by preparations, drawings, and specimens; yet the lectures in midwifery are relegated to the summer, when there is no time for a long course, and when the attention is most easily fatigued and distracted. Hospital clinical instruction in midwifery is impossible in London; and operations, instead of being performed in a theatre under the eyes of hundreds, are done almost under the bedclothes in the dark and narrow chamber of the poor. The student must attend poor patients at their own homes. This duty is sometimes very disagreeable; consequently it is often evaded. Formerly the Colleges required attendance on six cases, but, though they have increased the number to thirty, it is scarcely sufficient for the purpose. Ordinary cases of labour require only patient observation. The extraordinary and difficult cases, which are calculated to afford most instruction, are few and far between, and a pupil may have attended thirty cases without meeting a single difficulty. Fifty in place of thirty would be far better. More than 2000 children are born every week in London, and there could be no difficulty in obtaining the required number for the student. Experience of one really difficult case under a competent teacher will give marvellous skill and confidence.

One glance at the memorial of the obstetric lecturers (which we print at p. 622), at the enormous importance of the health of our women and children, and at the corner into which obstetric instruction is thrust under present regulations, will render evident the fact that the obstetric art is by no means represented in the General Medical Council, and that this is one of the earliest reforms in the constitution of that body which ought to be attempted.

THE WEEK.

TOPICS OF THE DAY.

The din of the elections is beginning to wane. The gains since we last wrote to the number of Medical candidates are soon told. We are glad to see that Dr. Lush is returned for Salisbury, and that Dr. Brady resumes his seat for Leitrim. Had the state of political feeling in Ireland permitted him to receive the support of his Professional brethren, there can be no doubt that Sir Dominic Corrigan would have sat for the city of Dublin. Sir John Lubbock, who was at one time started as the scientific Liberal candidate for the University of London, has been defeated in West Kent. On the whole, the elections, considering that Medical men as a body have displayed their wonted indifference, have not proved unfavourable to the prospect of Poor-law and other Medical reforms.

The defeat of Mr. Gladstone in the contest for the Lord Chancellorship of the University of Edinburgh is one of those events which had been foreseen and which are to be easily accounted for. In the first place, there is undoubtedly a strong Conservative feeling amongst the graduates of the University, but it may be questioned whether this alone sufficed to give the Lord Justice-General the majority of 210 over his brilliant opponent in a constituency of about 3300. The fact is that the Lord Justice-General was universally popular with the graduates, for this University probably owes more to him than to any other public man who is not immediately engaged in conducting its business. On the other hand, Mr. Gladstone, although he has filled the office of Lord Rector, has not conferred any special benefits on the University constituency, and is the author of a most unpopular scheme for degrading the Scottish Universities to the rank of Colleges. Whilst, therefore, his defeat is to be accepted as one evidence of a strong Tory feeling existing amongst the Edinburgh graduates, it is by no means a certain omen of the result of the fight between the Liberal and Conservative parties in the coming election. No doubt votes for the Lord Justice-General were given for non-political reasons, whereas the coming election will afford tolerably conclusive evidence of the strength of political parties in the Edinburgh and its sister University. We regret to hear that many of the St. Andrews graduates have neglected to register, and are therefore deprived of the privilege of voting.

The struggle between the two lawyers in the Glasgow and Aberdeen University constituency is as yet a very doubtful one. The nomination took place on Wednesday last week, when the Lord Advocate Gordon was proposed by Mr. James A. Campbell, and was seconded by Dr. J. G. Fleming; and Mr. Moncreiff was proposed by Mr. Walter Buchanan, and was seconded by Dr. Brown, of Aberdeen. The poll is appointed for December 2 and the five following days.

The promised Royal Commission on matters relating to public health is now appointed, and, both by its constitution and by the very important range of subjects over which its powers of inquiry extend, seems destined to mark an era in the history of sanitary reform amongst us. The appointment of the Commission, and the admirable selection made of Commissioners, tend to enhance the generally favourable impression which the domestic policy of the present Government will leave. The objects for which the Commission has been issued are to inquire and report upon the operation of the sanitary laws for towns, villages, and rural districts in Great Britain and Ireland, so far as these laws apply to sewerage, drainage, water supply, removal of refuse, prevention of overcrowding, and other conditions conducive to the public health; also to inquire into the operation of the laws for preventing the introduction and spread of contagious and infectious diseases and of epidemics; to examine into the local administration of the sanitary laws, and, lastly, the operation of that part of the registration system which relates to certificates of causes of death. The following are the names of the Commissioners:—Lord Northbrook, the Earl of Romney, Lord Elcho, Charles Bowyer Adderley, Henry Austin Bruce, Sir Thomas Watson, Bart., M.D., Sir Charles Lanyon, Knight, Lieutenant-Colonel Charles Brisbane Ewart, R.E., John Robinson M'Clean, C.E., George Clive, Francis Sharpe Powell, Acton Smee Ayrton, Roger Sinclair Aytoun, Benjamin Shaw, John Lambert, James Paget, F.R.C.S., Henry Wyldbore Rumsey, Henry Wentworth Acland, M.D., Robert Christison, M.D., William Stokes, M.D., and the Rev. Samuel Haughton, M.D. Nothing, we think, could be better than this selection. A report signed by such men as Sir Thomas Watson, Colonel Ewart, Professors Haughton, Acland, and Christison, Mr. Paget, Dr. Stokes, and Mr. Rumsey, will have an authority that will admit of no gainsaying.

The muttered discontent with which the mandates for building the expensive new Hospitals and asylums for sick and insane paupers have been generally received by the London parishes has broken into open opposition in the Holborn Union. It appears that the Poor-law Board have issued an order for combining the parishes of St. James's Clerkenwell, St. Luke Middlesex, and the Holborn Union into the "Finsbury Sick Asylum District" for the purpose of erecting in some open situation sick asylum buildings common to all. Now, it appears that the guardians of the Holborn Union had already, with the knowledge of the Poor-law Board, entered into agreements for the purchase of land adjacent to their workhouse, at the cost of £5000, on which to build their infirmary.

The Poor-law Board, it is said, have had these agreements in their possession for several months. The guardians, therefore, naturally enough object to the new order, and are determined to oppose it as best they may. We hear that the guardians of St. Giles-in-the-Fields and St. George Bloomsbury have been placed in a somewhat similar dilemma. If these sick asylums are to be built, and can be erected at as small a cost out of town as in the parishes themselves, there can be no doubt that the recognised principles of hygiene would require a country site. We have already expressed our opinion on the justice or necessity of burdening the great mass of ratepayers for the purpose of raising gigantic buildings where the sick pauper is to be housed and tended at a greater expense than the poor ratepayer could afford for a sick wife or child. Still, if the expenditure be not greater, and the present enormous local taxation thereby increased, there can be no doubt as to whether a town or country infirmary should be preferred.

In addition to Dr. T. K. Chambers and Dr. Ogle, we notice that Mr. T. P. Teale, M.A., B.M., Brasenose, has been nominated by the Vice-Chancellor as an examiner in the final examinations for the degree of Bachelor of Medicine at Oxford.

During the past week a schoolmaster named Cosbey has been tried at the Central Criminal Court for the manslaughter of a boy named Wiley. It appears that the defendant, in punishing Wiley, gave him a blow with the hand on the top of his head. The boy complained of headache afterwards, and seemed ill, but the same afternoon he went to see some pigeons fly. Whilst looking at the birds he was seized with giddiness, and in the course of the day he vomited. The day was a very hot one. The boy became worse, and died with symptoms of brain mischief twenty days after the blow had been received. Mr. Baker, of Grove-road, who attended the boy, and made the post-mortem examination, deposed to finding thickening of the membranes, and the results of inflammation under that part of the skull where the blow had been struck. Dr. Sedgwick, of Park-place, Upper Baker-street, had also seen the boy during his illness, which he ascribed to inflammatory effusion on the brain, the result of sunstroke. The jury accepted the latter view of the case, and acquitted the schoolmaster.

A telegram states that a Medical student named Miles was murdered in Dublin in the open street on Wednesday afternoon last. The crime was committed close to Moore's statue in College-street. Mr. Miles was beaten about the head and his skull fractured. He was taken to the Hospital, where he died shortly after admission. A man who assisted him to the Hospital gave the names of three men who, he stated, attacked the deceased.

According to Sir Richard Mayne's statistics, crime in London does not seem to be on the increase, but there is an enormous amount of it never detected. It is not pleasant to know that if your house is robbed it is about three to one that all the thieves will escape, and that there are about nine chances to one in favour of each particular thief engaged in the exploit. Robbery with violence is rather more dangerous to the perpetrators. It is a crime in which there are always two or more engaged, but for fifty-four street outrages which occurred in the metropolitan police districts during six months of the present year only thirty-eight persons have been convicted.

Dr. Semple, of Torrington-square, has been elected Physician to the Bloomsbury Dispensary. The appointment carries with it a yearly honorarium of a hundred guineas.

A remarkable case of alleged homicidal monomania is reported in the Geneva journals. A nurse, named Jeanneret, has been arrested on the charge of having murdered nine of her patients with atropine or belladonna. It is said that she feigned partial blindness in order to obtain the poison. She neither robbed the persons whom she is said to have killed, nor did she obtain any benefit by their death.

The erection of the new buildings for the use of the learned societies has given rise to some correspondence between the secretaries of the Chemical and Royal Societies on the subject of intercommunication between the apartments of the two societies. One principal reason urged for the association of the learned and scientific societies at Burlington-house was that it would promote the free exchange of thought and information amongst men engaged in different scientific pursuits; that it would give facilities for members of different societies to attend their respective meetings or to consult their libraries, and, on the whole, would tend to the advancement of science. At present in Burlington House there exists all the required facility of intercommunication between the temporary apartments of the Royal and Chemical Societies; but in the new buildings this will not be the case. In answer to a letter expressing the wishes of the President, the Vice-Presidents, the Secretaries, and a large body of Fellows of the Chemical, that the plan of free intercommunication be adopted in the new building, Dr. Odling has received an official letter from Dr. Sharpey, enclosing a copy of the following resolution adopted by the President and Council of the Royal Society:—"That the question of establishing an internal communication between the new apartments of the Royal Society and those adjoining having, after mature consideration, been determined in the negative, and the architects having received instructions to that effect, and prepared the plans accordingly, the President and Council are not disposed to approve of any alteration which would involve a departure from that arrangement." Some further correspondence has since taken place, but without altering the determination of the Royal Society, which prefers isolation, we presume, as more conducive to its dignity and its repose.

ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.

THE President of this Association will have a peculiarly grateful duty to perform at the anniversary dinner in giving the toast, "The Houses of Parliament," for he will not have to look beyond the ranks of the Profession or of the graduates of his own University for a response. Dr. Lush, the newly elected member for Salisbury, will be there as a member as well as a guest, and doubtless his fellow-graduates will give him a hearty welcome.

CHELSEA HOSPITAL.

A CORRESPONDENT generally well informed on such matters writes to inform us that the appointment of Principal Medical Officer of the Chelsea Hospital rests entirely in the hands—of all persons in the world—*of the Paymaster-General!* and that the Director-General of the Army Medical Department has virtually nothing whatever to do with it, or else, adds our correspondent, we might be certain that the interests of the large body of deserving Medical officers retired from the service on half-pay would not be sacrificed to the advancement of a junior staff-Surgeon to an easy and—as times go—lucrative home appointment.

PROMOTION IN THE INDIAN MEDICAL SERVICE.

WE doubt whether the announcement will give satisfaction that her Majesty's Government have extended to the Indian Medical Service the regulation which prevails in the British—that "a Surgeon of less than twenty years' full-pay service may be promoted to the rank of Surgeon-Major for distinguished service." We have already shown how and why the present system of the application of this rule in the British Medical Service has produced so much dissatisfaction among the members of that body generally, and we feel certain that it will be still more distasteful to those of the Indian Medical Service, unless it be qualified with a provision that promotion to the administrative ranks is, as heretofore among them, to be according to seniority

in total length of service. That the system of promotion by seniority is the most likely to lead to the general efficiency of the service we do not mean to contend, but Indian Medical officers have been accustomed to it so long that they now look upon it as one of their inalienable rights, any infringement of which, by the promotion to the rank of Deputy-Inspector-General of an officer who had obtained precedence in the list of Surgeons-Major on account of distinguished service, will be felt by all the senior members of that service to be a hardship of no ordinary kind. If selection for promotion to the higher ranks is to be the rule of the Indian Medical Service, it ought certainly, in justice to those who entered that service with different expectations, to apply only to those who may hereafter enter it with such an understanding.

SOLDIERS' PACKS AND MEDICAL OFFICERS' UNIFORMS.

It is said that the delay which has occurred in the adoption of the new form of soldiers' packs recommended now nearly two years ago by the committee appointed to consider the effect of the present system of accoutrements and knapsacks on the health of the infantry soldier has arisen entirely from the obstructive action of a noble lord high on the staff of H.R.H. the Duke of Cambridge. We think it would be very desirable that some representative of public opinion in the new Parliament should institute inquiries as to where the obstruction exists. Army Medical officers have also, we believe, to thank the same high authority for the rejection of improvements in their uniform lately submitted for the consideration of the Commander-in-Chief.

SCARLET FEVER.

If anything were wanting to show that scarlet fever belongs to the same class of diseases with erysipelas, Hospital gangrene, typhoid fever, and the like, it is the identity of the questions which arise from time to time as to their origin and propagation. Some years ago the doctrine was that scarlet fever was propagated exclusively by infection; and even after typhoid was known to be caused by sewer poison, the idea that the same could be the case with scarlet fever was treated as fanatical. By the way, so far as we know, this idea was first enounced by Dr. Druitt in a lecture on the sanitary state of dwelling-houses, at the Royal Institution in 1859. Now, however, both doctrines seem to be held with even balance. No one can deny the spreading of scarlet fever from sick to healthy; but the correlated doctrine that it can be generated, or at least increased and propagated, by filth of all sorts, but more especially by sewer filth, is also acquiring daily greater prominence. So that, as with questions of quarantine, whilst contagion is justly shunned, the foul conditions of air, earth, and water, which intensify contagion, are still more justly denounced. A letter which Dr. Carpenter, of Croydon, has published in the *Times* of November 24, bears valuable testimony to the true sources of danger. We know for a fact that persons who would refuse to come within half a mile of a scarlet fever patient, and who profess dread at the smallest piece of scarf-skin that peels off, will yet breathe and drink sewer vapour and sewer water with sublime unconsciousness of danger. Dr. Carpenter says of scarlet fever:—

"In most cases its destructive effects may be traced to some recently disturbed cesspool. It is severe with those living in an atmosphere such a condition engenders; it is slight with those not exposed to such influence; and this is the case with the majority of those living upon lines of sewers which are properly flushed and well ventilated; not, however, on the *elongated cesspools under streets* of great cities.

"It is more particularly the truth of the assertion that scarlet fever depends wholly upon contagion for its production that I wish to challenge, and for the following reasons:—I have twice been able to trace an outbreak of scarlet fever most distinctly to the spreading of slaughter-house manure upon market gardens—in one case 500 yards distant from the houses affected by it. The manure was spread and left exposed upon the ground for three days to windward of some houses situated upon higher ground. They were all detached from each other, and not communicating with each other. Five days after the manure was thus exposed, seven cases of scarlet fever occurred simultaneously in six of the houses thus circumstanced. Not one of the parties affected knew any of the others, and there was no circumstance common to each except the one I have mentioned. The symptoms of the fever were most marked, but the ordinary means of isolation being adopted, there was no spreading of the disease after its first appearance. The manure was ploughed in as soon as complaint of the stench was made. In the other case the impossibility of contagion was less marked, but many isolated cases occurred in a district exposed to the influence of slaughter-house manure. They all occurred, as far as I could learn, simultaneously, or nearly so, and there was no continuance of the disease.

"Now, while slaughtering goes on as it does in large cities, while the refuse is used as a manure, and carted without preparation over the country in hot seasons and spread over the land, while cesspool matter is used in the same way, while blood from slaughtering-places finds its way into sewers and putrefies there, the particular ferment producing scarlet fever is thus set free. Scarlet fever will continue to occur, in spite of all other sanitary improvements, and while such cases do arise its propagation will occur in ways quite impossible to discover, the penalties inflicted by the Sanitary Act notwithstanding. Every Medical man attending the poor in great cities is aware of this. I have seen poor persons at work as tailors, as upholsterers, as weavers, and at other trades, in the same room as that in which their children, sick with scarlet fever, were lying. I have remonstrated with them upon the danger to others by such a course. They have asked, with tears in their eyes, if they and their sick little ones were to starve. Thus the disease is introduced into the households of the rich from the dwellings of the poor, and the vengeance of Providence falls upon those who, as a class, are more responsible for the origin of such diseases than the poor among whom it may first be engendered. We ought not to allow the presence of that matter which produces the disease—namely, animal matter in a particular state of decomposition. Remove all such before decomposition takes place, and you render scarlet fever comparatively harmless and infrequent."

EARTH-CLOSETS AT DOVER.

Some of our readers may be aware that earth-closets of a simple and inexpensive construction, manufactured by military labour, have been in use since January, 1867, at the Castle-hill Fort, Dover, as a temporary measure during reconstruction of the latrines on the water principle and connexion of the sewers with the main drainage. The result of the earth-closet system has been so satisfactory that it appears matter for regret that it should have been of merely temporary application, and the question arises whether—if not too far advanced—the works for the water drainage might not be suspended for a further period, if not entirely abandoned. The Fort is particularly well situated for the purpose of giving the earth-closet system the fullest and fairest trial, being surrounded by cultivated land, etc. A neighbouring farmer, for the first year, contracted to supply the necessary quantity of earth at half-a-crown a ton, and to remove the soil when required. Having experienced the fertilising results on his crops, he has now undertaken to supply the earth for nothing during the second year. He burns all weeds, clumps of earth, and scrapings of his fields, and removes stones by sifting before sending the earth to the Fort; the resulting soil requires no other burning, and no disagreeable smell whatever is experienced in its removal or from the fields on which it is spread. It is estimated that 4 lb. of earth *per diem* is required for each person. The closets are self-acting, and have been very seldom, and that only to a trifling degree, out of repair since they were first used.

FROM ABROAD.—RURAL POPULATION OF FRANCE.—PROPAGATION OF TUBERCLE BY INGESTION.

In the last number of the *Revue des Deux Mondes* a question is incidentally touched upon which a little time since occupied

much of the attention of the Academie de Médecine—viz., the decrease of the rural population in France, concerning the reality and causes of which great difference of opinion prevailed in that learned body. The article we are now about briefly to allude to is from the accomplished pen of M. Léonce de Lavergne—as great an authority on all rural and agricultural matters in this as in his own country. He is furnishing an account of the publications which are now being issued as a consequence of the great *enquête agricole* which the French Government instituted in 1866 for the purpose of investigating the complaints of agricultural distress, which had become so general. The volumes are now issuing, printed in the costly and broad-marginal style characteristic of the French official reports, so contrasted (we are glad to say) with our own economically got-up blue-books. The inquiry was conducted on the most elaborate scale, embracing all France, and going into every question which even incidentally related to the condition and prospects of agriculture, communications being sought by means of circulars from every quarter, and most freely furnished, either orally or in writing. M. de Lavergne pronounces the *enquête* to have been as "serious" as any administrative one could be; but another able writer in the same journal, M. Reybaud, of the Institut, referring to the same publication, plainly intimates that one great object it has in view is to raise the bucolic expectations and hopes on the eve of the elections. However this may be, we have to observe that the general tenor of the *enquête* is to show that French agriculture is in a very depressed state, while the means suggested for its revival contemplate an amount of expenditure impossible to be provided for.

One complaint met the Commissioners on every side—the want of sufficient hands. This has always been a complaint, M. de Lavergne observes, in the provinces, but one, until of late years, not justified, inasmuch as the rural population continued to increase; but during the last twenty years it really has diminished by one-tenth. Before 1848 the national population increased by 200,000 souls per annum, while since that date it has only done so by 100,000, making a difference of 2,000,000 in the twenty years. The opinion so generally spread that this arises from the diminution in the number of births is not exact, for such diminution has been too slight to exert a preponderant influence on the decline. The true scourge has been the increase of mortality, and this increase, as well as the decrease of the births itself, is mainly due to the military service. Before 1848 the births were 980,000 per annum, and the deaths 800,000; while since 1848 the births have been but 960,000 per annum, and the deaths 860,000. During the years of war the mortality was frightful. Thus in 1854 and 1855 the deaths exceeded the births, which had never happened before; and in 1859 and 1865 a similar increase in mortality occurred. Even in time of peace the present enormous army leads to a great loss of life. During fifteen years 500,000 men in the prime of life have been lost by war who might yet be alive, as would many children be whom they would have begotten. It is quite impossible for France to continue supplying a levy of 100,000 men per annum. Another grievance the provincials bitterly complain of is the attraction of men to the towns in excessive numbers by the vast public works there executing. While portions of territory are nearly depopulated, the Department of the Seine has gained its 750,000 new inhabitants in fifteen years.

On perusing the gloomy picture which so competent a hand as that of M. Léonce de Lavergne draws of the position of the French peasant, we are reminded how often he has been held up as an object of envy to our own labouring class. It is true that the condition of Hodge is still deplorable, though not unimproved; but we strongly suspect a brighter future is in store for him than awaits Jacques Bonhomme. In some of the departments of the north and west, having the supply of Paris and easy communication with this country, agriculture is flourishing enough, and the peasant proprietor may be there living in clover; but in the centre and south of France a very different tale is told. There pursued by his mania for possessing a bit of land however fragmentary, loaded with debts and mortgages, exposed to vexatious litigation, harassed by imposts and taxes, deprived of roads for the conveyance of his produce, meeting octrois at every profitable market, unprovided with sufficient and nutritive food or with suitable habitation, and having no claim for Medical attendance or assistance beyond that supplied by voluntary charity when sick or worn out, nothing but his undaunted spirit and noble self-denial could enable him to make the stand he has made, and no wonder that he begins to manifest signs of impatience.

If the prolonged discussions which have taken place this year at the Académie de Médecine on the subject of tuberculosis terminated amidst general weariness and inattention, such was not the fate that awaited a paper read by M. Chauveau at the last meeting. This raised almost a storm at its author's expense for having brought forward a matter pregnant with the most important consequences on grounds so manifestly insufficient. Truly the subject was important enough; for M. Chauveau declares that tuberculosis can be propagated with ease by the consumption of meat furnished by animals the subjects of tubercle. The natural conclusion is that the meat of such animals should be prohibited to be sold, not on the ground of its being less nutritious than that furnished by healthy animals, but that it is a means of directly conveying a virulent disease. One would have thought that so important a conclusion would have been based upon a prolonged investigation; but M. Chauveau contented himself with conveying thirty grammes of tuberculous matter taken from a phthisical cow into the stomach of three heifers. Killed at the end of fifty-two days, in each animal general tuberculosis was found to have become developed. A fourth heifer living under the same conditions as these, save the ingestion of the matter of tubercle, continued quite well. Thus tuberculosis may be conveyed to these animals by digestive infection, just as vaccinia or variola may be from man to man by contact. M. Colin protested against receiving these three cases as anything more than mere coincidences, especially considering how frequent is the occurrence of tuberculosis in cattle. The not finding this condition is quite the exception in the autopsies made at Alfort. The disease, too, became developed far too rapidly in M. Chauveau's cases—in one only twenty days after ingestion—not to suppose that a tubercular condition already existed at the time of the administration of the tubercular matter. M. Reynal considered the statements made of great importance, for among the cattle allowed to be sold for food many are tubercular. He does not believe, however, that the disease is identical in cattle and man—the former, in fact, presenting the same lesions as in epizootic peripneumonia. M. Tardieu considered that any formal discussion on such slight grounds would be as premature as are the conclusions themselves.

Professor Virchow.—The ovations intended to be paid to this distinguished professor on the occasion of his twenty-five years' doctorate jubilee on October 21 were defeated by his setting off for a tour in order to avoid them.

Rupture of the Spleen in Pregnancy. — Dr. Whitney relates an interesting case. A woman aged 38, advanced eight months in her ninth pregnancy, enjoyed excellent health until this occurrence. After eating a hearty supper she was seized in the night with violent pain in the region of the stomach, and soon after with convulsions, supposed to be puerperal. She died in a few hours, and at the autopsy it was found that labour had not begun, but that there was a laceration of the spleen from which had escaped four or five pints of dark and still fluid blood. The organ was little if at all enlarged, and the torn part had the colour and consistence of black-currant jelly.—*Boston Medical and Surgical Journal*, October 1.

MEMORIAL OF THE LONDON LECTURERS ON MIDWIFERY

TO THE

COMMITTEE OF THE GENERAL COUNCIL ON MEDICAL EDUCATION.

TO JAMES SYME, ESQ., CHAIRMAN OF THE COMMITTEE OF THE GENERAL MEDICAL COUNCIL ON "MEDICAL EDUCATION."

London, November 10, 1868.

SIR,—The Lecturers on Midwifery and the Diseases of Women and Children attached to the London Schools considered that they might most effectually promote the object sought by your Committee by discussing the matter together, and submitting the conclusions which they, as a body, might arrive at.

They have accordingly met in deliberation, and beg leave to submit the following:—

The lecturers—considering the great extension which has been made in recent years in the knowledge of obstetrics and the diseases of women and children, the deep interest of the public in possessing Practitioners duly skilled in this department, and that it is of paramount importance to the comfort and success of the young Practitioner to possess sound theoretical and clinical training in it—are unanimously of opinion that the actual means of study, and the share devoted to it in the present curriculum, are insufficient.

At present, one summer course of three months only is required. It is found to be impossible in such a course to treat adequately of the subject of midwifery proper, whilst the extensive and important subjects of the diseases of women and children must be left untouched.

As to the topics which may most advantageously be included under the subject of Midwifery and the Diseases of Women and Children.

The lecturers are of opinion that the course of instruction should embrace—

1st. All that relates to pregnancy, parturition, and lactation.

2nd. All that relates to the functions and diseases of the sexual system of women; and

3rd. The diseases of childhood.

As to the period in a four years' course when Midwifery can be most profitably studied, and the length of time which should be devoted to Midwifery.

The lecturers are of opinion that the study of the subject of Midwifery and the Diseases of Women and Children should be extended over two courses of lectures; and that these may be most profitably attended during the second and third summer sessions; and further, that a course of clinical lectures—not less than twenty in number—on the diseases of women and children, should be attended during the third or fourth winter.

As to the manner in which Midwifery can best be taught—by Lectures, practical instruction, or otherwise.

The lecturers are of opinion that attendance upon systematic lectures on Midwifery is indispensable. They believe that Midwifery, even more than Medicine or Surgery, admits of illustration by preparations, fresh specimens, and drawings; and that an important portion of the subject requires and admits of demonstrations by the lecturer and manual practice by the students.

With a view to the better clinical teaching, the lecturers are of opinion that there should be attached to every Hospital an Obstetric Physician and an Assistant Obstetric Physician, or two Obstetric Physicians, it being impossible for one officer to be at all times ready to meet the sudden emergencies of Midwifery.

Also, that the students should be required to attend Midwifery cases—not less than twenty in number—after or during their attendance upon the first course of lectures on Midwifery; and that to assist the students, as well as to conduct the maternity department in an efficient manner, a Resident Accoucheur or Obstetric Assistant, acting under the guidance of the Obstetric Physicians, be attached to the Hospital.

As to instruction in the Diseases of Women.

The lecturers are of opinion that a ward should be devoted to the diseases of women, and that the Out-Patients' Department for Women should be made more available for clinical instruction by attaching clinical clerks and dressers, as is done in the Medical and Surgical Departments.

Also, that every student should be required to follow during at least six months the practice in the Obstetric Department, including the ward for diseases of women and the out-patients.

In relation to this point, the lecturers are of opinion that a similar rule to that of the College of Surgeons (Section II., No. 10), which requires a certificate of having attended clinical lectures on Surgery, and to that of the University of London, which requires a certificate "of having attended the Surgical and the Medical practice of a recognised Hospital during two years, with clinical instruction and lectures on Clinical Surgery and Clinical Medicine," should be extended to the Obstetric Department.

They remark that, in the case of the most modern curriculum, that of the Royal College of Physicians for the licence, a certificate is required "of having been engaged during six months in the clinical study of diseases peculiar to women."

As to the Diseases of Children.

The lecturers are of opinion that a special ward should be devoted to sick children, that sick children should be seen in the Out-Patients' Department, and that attendance in this branch should be held to be an essential part of the clinical study in the Department of Midwifery and the Diseases of Women and Children.

We have the honour to be, Sir,

Yours faithfully,

(Signed)	HENRY OLDHAM,	GRAILY HEWITT,
	J. HALL DAVIS,	JOHN CLARKE,
	W. TYLER SMITH,	E. HEAD,
	ROBERT BARNES,	E. PARSON,
	J. BRAXTON HICKS,	FREDERIC BIRD,
	W. O. PRIESTLEY,	ROBERT GREENHALGH.

REVIEWS.

On the Wasting Diseases of Infants and Children. By EUSTACE SMITH, M.D. Lond., Physician Extraordinary to the King of the Belgians, etc., etc. London: Walton. 1868. Pp. 260.

THIS work is a very useful addition to Medical literature. Dr. Eustace Smith especially points out that the terms "wasting," "marasmus," etc., are often very improperly used. He observes: "It is not uncommon to hear that a child has been given over for this supposed complaint (mesenteric disease) when he is in reality suffering from nothing else than *bad feeding*, with derangements of the bowels as its natural consequence. . . . Setting aside the extreme rarity of mesenteric disease, there remains the fact that the distension of the abdomen is by no means a necessary consequence of this disease. On the contrary, unless the glandular disease be great, the abdominal wall is more often retracted than expanded. . . . If the increase in the size of the glands is sufficiently great to produce a distinct tumour, the swelling is seated about the umbilicus, and does not occupy the whole abdomen." What then gives rise to the emaciation so often met with in infancy? Not one, but various diseases—chronic diarrhœa, rickets, worms, chronic tuberculosis, and congenital syphilis—and these diseases too frequently have their stimulus in a defective nutrition. "Wasting is a sign of defective nutrition," and in every case the cause should be inquired into. It may be unsuitable food; the child may be prevented from assimilating an ordinary digestible diet by some unhealthy condition of the alimentary canal, or some constitutional defect, as the existence of tuberculosis or congenital syphilis, may interfere with the proper nutrition of the tissues. It is very essential, therefore, to detect the earliest symptoms of wasting, and to search out its cause. In the majority of cases it can be traced to improper feeding, and therefore a strict regulation of the diet is indispensable. "Tonics given to a child whose bowels remain disordered are *perfectly useless*, for, so long as derangement of the alimentary canal continues, nutrition cannot be restored, on account of the impediment thus presented to the digestion and the assimilation of food." The strictest attention should be given to regulate the diet, to arrange the quantity and the times for taking food, of course removing by medicine any improper food which may have been previously taken. In aid of a regulated diet, strict attention to the skin is necessary. For this purpose, warm baths followed by continued friction over the body for some time will be found of great service, and in cases of chronic disease stimulating liniments and cod-liver oil. By these means the circulation is rendered more vigorous, and the healthy action of the skin promoted. But discretion is needful in the use of counter-irritants to young children, for "an irritant which in a healthy child would produce only

a moderate degree of redness will often, where the strength is much reduced, set up very great inflammation, or even produce sloughing of the tissues. . . . Blisters are inadmissible for infants."

Having given this general outline, the author proceeds to consider the various results which follow from defective nutrition; and first, "simple atrophy," which he states is "an exceedingly common condition." The supply of food may be actually deficient, as is often the case when the child is nourished entirely by the breast, but the milk of the mother is poor and watery. When she is weak, anæmic, and evidently ill-nourished, the milk must suffer; but there are cases where the health and general appearance present no signs of weakness, and yet the milk is of inferior quality. "From the researches of MM. Vernois and Becquerel, we find that the richest milk is far from being secreted by women of the greatest muscular development. On the contrary, their investigations tend to show that a robust figure is inferior in milk-producing power to one slighter and apparently less vigorous." Besides those cases where the quantity of food is at fault, there is another class where nutrition is equally unsatisfactory, although the supply of food is liberal enough. For instance, where weaning is premature, or where the child has been brought up by hand and the food improperly selected, "a child is not nourished in proportion to the bulk of food he receives into his stomach." He may take large quantities of food into his stomach, and yet, from weakness of his digestive organs or from the indigestible nature of the food swallowed, may derive no nourishment from it whatever; on the contrary, it may cause great irritation and pain, and reduce the child it was intended to support. The author says: "It is the tendency of mothers to overfeed their children—to mistake every cry for the cry of hunger. Consequently the peevishness and irritability of the child increase in proportion to the pain excited in the bowels; the food is made more and more nourishing, and the louder the cry the thicker 'the sop,' until at last a violent attack of vomiting or diarrhœa takes place, or a convulsive fit warns the parent it is time to desist."

In nutrition it is important that changes be rapid. These are effected by the oxidation of the old material, which is then removed to be replaced by new matter. It is indispensable, therefore, that no needless impediment should exist to the free oxidation of the tissues. "Now, starches and sugars, into which starches are converted by digestion, have a greater affinity for oxygen than albuminates. They therefore tend to appropriate the oxygen which is required for the removal of waste matters, and so prevent the proper change taking place." For this reason alone, besides their indigestible properties, food composed chiefly of starches is very improper diet for a young child.

Under the head "Treatment" the author makes some very valuable remarks on nursing. He then proceeds to the consideration of infantile diseases, many of them the result of improper diet—for instance, chronic diarrhœa and chronic vomiting. Rickets he shows to be also an effect of malnutrition, and worms a consequence. Other constitutional diseases the author classes with these, as tuberculosis, phthisis, congenital syphilis, on all of which he has written valuable chapters. The work we think an excellent one for the student of the diseases of children, and well worthy the attention of the Profession.

Medical Candidates for the Army.—We are glad to hear that the present class of Medical candidates for the army at Netley is of good quality, and contains some gentlemen of decidedly high Professional and general attainments. The number of candidates at the last competitive entrance examination having considerably exceeded the number of vacancies, doubtless contributed to this result.

We observe that a local Medical Society for Salisbury and its neighbourhood has just been constituted in that city. The President, Dr. Lush, is one of the few new Medical Members of Parliament, having just successfully contested the borough, and having been elected chiefly on account of the great respect entertained for him in and around Salisbury. The following is the list of office-bearers for the ensuing year:—*President:* J. A. Lush, M.D., M.P. *Vice-Presidents:* J. M. Cardell, F.R.C.S. Eng., and W. G. Davis, M.R.C.S., L.S.A. *Committee of Management:* W. Martin Coates, M.R.C.S., L.S.A.; J. Winzar, M.R.C.S., L.S.A.; and E. Young, M.D. *Treasurer:* F. R. P. Darke, M.R.C.S., L.S.A. *Honorary Secretary:* H. J. Manning, B.A. Lond., M.R.C.S.

FOREIGN CORRESPONDENCE.

GERMANY.

The Annual Congress of German Naturalists and Physicians.

Berlin, November 1.

The proceedings of the Medical Section commenced with the reading of a paper, by Dr. Wietfeld, on "Basedow's or Graves's Disease," the characteristic symptoms of which are palpitations of the heart, swelling of the thyroid body, and undue prominence of the eyeballs. He related the case of a girl, aged 19, all of whose relations had died of phthisis. There was considerable dyspnœa, excessive action, but no enlargement, of the heart, a pulse of 130 to 140, restlessness at night, and increased appetite. The right lobe of the thyroid body was much enlarged, and the eyes so prominent that, when the eyelids were closed, a cleft of a quarter to half a centimetre was visible between them. The treatment consisted at first of the administration of digitalis and iron, afterwards of quinine in doses of one to one and a quarter grammes,(a) and at last of the use of the continuous galvanic current to the pneumogastric nerve. The immediate effect of the latter proceeding was that the pulse fell by five or ten beats. The tincture of veratrum viride was now also administered. Within six months there was considerable improvement; the pulse had fallen to from 60 to 70 beats, and the dyspnœa and prominence of the eyeballs had entirely disappeared.

The author then entered into the pathology of the disease, saying that Basedow thought it a dyscrasia similar to chlorosis, while Piorry believed the enlargement of the thyroid to be the principal cause, and the palpitations and exophthalmus merely a consequence of that. Trousseau, again, explained the symptoms by assuming irritation of the sympathetic, while Friedreich supposed it to be due to paralysis of the vaso-motor fibres coursing within the sympathetic. The author thought that the increase of the heart's action pointed to a weakened condition of the vagus, and he therefore directed the galvanic current to that nerve. Dr. Flies, of Berlin, had, by the same proceeding, obtained excellent results in eighteen cases of morbidly increased heart's action.

Dr. Guttmann, of Berlin, said that he had observed a number of these cases, and come to the conclusion that Basedow's disease was an affection of the sympathetic. He had, in six cases in which post-mortem examinations were made, found decided pathological changes in the cervical sympathetic. He referred to a paper on this subject he had published in Griesinger's *Archiv für Psychiatrie*. Dr. Hecker said that, in galvanising the pneumogastric as Dr. Wietfeld had done, it was unavoidable to act on the sympathetic at the same time, so that it appeared difficult to decide whether the favourable results were due to the stimulation of the vagus or of the sympathetic. Dr. Hirschberg said that he had seen many cases of Basedow's disease in Professor von Graefe's clinique, and that he believed it to be much more frequent than was generally considered. Graefe thought that it was a spasmodic affection of the levator palpebrarum, and that it might be cured by a division of that muscle. Dr. Hirschberg was satisfied that the sympathetic had a great deal to do with it, and that in many cases the starting-point of the disease seemed to be in an irritable condition of the sexual organs. Dr. Pauly believed the complaint to be an affection of the sympathetic caused by reflex action from remote organs. Dr. Freund said that he had in several cases seen uterine disease of a somewhat severe character precede the complaint, and that the irregularities of menstruation and anæmia, which were by some observers believed to be due to the complaint, occurred long before this broke out.

Dr. Erb, of Heidelberg, then made a communication on peripheral paralysis, with special regard to galvanisation and faradisation. Proceeding from the observations made by Baierlacher and others, that in certain cases of paralysis of the portio dura the muscles would still respond to the continuous current when they had entirely lost their excitability to the induced current, he made some experiments in animals in order to study the alterations of galvanic and faradic excitability of the muscles after division of the nerves animating the same. The results obtained by these experiments coincided completely with the observations made in patho-

(a) For some time past French weights and measures have in Germany been substituted for the old medicinal weights and measures.

logical cases, so that it seemed evident that these phenomena were due to identical causes. He found that nerves and muscles behaved quite differently under these circumstances. In the commencement of the paralysis the excitability, both to the galvanic and faradic current, became gradually and equally diminished in the nerve, and a week or two after the injury it was entirely gone. It only returned after the lapse of a more or less considerable space of time, and generally long after voluntary motility had returned. This was due to the interesting fact that, in the peripheral nerve-piece, conduction for the will was re-established before stimulation of any sort had again any influence upon the same. With regard to the muscles, it appeared that their galvanic and faradic excitability diminished likewise during the first week; the faradic excitability then continued to sink, while the galvanic, from the end of the second week, began to increase very much, and was also changed in quality, the excitability to the positive pole, on closing the circuit, rising more rapidly than that to the negative pole under the same circumstances. After some time galvanic excitability was again diminished, and fell gradually below the normal standard, while faradic excitability returned very slowly. The mechanical excitability of the muscles was increased in equal proportion with the galvanic. Dr. Erb then entered into the anatomical changes which were the cause of these alterations of excitability. In the nerves there was the usual degeneration of their marrow; the cylinder-axis persisted; and during the process of cure there was gradual new formation of the marrow, proceeding in a peripheral direction. In the neurilemma he had found proliferation of cells, and gradually increasing development and thickening of cellular tissue. As regards the muscles, there was true atrophy; the fibres became less than one-half their normal width within a month, the stripes being indistinct, although not entirely gone; the muscular nuclei increased; and finally that change of the contractile elements occurred which, after the death of the animal, appeared as so-called "waxy degeneration." In the interstitial connective tissue, he found, at an early stage, a considerable accumulation of round cells, which led, in course of time, to hypertrophy of the tissue. It was easy to connect the alterations of electric excitability of the nerves and muscles, which had been alluded to, with these anatomical lesions. These latter were very nearly allied to inflammation, especially to that chronic form which in certain organs leads to cirrhosis.

In the discussion which followed the reading of this paper, Professor Ziemssen, of Erlangen, said that he had also made a series of experiments on this subject in rabbits, which extended over eight months. He divided altogether fifty nerves, taking either the sciatic or the peroneal. From some of them a piece, three or four millimetres long, was removed; in others, conduction was interrupted by ligature, contusion, or tearing asunder. The wound made healed generally by first intention, and it was then possible to examine daily the excitability of both the central and peripheral ends of the nerve. On the whole, the results at which he had arrived coincided with those obtained by Dr. Erb; but in some respects his investigations had gone further. He found that by employing a more or less tight ligature he could produce palsies of different intensity and duration. Palsies of slight degree were characterised by loss of motility, diminution of faradic and increase of galvanic muscular contractility, while the excitability of the nerve was altogether diminished. In palsies of medium intensity, he found, besides the cessation of motility, after a day or two, total loss of excitability of the nerve to both the induced and the continuous current, increase of galvano-muscular and abolition of faradomuscular excitability. This loss of excitability was more rapid the nearer the injured portion of the nerve was to the muscle, and slower when nervous conduction was interrupted nearer the nervous centre. The duration of this form of paralysis was from three to six months, after which time the normal condition was gradually re-established. The severest degrees of palsy were caused by excision of a piece of a nerve. In this form the symptoms were generally similar to those previously described, with the exception, however, that the galvano-muscular excitability did not increase, but diminished in equal proportion with the faradic excitability, was entirely lost in the third month, and returned after six or eight months, simultaneously with the conductivity of the nerve. In these cases there was always atrophy, hardening, and rigidity of the muscular substance; and this also gradually disappeared in proportion as the nerve recovered.

Professor Maier, of Freiburg, then spoke on the development of connective tissue in the placenta, after which Professor Merkel, of Leipzig, read a paper on a new method of applying remedies to the pharynx and larynx by means of irrigation. This was practised in the following manner:—The patient took half a teaspoonful of the liquid to be used, the head being retroflexed, and the mouth wide open; let it flow down the tongue, and then made some lateral movements with the head, in order to bring the liquid into contact with all the parts upon which it was intended to act. The Professor showed, by an auto-laryngoscopic demonstration, that, by operating in this manner, the liquid would touch the base of the tongue, the sinus glosso-epiglotticus, the anterior portion of the epiglottis, the hyo-epiglottic ligament, the pyriform sinuses, the posterior surface of the arytenoid cartilages, and the posterior wall of the glottis cartilaginea. The method was useful in all congestive and inflammatory conditions of the mucous membrane of the pharynx connected with difficulty of swallowing, retching, sickness, etc., also in erosions, ulcers, and other lesions of the same parts, in infiltration, tumours, and paralysis of the muscles on the posterior part of the arytenoid cartilage. Tannine was the remedy chiefly used by the Professor, but he also sometimes employed nitrate of silver, iron, iodine, morphine, nux vomica, Calabar bean, etc.

Professor Ziemssen, of Erlangen, then spoke on paracentesis for hydrothorax where this was due to non-inflammatory processes. He said the reason why this little operation was not more practised, while paracentesis of the abdomen was constantly resorted to for ascites, was, that Medical men were afraid the results would be as unfavourable in hydrothorax as they were in freshly formed inflammatory effusions. This was, however, quite a mistake, and the operation itself was so insignificant that it might be made without a special set of instruments, and without assistance, by means of the ordinary test-trocar, which was pushed into the fifth or sixth intercostal space, at or in front of the axillary line. It was not necessary to use special precautions for preventing the entrance of air, as this was perfectly harmless. The pain was considerable, but might be reduced by employing the ether spray. There was no pain twenty-four or thirty-six hours after the puncture was made, and there was rarely, if ever, any inflammatory reaction. The liquid was evacuated not uninterruptedly, but by jerks, during expiration; nothing came away during inspiration, and if a deep breath was taken, air entered with a peculiar noise into the cavity of the pleura. The quantity of liquid evacuated varied from 500 to 1500 cubic centimetres. Corresponding to this, there was an increase of the vital capacity of the lungs, as shown by the spirometer. In one patient who was accustomed to spirometry, the following numbers were found:—

Day of Operation.	Side of Thorax.	Quantity of Liquid evacuated.	Vital Capacity of Lungs before and after Paracentesis.		Absolute Increase of the same.
		cc.	cc.	cc.	cc.
January 7 .	Left	700	755	982	227
February 2.	Left	580	750	885	105
April 11 .	Right	975	931	1057	126

Paracentesis ought to be performed where there was a high degree of compression of both lungs, with double hydrothorax, consequent upon disturbances of circulation, acute and chronic Bright's disease, tumours in the thoracic cavity, etc., which interfered with respiration and the heart's action. Under such circumstances the level of the liquid was high, there was extreme dyspnœa, impossibility to lie on the back, somnolence, turgescence of the veins of the neck, even during inspiration, and an extremely small and soft pulse. By the evacuation of from one to two pints of liquid, the symptoms were considerably changed; the pulse became stronger, the veins of the neck were emptied, dyspnœa disappeared, and the patient was again able to lie on the back and to sleep. The result of the operation was indeed so satisfactory that the patients themselves requested its repetition as soon as the dyspnœa became once more urgent. One patient who suffered from stenosis of the mitral valve and granular degeneration of the kidneys was altogether operated upon fifteen times, and his life prolonged for four months. Of course the results could never be curative, but the relief afforded was so great that it was our duty to resort to the operation.

Dr. Glück, of Liverpool, spoke on the value of blood as a medicine and an article of food. Blood might be called "essence of meat," because it contained all the essential parts of the latter. He used the blood of bullocks, calves, cows, sheep, and pigs, and thought it best to let the blood into large vessels and frequently transfer it to others, so as to bring the

blood thoroughly into contact with the air, and to aid the formation of the coagulum. This should be pressed and made into a hash, which might be added to soups, together with part of the liquid blood. He also recommended the hash and liquid blood to be added to calfsfoot jelly, which formed an article of food quite sufficient for sustaining life without the addition of anything else. It was extremely useful in anæmia, chlorosis, and similar conditions, and had been tested with satisfactory results in the Flint-street Soup-kitchen in Liverpool. Dr. Köhler thought that the iron contained in the blood had something to do with its beneficial effect; and it might be better to give, instead of blood, milk mixed with saccharate of the peroxide of iron, of which as much as thirty grains might be added to milk without producing coagulation of it.

GENERAL CORRESPONDENCE.

COLONEL EWART'S REPORT ON TOWN DRAINAGE.

LETTER FROM DR. J. H. WEBSTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your leading remarks on the above report will be eagerly read by members of our Profession. Agreeing with the tenor of that report, there are yet points which I think may be worthy of further consideration.

Water carriage and sewage irrigation hold their proper place in the recommended plans, but a "separate system" for rain-water in old crowded towns would be inefficient, and impracticable on the score of expense.

The washings of a large populous town upon a heavy fall of rain, and the refuse of gas works and other factories, admit no more of purification by "precipitation and filtration" than sewage itself, and ought never to go into our running streams. The enormous bulk of this water diluting the true sewage to so great an extent is the qualifying point of Colonel Ewart's recommendation of the entire application of sewage to land. It is a very good objection, but one that may be met, and in some towns it is so, of which Banbury is an instance.

One inch of rain giving upwards of 100 tons of water per acre, falling in the course of two or three hours, gives more than five times the daily average of dry-weather sewage in this town of 40,000 inhabitants. Such a quantity or more so suddenly falling must of necessity flush all the sewers, and if the rain be continuous, the subsequent water through the sewers will be very much purer, whereby its escape into a rising river may be allowed without any detriment. Provision by large tanks capable of containing four or six times the average daily sewage of the district might be made to catch the first hour or so of such storm-water, and the surplus remainder allowed to escape by the natural outlets. Such is the plan adopted at Banbury. Tanks are reserved to receive the rush after first rain, and when the water has risen in those tanks up to a certain height, the remaining extraordinary flow is diverted into the river, the amount of true sewage being then an unimportant minimum in an approaching maximum of river water.

Another point worthy of consideration is that in all towns having good drainage fall, with well and equably constructed culverts, whereby rapid transportation takes place, the sewage differs very materially in turbidity at different hours of the day, generally being at a maximum from about 10 a.m. to 1 or 2 p.m., and becoming clearer until about 10 to 11 p.m., when it slightly increases, and again diminishing until the hour of the change in the following morning.

Careful observation on the part of an intelligent surveyor of works would quickly give the times and circumstances when the sewage was of more or less concentrated character, and he could take his measures accordingly to appropriate that flow of sewage water most suited for agricultural irrigation, and deliver to the outfall that which is mostly in an innocuous condition.

Some towns deliver the whole, true sewage and rain water, on to their irrigation farms. Croydon and Rugby are doing this, and the experienced engineer of these works observed to me in relation to the former place, "We never yet have had too much, and, as far as I see, the more the better."

Dilution by storm-water of natural sewage ought not to be the objection to irrigation.

The rainfall may be taken at 23 inches per annum, not one half of which, from absorption by the soil, probably reaches the sewers. The first few hours of rain after a dry period are generally heavy, the latter a mere mizzle.

If the rain-gauge is made a subject of proper study in connexion with the season and its meteorology, Colonel Ewart may go in solely and unreservedly for sewage irrigation without any introduction to our towns of a "separating sewage" system of drainage.

I am, &c.

Northampton, Nov. 24. JOHN H. WEBSTER, M.D.

SUPPORT OF THE POOR-LAW MEDICAL OFFICERS IN THE NEW HOUSE OF PARLIAMENT.

LETTER FROM DR. JOSEPH ROGERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your journal of the 14th inst. you inserted, at the request of the Council of the Poor-law Medical Officers' Association, a copy of a circular letter which has been since sent through the members to candidates for a seat in Parliament, and I have now to ask you to permit me briefly to state what has proceeded from it.

It was decided that the replies should be forwarded to me for the purpose of being copied and arranged, with the view to their being laid before the Council of the Association at their next meeting in December; but as the results are extremely gratifying and encouraging to the future prospects of the Association, I should feel obliged if you will allow me, through your columns, to inform our members and Poor-law Medical officers generally that gentlemen belonging to every shade of political opinion, and who have since been returned, have written to state that they will advocate a modification of the Poor-law Board in the direction suggested by the Association and redress of the grievances of Poor-law Medical officers, whilst many others have intimated their intention to give favourable consideration to the question when it comes before the House.

Amongst gentlemen who have given favourable replies to the objects of the Association are to be found Mr. Birley, Mr. J. Bright, Mr. Muntz, Right Hon. R. Lowe, Mr. H. Lewis, Mr. Torrens, Mr. C. Ancott, Dr. Brewer, Mr. C. Waring, Mr. M. A. Bass, Lieut.-Col. Lloyd Lindsay, Mr. Peek, Sir G. Jenkinson, Lord G. Hamilton, Mr. C. Reed, Lord E. Fitzmaurice, Mr. Brand, Lord A. Henley, Mr. D. Bromley, Mr. Brodrick, Mr. A. Russel, Mr. Michael Biddulph, Lord C. Bruce, Mr. Gordon Rebow, Mr. Norwood, Mr. Clay, Mr. Guildford Onslow, Mr. Peare, Mr. W. Dilke, Mr. Hoare, Mr. J. Holms, and a great many others.

In addition, I have to state that I have received several letters from Poor-law Medical officers informing me that they have had either satisfactory interviews with or communications from members; and I should feel further obliged if you will permit me to request them to transmit to me all written replies as early as may be convenient, that a correct list might be made of all gentlemen who are disposed to support the objects of the Association in the House.

I am, &c. JOSEPH ROGERS,
President of the Poor-law Medical Officers' Association.

CURIOUS CASE OF SPONTANEOUS VERSION.

LETTER FROM DR. PAUL MAUNOIR, OF GENEVA.

[To the Editor of the Medical Times and Gazette.]

SIR,—I read with the utmost pleasure and interest Dr. Barnes's lectures on obstetric operations, now published in the *Medical Times and Gazette*. Amongst many points which the Professor sets forth with so judicious appreciation, one particularly struck me as important; not that I attribute it to him (as it has been known long since), (a) nor does he do so himself, but that he insists upon it as too much neglected, giving even the reasons of that neglect. I mean the remarkable extent of power in nature to deal successfully, and I should say cleverly, with unfavourable presentations and positions of the fœtus in utero.

I would have satisfied myself with reading such an important point developed by a man of high authority, as Dr. Barnes is, without writing anything, had I not quite lately met with an interesting case of self-evolution or, as it may perhaps better be called, self-turning. As the mechanism in this occurrence is

(a) Madame Boivin is very precise on that ground. Boivin, "Mémorial de l'Art des Accouchements," 3me édit. p. 221.

not quite obvious, I hope Dr. Barnes will kindly gratify your readers with a commentary on the fact.

I was called a few weeks ago to a woman, 36 years old, primipara, at full term after a favourable pregnancy. The labour began two days previously, but with very slight pains, very distant at first, and more frequent during the last night, though remarkably mild. As the real expulsive pains were wanting, the midwife sent for help at twelve in the day. I arrived twenty minutes after, and found the waters escaped just ten minutes, only about a full glass of viscous greenish fluid on the floor, the woman being up, and the surplus spotting the bed, but in a very small quantity. The first truly expulsive pain was felt at the rupture of the membranes. I was informed that the os uteri, very high in the pelvis, and still closed yesterday night, began to descend and dilate slowly after six this morning without the ordinary pains. The midwife felt the head presenting.

When I touched I ascertained the head was at the brim of the pelvis, the anterior fontanel towards the left sacro-iliac symphysis, and very easily reached with the finger; the posterior on the right ilio-pubic symphysis, above the edge of the brim, so that the bregma rather than the point of the head was presenting. Between the fontanels a mere crowning of the scalp instead of the ordinary tumour. My finger was then covered with glutinous fluid and plenty of sebaceous matter.

As the fœtus had not moved at all since nine in the morning, I believed it was dead, but I thought the labour would end naturally, and went away.

When I came back—one hour and a half afterwards—the fœtus was just extracted; it had been pushed out almost without pain; the breech foremost, the back in front, the legs close on the abdomen, and the head had to be disengaged with a little difficulty. A large quantity of clots and blood poured out with the fœtus. The child was dead; no blood tumour; the lips thin and violet; the trunk covered with violet spots; the funis thin, and quite pale. It was impossible to revive it. The placenta looked normal. Before I pulled it out there was much bleeding, and even after its extraction I had difficulty to stop the hæmorrhage. Happily the pains then began strongly, and the uterus contracted.

Excuse me for giving such an extent of details. I think they are important for the explanation of the fact. There is, I regret to say, a great deficiency of information in the few cases of self-evolution or self-turning I have found reported. It diminishes the utility of the observations.

In the above case there were obviously more than mechanical circumstances that conspired to produce the uncommon result. I cannot help thinking the placenta, in spite of its appearance, and consequently the fœtus, were diseased. The uterus, from the beginning of its enlargement, was considerably bending on the right side. The quality and quantity of the waters, the death of the fœtus (evidently previous to the bursting of the membranes), the atonic state of the uterus, and the hæmorrhage before delivery, indicate some morbid conditions of the organs that I dare not to determine. At any rate, I do not fancy that a healthy state of the organs and a live fœtus head foremost, even presenting a wrong diameter at the brim of the pelvis, should have admitted such a curious and rapid ending of the labour. What happened there is not easy to say. Likely the bregma swept from the posterior to the anterior fontanel on the ilio-pubic edge. The head was then pushed up, and the turning took place. Still, how is it that such a labour went on, with but little pain, for one hour and a half, and without any notable trace of pressure of the face, body, or scalp (except the aforesaid crowning)? There is a good deal to be explained in this case, and rather than give an explanation of my own, I shall get greater advantage, and so will also your readers, by referring to Dr. Barnes's knowledge and experience. I am, &c.

Geneva, November 17. PAUL MAUNOIR.

A TELEGRAM states that the Ohio Lunatic Asylum at Cleveland was burnt on November 18. Six patients were burnt to death.

ELECTRO-PUNCTURE IN THORACIC ANEURISM.—In the *Gazetta Medica Italiana-Lombardia* for October 31, Dr. Ciniselle relates a case in which electro-puncture was employed in the case of an aneurism of the ascending aorta, occurring in a man of good constitution, 46 years of age. The report comes down to the seventy-fourth day after the operation, by which time the patient had apparently quite recovered, and returned to his employment.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 17.

J. SIMON, Esq., F.R.S., President, in the Chair.

DR. MURCHISON, on behalf of the Committee on Morbid Growths, read a report on Mr. Carr Jackson's specimen of Intra-thoracic Tumour secondary to cancer of the humerus. It was stated to be secondary osteoid sarcoma of the lung.

DR. MOXON also read a report on Mr. Pick's specimen of Serocystic Swelling, and Mr. HULKE one on Mr. Heath's specimen of Tumour of the Bones of Skull. This last was pronounced sarcomatous, and probably periosteal in its origin.

Mr. BRUCE then exhibited some specimens illustrative of Destructive Changes in the Cartilage of the Patella. In many cases of pyæmia he had found apparently diseased conditions of the cartilages of the joints, especially of the patella; they were yellow, soft, and woolly. But he found that these changes did not necessarily depend on disease; they were common in old people. There might be few symptoms during life beyond a rough grating sensation on rubbing one bone against another. Sometimes the changes were confined to the knee-joint. Mr. Bruce gave an account of the microscopical appearances observed, which led

Mr. T. SMITH to remark that he had read descriptions exactly similar in the work of Professor Redfern, published many years before.

Mr. W. ADAMS thought people generally understood the meaning of the term ulceration as used by Redfern on this matter. Such changes might occur independent of any in the bone. He did not understand that this condition could be made a necessary connexion of pyæmia. Nor did he agree as to the cause assigned—viz., friction.

Dr. GREEN thought it did not specially depend on friction, but was a chronic ulcerative condition rather than anything else.

Mr. BRUCE thought the changes depended on friction alone. He did not bring forward the observations as new, except with regard to the frequency of such changes.

Dr. BRISTOWE showed a Diverticulum of the Pericardium in the shape of a small opening leading to a loculated cavity lying under the sternum. He only wished to put such a phenomenon on record: he had no explanation to offer.

Dr. CHURCH exhibited a specimen of Carcinoma of the Thyroid Body, Trachea, and Œsophagus. Only one case was recorded in the *Transactions*. No secondary disease existed, except in the liver. The specimen was taken from a man aged 37. He died of apnœa.

Dr. CHURCH also showed a Diseased Mass of Mediastinal Glands removed from the body of a woman aged 32. She died in October. The whole anterior portion of the thorax was filled up with a yellowish-white mass, mostly collected on the left side, where it extended from top to bottom of the cavity. There was a little fluid in the pericardium, which was involved in the mass, but there were no adhesions to the heart. The new substance did not invade the lung, but the pleura and diaphragm were affected, as were the lymphatic glands below the diaphragm. The mesenteric glands were natural, and the other organs healthy.

Dr. H. BEIGEL narrated a case of Lepra Tuberosum occurring in a male aged 36. Three years ago a little swelling appeared on the left side of the neck. The patient caught cold, and the swelling increased. A bladder formed behind the ear, which was opened, but no matter escaped. The skin became indurated, and the hardening extended from the neck to the chest. The incision never healed; but a deep rugged ulcer formed, which often bled. He suffered from rheumatic pains, and the swelling became painful. Cough and dyspnœa supervened, and the whole body became œdematous. Glandular swellings appeared in the axilla, blisters on the feet, and swellings in the groin. The lungs, after death, were found to be indurated by tissue continuous with that round the ulcer in the neck. The heart was shrunken. The left kidney was spotted. All the organs affected contained connective tissue, with granular corpuscles in great abundance. Referred to committee.

Mr. J. D. HILL showed three specimens of Diseased Knee-joint removed by operation. The first occurred in a man who had been ill seven years, and whose knee was anchylosed. The

joint was resected, and a fossa was found in the tibia; but the man did well. The second was in a boy, aged 5 years, under the care of Mr. Gant. A false aneurism formed behind the diseased joint, which was resected. The boy was still in Hospital. The third was also in a boy who had extensive disease of the joint. He was still in the Hospital.

Mr. Payne exhibited a specimen of Ulceration of the Trachea and Bronchi, the upper part of the trachea being free. The mucous and submucous coats alone appeared to be affected, except in one cartilage. The patient, a woman, had suffered from symptoms of dyspnœa. She died of pneumonia. There was neither tubercle nor cancer. Referred to committee.

Mr. Wyatt exhibited a specimen of Carcinoma of the Pylorus and Suprarenal Capsules, occurring in a married guardsman. The patient was in good health till a short time ago, but for three months he had been becoming emaciated and acquiring a dark bronze colour. He complained of indigestion, he was sometimes sick, and his bowels were constipated. He was relieved by vomiting. He was fed by enemata for a time, but sank, although there was no particular pain. The suprarenal capsules were found to be indurated. Referred to committee.

Mr. Weeden Cooke showed a Tumour two and three-quarter pounds in weight removed from the side of the Face, where it had existed twenty-seven years in the patient, who was 47 years old. It lay over the carotid, but was not intimately connected with the structures beneath. It originated from a blow, and grew very gradually. It was much lobulated, and appeared to be fleshy above and cystic below. He supposed it to be colloid. Referred to committee.

Mr. Hulke exhibited some microscopical specimens illustrative of the Changes which take place in the Optic Nerves consequent on their inflammation following intracranial changes. In one condition there was only a little opacity, in the other there was distinct inflammatory action. The changes may depend on direct or indirect affections of the nerve; the origin may be syphilitic inflammatory tumours of bone pressing on the brain near the cavernous sinus, or even more remotely, etc. There were also changes in the retina and nerve in kidney disease; there was not so much swelling, but there were many coarse granules with colloidal nodules in the outer layer of the retina, with capillary hæmorrhages, often bush-like more internally. There were also nests of nodular bodies in the nervous layers.

Dr. Murchison showed a cancerous Ulceration of the Stomach. When the patient was first seen, there was a large inflammatory swelling above the umbilicus. This burst, and established a communication with a cavity in the abdomen, which in its turn was connected with the ulcer. The patient had all the symptoms of hectic.

He also showed a large simple Ulcer of the Duodenum occurring in a man aged 50. In its floor the openings of vessels could be seen. The patient was attacked, two years before his death, with the ordinary symptoms of ulceration of the stomach or duodenum. He seldom vomited except when there was hæmorrhage. He had the physical signs of tubercle in the apex of the lung. Cough came on latterly. There were numerous small cavities rather tubercular than cancerous. They might have some connexion with the ulcer in the duodenum.

Dr. Moxon exhibited a specimen of Epithelioma of the Larynx and Lung secondary to disease of the œsophagus. In the lung were found certain small round epitheliomatous nodules deeply seated, and in the lower portion of the lung only. On cutting into them he found the bronchial tubes, which contained pus. Most likely the cancer had spread by gravitation, as it had been known to do in the abdomen.

The President remarked that he had long ago shown this mode of cancerous dissemination with regard to the bladder, the kidney being affected.

Mr. De Morgan had no doubt of this mode of propagation. He had brought forward a case where intracranial cancer was communicated to the lower portion of the spinal canal by means of gravitation. This was really the way cancer spread, and any kind of cell in the body might be propagated in like manner. They have a predisposition for certain structures, but this does not imply that the *materies morbi* is constitutional.

Dr. Moxon narrated the case of a little boy who suffered from acute suppurative pericarditis. An abscess formed in the septum ventriculorum, which opened into the left ventricle. The only other parts of the body where pus was found were the kidneys and the joints; there was none in the brain. He thought the joints could hardly be embolised when other structures were not so. In one case he had seen the hard tissues alone affected by cancer, the soft ones remaining unimplicated.

Mr. De Morgan explained that, although he did not believe in the purely constitutional character of such diseases as cancer, he believed in the specific relations they had to certain tissues or organs.

MEDICAL SOCIETY OF LONDON.

Dr. B. W. Richardson, F.R.S., President, in the Chair.

Mr. Henry Lee read a paper on

THE MEDIO-LATERAL OPERATION FOR LITHOTOMY.

He described the mode of performing the medio-lateral operation, and said it combined the advantages of all the other methods that had been recommended without many of their disadvantages. The urethra in Mr. Lee's operation is entered in the median line, which he considers insures the success of the operation as far as the Surgeon is concerned, while the incision is carried round the front and left side of the rectum so as to leave a sufficiently large external opening. The patient, for this operation, is placed in the ordinary position for lithotomy, and a grooved staff is introduced into the bladder; the skin of the scrotum is held moderately tight by an assistant; an incision is then made in the median line of the perinæum from before backwards. This should extend through its posterior half, terminating two or three lines in front of the anus. From this point the incision is continued for a quarter of a circle round the front and left side of the rectum. The finger of the left hand may then be put into the wound, and the rectum pressed back, whilst an additional touch or two with the knife separates it still further from the parts in front. The forefinger of the left hand is now passed into the rectum, and the knife, with its back towards the bowel, is passed, at the posterior part of the central incision, into the membranous portion of the urethra. With the finger as a guide, this is done with great ease and certainty. A bistoury or a knife, with a probe at its extremity, is then passed into the same opening, and made to slide along the staff into the bladder. The forceps or any other instruments that may be used are also introduced more directly into the bladder than in the ordinary lateral operation. The incision is made into the prostate gland, is made from within outward, and this Mr. Lee considered an advantage. In children a single incision with the scalpel is sufficient, but in adults the circular part of the wound should be deepened either before or after the urethra is opened. The operation, as a whole, is, he thought, the simplest in conception, the easiest in execution, and the least liable to be attended or followed by any unfavourable complication of all the operations for lithotomy.

At the meeting on November 16, Dr. B. W. Richardson, F.R.S., President, in the chair, Dr. Sedgwick exhibited an adaptation of the mirror to the uterine speculum. Mr. Spencer Watson exhibited a case illustrating his treatment of wounds by the antiseptic method. The case was that of a boy who had a wounded knee-joint. Mr. Watson injected into the joint a lotion of carbolic acid, one drachm to an ounce. Mr. Cooper exhibited a case of carcinoma about ten by five inches, situated over the lower part of the sacrum. Mr. Henry Smith exhibited a case of excision of the knee operated upon eighteen months ago; there was bony anchylosis, a most useful limb, and the boy was in excellent health. Mr. Hunt read a paper on the phases of Physic in the nineteenth century.

NEW BOOKS, WITH SHORT CRITIQUES.

The Ship Captain's Medical Guide. Compiled by Harry Leach, Resident Medical Officer Hospital Ship *Dreadnought*. Second edition. London: Simpkin and Co. Pp. 93.

*** When the former edition of this work appeared, we expressed ourselves as highly pleased with it, almost a model book for the purpose intended, that of aiding men uninstructed as to medicine in maintaining the health of their ship's crew. We again repeat our commendation in equally high terms as far as the author is concerned, but the publishers are not so praiseworthy. On the front of the book is stamped in large letters "By Authority," the work bearing the imprimatur of the Board of Trade; but on opening it we come across a number of advertisements of quack remedies, such as Lamplough's Pyretic Saline, Norton's Camomile Pills, and Keating's Cough Lozenges. Surely these are not also "by authority."

Researches on the Intimate Structure of the Brain. By J. Lockhart Clarke, F.R.S., etc. From the Philosophical Transactions, Part I. 1868. Printed by Taylor and Francis. Pp. 263 to 331.

*** Mr. Lockhart Clarke's brilliant and painstaking researches are too generally appreciated to want a passing word of commendation. We simply remark on the appearance of a new series of microscopical and other drawings by the same accomplished anatomist. The parts described are those situated at the base of the brain, and associated with the medulla oblongata. The communication also contains some valuable pathological information.

Skin Diseases: their Description, Pathology, Diagnosis, and Treatment. By Tilbury Fox, M.D. Lond., M.R.C.P., Physician to the Skin Department, Charing-cross Hospital, etc. Second edition. London: Renshaw. Pp. 472.

*** This little work is, as it were, a condensed and revised form of the author's two former works on "Parasitic Skin Diseases" and on "Skin Diseases in General," but it contains much that is new, especially with reference to skin affections likely to be encountered abroad. The work also contains a number of illustrations, chiefly of parasitic diseases, a collection of formulæ, and an index, which includes the derivations of most of the terms employed. Dr. Fox's reputation as a dermatologist stands deservedly high, and this work which he has just brought out will, we think, prove the best hitherto published in this country for the use of the student.

PROCEEDINGS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a quarterly meeting of the Council of the above institution, on October 15 last, it was moved and seconded—"That an authorised report of the proceedings of each meeting of the Council, *excepting of such portions thereof as shall relate to business or resolutions still under discussion or unconfirmed by the Council*, be posted in the hall of the College within one week after such meeting of the Council has been held; but that such report must previously be submitted to the President, or, in his absence, to the senior or junior Vice-President for the time being, for approval." An amendment to omit the words above in italics was lost, and the original motion was consequently carried, the result of which is that the members of the College can now make themselves acquainted with the proceedings of the Council by reading the abstract suspended in the hall of the College. A notice of this resolution of the Council appeared some weeks ago in the *Medical Times and Gazette*. At the same meeting, after long and mature deliberation the name of George Frederick Thomas, of South Yarra, Melbourne, Australia, was removed from the list of Members of the College, and a communication to this effect was made to the Registrar of the General Medical Council, by whom, no doubt, as in other cases of a like nature, the name will be removed from the Register.

A report from the President and Vice-Presidents on the letters from Mr. Cæsar Hawkins and Dr. Hawkins in relation to the proceedings of the General Medical Council was read, after which it was resolved that the following recommendations of that body with respect to vaccination be adopted:—

"1st. That a certificate should be required by each licensing body from every candidate for its degree, diploma, or licence to practise Medicine or Surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph, and is thoroughly informed in every necessary part of the subject.

"2. That such certificate should only be received by any licensing body from recognised vaccine stations, or from recognised vaccine departments in Medical schools or Hospitals or other public institutions where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (perhaps eight or ten, on an average, weekly) as may be found, after due inquiry in the first instance, confirmed by authentic returns or inspections from time to time, to be sufficient for this purpose, at each place.

"And that the regulation restricting the grant of the certificate of instruction and proficiency in vaccination to teachers of vaccination holding the appointments or possessing the opportunities enumerated in the second recommendation, be applicable to candidates commencing their Professional education on or after October 1, 1868."

A letter was read from Sir Redmond Barry, Chancellor of the University of Melbourne, Australia, thanking the Council for their recognition of that University.

The Council acceded to a request made by Mr. South to be allowed to make extracts from the minutes of the Corporation of Surgeons and of the College, and from any other papers, the property of the College, he may wish to consult, with a view to his obtaining materials for a history of the Corporation and of the College, on which he is now occupied.

The Council adjourned. The abstract of the proceedings is signed Edward Trimmer, Secretary, November 19, 1868.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—SECOND M.B. EXAMINATION, 1868.—The following are lists of candidates who passed the Examination for Honours in the subjects indicated:—

MEDICINE.

First Class.

Poore, George Vivian (scholarship and gold medal), University College.
*Richards, William Alsept (gold medal), King's College.
*Anderson, Tempest, B.Sc., University College.
*Taylor, Frederick, Guy's Hospital.
Ridge, John James, B.A., B.Sc., St. Thomas's Hospital.
Eager, Reginald, Guy's Hospital.
Haynes, Frederick Harry, St. Bartholomew's Hospital.

MIDWIFERY.

First Class.

Taylor, Frederick (scholarship and gold medal), Guy's Hospital.
*Richards, William Alsept (gold medal), King's College.
*Eager, Reginald, Guy's Hospital.
*Anderson, Tempest, B.Sc., University College.
Leech, Daniel John, Royal Manchester School of Medicine.

Second Class.

Ridge, John James, B.A., B.Sc., St. Thomas's Hospital.
Poore, George Vivian, University College.

FORENSIC MEDICINE.

First Class.

Taylor, Frederick (scholarship and gold medal), Guy's Hospital.
*Eager, Reginald (gold medal), Guy's Hospital.
*Batt, Charles Dorrington, St. Bartholomew's Hospital.

Third Class.

Anderson, Tempest, B.Sc., University College.
Poore, George Vivian, University College.

* Worthy of scholarship.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary Examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 19th inst.:—

Booth, Edward Johnson Hardy, L.S.A., Huddersfield, of St. Thomas's Hospital.
Brown, Samuel Stainton, Lewisham, of Guy's Hospital.
Butcher, William Deane, Maidstone, of St. Bartholomew's Hospital.
Clarke, Francis Edward, M.B. Dub., Dunfanaghy, Donegal, of the Dublin School.
Cole, Richard Mount, L.R.C.P. Lond. and L.S.A., Rochester, of Guy's Hospital.
Curnow, John, Penzance, of King's College.
Dickson, John Robinson, M.D., Kingston, Canada.
Jackson, Samuel, L.R.C.P. Edin. and L.S.A., Halifax, Yorkshire, of Guy's Hospital.
Robinson, George, L.S.A., Spilsby, Lincolnshire, of the London Hospital.
Staveley, William Henry, Reading, of St. Mary's Hospital.
Vawdrey, George, L.R.C.P. Lond. and L.S.A., Hayle, Cornwall, of Guy's Hospital.

It is stated that at this meeting three of the candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for six months, making the number of rejections out of the sixty-seven to amount to twelve, and two who withdrew. Of those who passed without being examined in Medicine there were:—

Lic. Roy. Coll. of Phys. Lond.	1
Do. do. and Lic. Soc. Apoth.	2
Lic. Roy. Coll. of Phys. Edin. and do.	2
Lic. Society of Apothecaries	16
M.B. Dublin	1
M.D. Coll. of Phys. and Surgs. New York	2
M.D. and L. Roy. Coll. of Phys. and Surgs. Kingston, Canada.	1
Total holding diplomas in Medicine	25

The diplomas of eight gentlemen are retained at the College until they shall have passed an examination in Medicine at the College, or at some recognised institution.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 19, 1868:—

Colson, Edward, Great Hamead, Herts.
Duke, Joshua, 272, Kennington-park-road.
Paterson, Walter Hugh, Brigg, Lincolnshire.
Taylor, Joseph Ogilvie, Whitby, Yorkshire.

NAVAL AND MILITARY APPOINTMENTS.

HOLMAN, Dr. JOHN RUDALL—Staff Surgeon in her Majesty's Fleet.

14th HUSSARS.—Staff Assistant-Surgeon William Henshaw to be Assistant-Surgeon, *vice* Edwin Wilson, promoted on the Staff.

MEDICAL DEPARTMENT.—Assistant-Surgeon Edwin Wilson, from the 14th Hussars, to be Staff Surgeon *vice* Staff Surgeon-Major Henry Crisp, M.B., placed upon half-pay.

CLERKE, HENRY, Acting Assistant-Surgeon, to the *Melville* Hospital ship.

BIRTHS.

DAVSON.—November 21, at 9, Carlton-terrace, Kilburn-park, W., the wife of S. Houston Davson, M.D., of a son.

FOX.—On November 20, at 43, Sackville-street, Piccadilly, W., the wife of Tilbury Fox, M.D. Lond., M.R.C.P., of a daughter.

FRODSHAM.—On November 23, at Upper Streatham, the wife of John Mill Frodsham, M.D., of a daughter.

GANGE.—On November 21, at Court-street, Faversham, the wife of Frederick A. Gange, M.D., of a son.

KORTEGARN.—On November 19, at Bonn-on-the-Rhine, Prussia, the wife of Dr. Arthur Kortegarn, of a son.

LEIGHTON.—On November 19, at 4, Henrietta-street, Cavendish-square, the wife of E. T. Leighton, M.B., of a daughter.

MANNING.—On November 20, at Laverstock, near Salisbury, the wife of Henry J. Manning, B.A., M.R.C.S., of a daughter.

ORMEROD.—On November 17, at 14, Old Steyne, Brighton, the wife of Edward S. Ormerod, Esq., M.D., of a son.

PARSONS.—On November 13, at Dover, the wife of Charles Parsons, M.D., of a daughter.

TURNER.—On November 23, at Buxton, the wife of Frederick Turner, M.R.C.S., etc., of a daughter.

WISE.—On November 19, at Gothic-villa, Burrage-road, Plumstead, the wife of W. C. Wise, M.D., of a daughter.

MARRIAGES.

BELL—BLANAY.—On November 23, at St. John's Church, Oxford-square, William R. Bell, M.D., of Cambridge-street, Hyde-park, to Julie, only daughter of M. Victor Destude de Blanay, Councillor of State, St. Petersburg.

MACMUNN—MATHIAS.—On November 18, at St. Luke's Church, Chelsea, John Alexander MacMunn, Esq., M.D., Staff Surgeon Royal Hospital, Chelsea, to Charlotte Edith, youngest daughter of the Rev. George Mathias, M.A., Chaplain of the Royal Hospital, Chelsea, and Chaplain in Ordinary to the Queen.

STILWELL—MERCER.—On November 18, at Denham, Dr. Henry Stilwell, of Hillingdon, to Lucy Jane, eldest daughter of John Mercer, Esq., of Uxbridge. No cards.

WEST—WESTALL.—On November 24, at St. Barnabas Church, Kensington, Thomas William West, Esq., of Miningsby, Lincolnshire, to Harriet Mary, second daughter of Edward Westall, M.D., 28, Holland-villas, Kensington, W.

DEATHS.

BROWN, JOSEPH, M.D., at Sunderland, on November 19, in his 85th year.

CORNWALL, EUPHEMIA ELIZABETH, the beloved wife of James Cornwall, Esq., M.D., F.R.C.S., and daughter of the late William Handyside, Esq., Writer to the Signet, Edinburgh, at 6, West Circus-place, Edinburgh, on November 19.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Belper Union.—Mr. Hawkins has resigned the Markeaton District; area 5880; population 1702; salary £11 per annum.

Cerne Union.—Mr. John Ewens has resigned the Melcombe Horsey District; area 4711; population 640; salary £13 per annum.

APPOINTMENTS.

Darlington Union.—Bartholomew Lumley, M.R.C.S.E., L.S.A., to the Haughton-le-Skerne District.

Holywell Union.—William Williams, M.D. St. And., M.R.C.S.E., L.S.A., to the Mold District.

Market Bosworth Union.—Thomas Spencer, M.R.C.S.E., L.S.A., to the Desford District.

Wincanton Union.—George Cardell, M.R.C.S.E., L.S.A., to the Wincanton East District and the Workhouse.

HER MAJESTY has shown her interest in the Lindley Library by presenting to it a copy of Hooker's "Filices Exoticæ," and also one of Roxburgh's "Plants of the Coast of Coromandel," in three folio volumes.

UNIVERSITY COLLEGE HOSPITAL.—His Royal Highness the Prince Christian of Schleswig-Holstein has consented to preside at the annual festival to be held in the spring on behalf of the funds of the University College Hospital.

A LAD who was dying from exhaustion after an operation performed at the Palermo Hospital, is said to have been saved by transfusion of blood from the veins of two students.

A PROTESTANT DEAN OF THE VIENNA UNIVERSITY.—For the first time in the history of this celebrated institution, a Protestant, in the person of Professor Brücke, has been chosen Dean of the Medical Faculty.

POISONING BY NICOTINE.—M. Tardieu has remarked the curious fact that animals killed by this poison always fall down on the right side.

BARON LARREY AND THE BRITISH ARMY HEALTH REPORTS.—Baron Larrey so highly appreciates the value of the last annual Report of the Health of the British Army that he has written to the Director-General of the Army Medical Department, requesting that he may be favoured with a copy of the whole series, to be deposited in the library of the Institute of France. This is a high honour to the department, and must be very gratifying to the Director-General and his coadjutors.

PUBLIC VACCINATION IN BIRMINGHAM.—The guardians of the poor are deliberating upon changing the existing system of vaccination for the parish of Birmingham. Up to the present time vaccination has been done by contract by the respective district Medical officers, and the fees derived from it, which amount on an average for each officer to about £50 a year, are considered to form the profitable portion of their parochial incomes. We think that the guardians are acting wisely in disconnecting the offices of vaccinator and Poor-law Medical officer, because we believe the conjunction to be objectionable, and that they will work much better apart; yet we also hope that the guardians will recompense their officers for the pecuniary loss which they will sustain by the deprivation of the vaccination fees by raising their yearly income. As a class of Practitioners, the Poor-law Medical officers are admitted, by all who are conversant with the nature of their duties, to be sorely worked and inadequately remunerated.

ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.—The second anniversary session of the Association will be held in London, at Willis's Rooms, King-street, St. James's, on Wednesday and Thursday, December 2 and 3. The programme for the session is as follows:—Wednesday, December 2.—7 p.m.: Election of new members; election of officers; report of Council; discussion on restriction of number of M.D.'s to ten annually. 8 p.m.: Report on the Parasitic Theory of Disease, by Dr. Sedgwick; and such other papers as time will allow. Thursday, December 3.—2 p.m.: Report on the Criminal Responsibility of the Insane, by Dr. Harrington Tuke, F.R.C.P.; On the Influence of a Moist Atmosphere in the Production of Phthisis, by Dr. Edwards Crisp; On the Relative Value of Symptoms in the Diagnosis and Treatment of Disease, by Dr. W. H. Day; On a Case of Imperforate Anus, by Dr. Lloyd Roberts; On Strychnia in Diphtheritic Paralysis, by Dr. Maund; On Fracture of the Sternum, by Dr. Beverley Bogg, R.N.; On the Physiological Effects of Chloroform, by Mr. Whitehead; with other papers by Drs. Bower Harrison, Hughlings-Jackson, Wynn Williams, O'Connor, Spencer Thompson, etc. 4½ p.m.: The Annual Address, "On the World of Physic and the World," by the President. 7 p.m.: Anniversary Dinner.

POOR-LAW MEDICAL SERVICE.—*Clerkenwell.*—Mr. Penrose for the Northern District, and Mr. Huxtable for the Southern District, were appointed to supply the more expensive drugs to the out-door poor. The Poor-law Board is insisting upon new contracts being entered into under the new Act between the guardians and the public vaccinators. They also propose that there should be two vaccinators and two inspectors instead of the present four vaccinators and no inspectors. The guardians are powerless, for if they do not obey the Poor-law Board, that Board will not allow them the salaries in question out of the metropolitan common fund. *Islington.*—The Poor-law Board disapprove of the appointment of an inspector of vaccination. They wish the payment to be by the case, and recommend that at first the duties of inspection should be undertaken by the registrars. The matter is under consideration. *Shoreditch.*—A letter was received from the Poor-law Board, with which was forwarded an order suspending the operation of those articles in the consolidated order relating to the payment of fees to Medical officers. They will consequently receive the salaries already assigned to them, the total amount of which is £804, distributed among seven Medical officers, exclusive of £50 for the school Medical officer. The above announcement was received by the guardians with general applause.

BARON JAMES DE ROTHSCHILD.—The great financier had much to do with our Profession. Dupuytren owed to him a great part of the large fortune which he left his daughter. The great Surgeon treated the great financier for a fractured thigh, and Rothschild paid him 100,000 fr. for his attendance.

Moreover, Dupuytren left his fee in his patient's bank, where it multiplied enormously by participating in the good fortune of a house that never knew reverses. To the 5,000,000 fr. which Dupuytren left, Rothschild's 100,000 fr. contributed not a trifle. Dupuytren knew this well, and was terribly mortified when he learned that Astley Cooper had left a fortune of 11,000,000 fr., the whole of it acquired by practice. M. Rayer was until his death the Physician as well as the friend of the Baron, who persuaded him to buy, when it could be had at a low figure, the beautiful Hotel of the Rue de Londres, which has since quadrupled in value. Rothschild has been the efficient patron of many of our *confrères*, especially those of his own persuasion, MM. Mandl and Gruby among others. In his later years he fell into the hands of the homœopathists. The Paris sight-seeing public has been terribly disappointed at not seeing the splendid funeral procession it expected. It was of the humblest kind; but that this has not resulted from parsimony the liberalities which have been showered upon the poor of Paris by the Baron's widow testify. —*Union Médicale.*

Dublin Obstetrical Society.—The first meeting of the thirty-first annual session of the above Society was held on Saturday evening, November 21, in the hall of the King and Queen's College of Physicians, Kildare-street. In consequence of the recent lamented death of the President, Dr. Hardy, the chair was taken, until the declaration of the ballot for officers, by Dr. George Johnston, the Senior Vice-President for the past session, and, after the declaration, by Dr. Ringland, one of the Masters of the Coombe Lying-in Hospital, who was unanimously chosen President of the Society. The report, which was read by the Secretary, Dr. Kidd, was most satisfactory as regards the progress of the Society in the number of its members, the state of its funds, and the value of the communications brought before it. Instead of the usual address by the President, a memoir of the late lamented Dr. Hardy was read by his friend and former colleague, Dr. McClintock. Among the visitors present on the occasion were the President of the College of Physicians, Dr. Churchill; the President and Vice-President of the Royal College of Surgeons, Dr. Porter and Mr. Macnamara; the Governor of the Apothecaries' Hall, Dr. Nolan; Captain Sir Leopold McClintock, R.N., etc. The following are the officers of the Society for the ensuing year:—*President:* Dr. Ringland. *Vice-Presidents:* Drs. J. A. Byrne and George Johnston. *Treasurer:* Dr. H. Halahan. *Secretary:* Dr. George H. Kidd. *Committee:* Drs. Beatty, Churchill, Cronyn, Denham, and McClintock.

Aneurisms in San Francisco.—Since the establishment of the Health Office in San Francisco, up to September 8, 1868, a period of thirty-four months, there have been reported 119 deaths from aneurism, or a yearly average of 42. The average population of the city for that time being about 126,000, there would be one death from aneurism for each 3000 inhabitants. Of the 119 cases which the city records show, during the thirty-four months that they have been kept, 34 cases were under the care of Dr. Soule, occurring in the City and County Hospital, leaving 85, or two and a half times that number, which died in other Hospitals or the city at large. The Hospital records extend beyond the city records more than a year, giving 16 cases to add to the 34 already named, and making 50 deaths from aneurism in the Hospital during the last four years. The nativities of the 50 cases were as follows:—Ireland, 12; United States, 10; England, 5; Sweden 3; Germany, 3; Prussia, Denmark, France, Azores, each 2; Norway, Finland, Holland, Scotland, East Indies, Chili, Canada, Mexico, unknown, each 1. In the following list of occupations the majority of the scattering cases followed various employments, the most recent being usually given. 'Longshoremen, 10; sailors, 8; labourers, 5; soldiers, 4; engineers, 3; miners, house-painters, teamsters, ostlers, cooks, each 2; baker, carpenter, cooper, drayman, fisherman, farmer, gardener, marketman, hatter, housewife, each 1, the latter being the only woman of the entire number of cases. From these records we may obtain a good idea of the class of men affected with aneurism. They have lived a rough, uncertain life, with no settled home or steady vocation; they have been tossed upon the sea of life, and wrecked upon the shoals of disappointment. Many complained of rheumatism; many did not; a large proportion had suffered from syphilis. Autopsies were made in all the cases, and degeneration of the arterial coats, atheromatous, fatty, or calcareous, found. The percentage of deaths from aneurism to the total mortality is as follows:—England, 1860-4, 0·09; New York, 1866-7, 0·06; Brooklyn, 1866-7, 0·09; Philadelphia, 1863, 0·06—1864, 0·03; Boston, 1863, 0·06—1865, 0·09; St. Louis, 1865, 0·02; San Francisco, 1858, 0·52—1859, 0·70—1866, 1·39—1867, 1·40—1868 (six months), 2·12.—*Pacific Medical and Surgical Journal.*

Hereditary Tongue-tie.—M. Mignot, of the Hôpital de Chantelle, observes that hereditary influence may be observed in small details as well as in the general disposition of organs. It has not been remarked upon by authors in relation to the duplication of the mucous membrane termed the frænum linguæ, which, existing only in a rudimentary state in some children, is considerably developed in others. He met with a lad 14 years of age, who was a distinguished pupil at one of the lyceés, and spoke without difficulty. Having occasion to examine his mouth, he found the tongue kept down to the buccal floor of the mouth in consequence of the short and thick frænum which extended to its point. Unable to pass the alveolar arch, the tongue had, by its constant pressure, pushed this forwards, so that the incisors were projected externally, becoming also somewhat slanting, and separated from each other by a considerable interval. When he tried to put the tongue out it curved backwards, striking against them. The lad's mother had precisely the same defect, producing with her some difficulty of speech. Out of four of her children, three were born with the same state of the frænum.—*Gazette Hebd.*, November 6.

A Dropped Fee.—A celebrated Surgeon was called in consultation, a few days since, to the house of Count B., who slipped a louis d'or into his hand as he was leaving. This was poor pay, and our Surgeon is no lover of poor pay. Making a grimace, he let his louis fall, and the Count stooped down, picked it up, and restored it to the Doctor. The Surgeon, however, stooped down in his turn, and pretended to be looking for something. "What do you seek, Doctor?" was the question. "I am looking for the other."—*Presse Belge.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Wilks's next lecture will treat of progressive muscular atrophy, and will be published next week. This will be followed by those on functional and local paralysis, headache, epilepsy, chorea, hysteria, and treatment.

Want of space compels us reluctantly to omit an article on the Alleged Practice of Homœopathy in the Aberdeen Infirmary.

Mr. Henry Smith on "Excision of the Knee-joint" next week.

Dr. Tilt's work shall be noticed duly.

Dr. Barnes's Lectures.—We are sorry to be compelled to defer Dr. Barnes's lecture this week. The first part of that on the Cæsarian Section will appear next week, which subject will, we hope, be completed this year. The lectures on Induction of Labour and Hæmorrhage will follow next year.

L. A.—We are unable to say to what particular article in the *British and Foreign Medico-Chirurgical Review* Virchow alludes, and he does not specify it. Probably to reviews of his book on Tumours in vol. xli. *et ante.*

Lithotomist, Liverpool.—We shall be glad to receive your paper authenticated. It is stated that the celebrated Cheselden cut forty-two persons for stone, and only lost two. On one occasion he performed the operation in *fifty-four seconds.*

A Fellow, Manchester, and Dr. W.—You will find a full account of the observations of Drs. Morris and Wiblin, and of the President of the College of Surgeons, on the right of the Fellows to meet and discuss the claims of candidates for seats in the Council, published exclusively in the *Medical Times and Gazette* of July 11 last, page 36.

Medical Archæologist.—A correspondent desires some information as to who Dr. *John* Baillie, Physician to St. George's Hospital in 1735, was, as his name does not appear in the roll of the London College of Physicians, or as a Medical graduate of either Oxford or Cambridge. The same correspondent requests also to know who Mr. Pawlett, Consulting Surgeon to the same Hospital in 1737, was, the names of these gentlemen not appearing in Wadd's or Pettigrew's memoirs.

A Cure for Ascarides Wanted.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—If any of the subscribers to the *Medical Times and Gazette* can point out a cure for the threadworm (*Ascaris vermicularis*), the writer of this query will esteem it a favour, as he believes he has tried every remedy that has been recommended by authority without success.

I am, &c. Medicus.

The New Pharmacy Act.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your issue of November 7 a letter appeared from Mr. W. W. Lees respecting the injustice of the Pharmacy Act as applied to dispensers in Hospitals. My case is similar to his. I was apprenticed to a chemist some ten years ago, and, from that time until about eight months before the passing of the Act in July last, was constantly engaged in a chemist's shop. I have just applied for registration for the "modified examination," but am informed that I am not eligible, because I have been a dispenser in a Hospital for about eight months before the passing of the Act. This is very unjust towards dispensers in Hospitals, and, I think, was never intended by those who passed the Bill, and therefore ought to be remedied as soon as possible. I am rather surprised that more persons have not complained of this part of the Act, as all young men engaged as dispensers to Surgeons, as well as those employed in Hospitals, etc., are excluded by the same clause. If they would come forward, and make their complaint known in the proper quarter, it may be redressed.

Wolverhampton. I am, &c. T. Weaver.

COMMUNICATIONS have been received from—

Dr. Neale; Mr. Spencer Wells; Dr. Clapton; Mr. J. Chatto; Dr. Sedgwick; Mr. Street; Mr. Porter; Dr. Paul Maunoir; Messrs. Coleman and Co.; Dr. Tilt; Dr. Suckling; Mr. Serjeant; Mrs. Baines; Dr. Taaffe; Dr. R. T. Abbott; Dr. C. A. Gordon; An Old Subscriber; Mr. Bruce; Mr. H. J. Manning; Mr. J. Attfield; Dr. J. F. Churchill; Mr. T. Weaver; Mr. H. B. Franklyn; Dr. Moriarty; Messrs. Southall, Son, and Dymond; Dr. J. H. Webster; Mr. J. Sheridan Moore; Mr. G. B. Morgan; Mr. Henry Smith; Dr. Lionel S. Beale; Dr. J. Hughlings-Jackson; Dr. Barnes.

BOOKS RECEIVED—

Wahltuch's Dictionary of Materia Medica and Therapeutics—Half-yearly Compendium of Medical Science, Philadelphia—New York Medical Journal, No. 44—Spence's Lectures on Surgery, Part 1—The Medical and Surgical Reporter, November, 1868—Dr. Meigs's Inaugural Address introductory to the Course on Institutes of Medicine, in the Jefferson Medical College, October, 1868—Gregory's Doctor or Doctress—Reith and Brown on Homœopathy—Proceedings of the British Pharmaceutical Conference—Miles's Economy of Life—Thompson's Clinical Lectures on Diseases of the Urinary Organs—Tilbury Fox's Manual of Skin Diseases—Owen on the Anatomy of the Vertebrates: Vol. III. Mammals.

NEWSPAPERS RECEIVED—

Gazette des Hôpitaux—L'Union Médicale—Gazette Hebdomadaire de Médecine—New York Medical Gazette, No. 58—Medical Press and Circular.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 21, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Nov. 21.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Nov. 21.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2158	1441	1507	49·4	29·0	39·8	0·04	4
Bristol (City)	167487	35·7	99	75	*61	..	..	..	..	..
Birmingham (Boro')	352296	45·0	222	171	148	48·0	30·3	40·0	0·20	20
Liverpool (Borough)	500676	98·0	341	290	296	52·3	32·0	40·1	0·20	20
Manchester (City)	366835	81·8	254	208	*222	53·8	31·0	40·2	0·16	16
Salford (Borough)	117162	22·7	63	59	72	46·6	31·3	38·9	0·17	17
Sheffield (Borough)	232362	10·2	156	122	116	45·8	28·7	39·4	0·21	21
Bradford (Borough)	108019	20 3	100	55	71	..	..	..	..	..
Leeds (Borough)	236746	11·4	126	120	124	47·0	31·0	42·2	0·14	14
Hull (Borough)	108269	34·4	85	50	86	47·0	30·0	38·9	0·34	34
Nwcstl-on-Tyne, do.	127701	23·9	103	68	58	46·0	28·0	38·7	0·52	53
Edinburgh (City)	177039	40·0	115	85	101	44·7	31·0	38·6	0·10	10
Glasgow (City)	449868	88·9	336	262	313	45·8	31·5	38·1	0·21	21
Dublin (City and some suburbs)	319985	32·8	137	157	152	54·2	36·1	44·7	0·40	40
Total of 14 large Towns	6391080	34·7	4295	3163	3327	54·3	28·0	40·0	0·22	22
					Week ending Nov. 14.	Week ending Nov. 14.				
Vienna (City)	(1863) 560000	..	..	..	233	..	..	37·6	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·049 in. The barometrical reading decreased from 30·21 in. on Thursday, Nov. 19, to 29·47 in. at the end of the week.

The general direction of the wind was N.E.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 21, 1868.

BIRTHS.

Births of Boys, 1083; Girls, 1075; Total, 2158.
Average of 10 corresponding weeks, 1858-67, 1933·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	748	759	1507
Average of the ten years 1858-67	748·6	735·7	1484·3
Average corrected to increased population	..	..	1632
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West	463,388	..	1	40	..	5	4	1	..
North	618,210	..	4	16	7	1	23	1	..
Central	378,058	..	..	12	1	2	8	4	..
East	571,158	..	2	26	3	8	9	2	..
South	773,175	3	5	24	4	15	11	1	..
Total	2,803,989	3	12	118	15	31	55	9	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·049 in.
Mean temperature	39·8
Highest point of thermometer	49·4
Lowest point of thermometer	29·0
Mean dew-point temperature	35·2
General direction of wind	N.E.
Whole amount of rain in the week	0.04

APPOINTMENTS FOR THE WEEK.

November 28. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

30. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. Mr. Chas. Jas. Fox, "A Case of Removal of Breast under Nitrous Oxide." Mr. Hunt, "On the Application of Chloric Ether to Sloughing and Irritable Wounds." Dr. Chambers, "Cases of Carbolic Acid Treatment." Mr. Alfred Haviland, "On the Geographical Distribution of Cancer in England and Wales, with Illustrations by Maps, &c."

December 1. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society of London, 8 p.m. Meeting.

Pathological Society, 8 p.m. Meeting.

2. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Obstetrical Society of London (Council Meeting, 7 p.m.), 8 p.m. Mr. Squire, "On Infantile Temperatures in Health and Disease." Dr. Copeman, "On the Treatment of Imperforate Hymen." And other Papers

3. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society of London, 8 p.m. Mr. Berkeley Hill, "On Carbolic Acid in Surgical Practice."

4. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Western Medical and Surgical Society, 8 p.m. "Remarks on the Pathology and Treatment of Epilepsy."

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Mr. SQUIRE introduced into Medicine (*Vide* "Lancet," March 4th, 1839)

SOLUTION OF BIMECONATE OF MORPHIA,

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Dr. Roots thus writes of it:—"I have taken it myself daily now for very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations on its effects on myself and others amounts to this—namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any other preparation of Opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Progressive Muscular Atrophy.

This is a paralysis in which the muscle itself wastes. It had formerly been observed by Sir C. Bell and others, but it is only a few years ago that Cruveilhier more particularly drew attention to the disease, and gave it a name. According to his belief, it is due to a degeneration of the muscular tissue. He stated that the nerves of the limbs might sometimes be found wasted, as well as the anterior roots proceeding from the spinal cord, but that the cord was not itself primarily affected; for, if this was found shrunken (as some had described) on its front aspect, this condition, together with the atrophy of the nerves, was altogether secondary.

Cruveilhier and his followers believed that the real seat of the disease was in the muscles, but later observers have shown by more accurate investigations the existence of a real and tangible lesion in the medulla itself—an opinion always held by Virchow and Gull.

Clinically, the case is a clear one; the muscles waste, and thus a form of paralysis is produced of a very striking kind. The disease appears to commence in the upper extremities, and is often confined to them, commencing in one arm or a part of the arm. Thus most frequently our patients walk into the Hospital and present little amiss with them at first sight, but you then observe their drooping shoulders, and their arms hanging at their sides as if they did not belong to them. On stripping the patient you see his remarkable condition—not a mere thinness or ordinary wasting from the absorption of fat, but the muscle itself has degenerated; you see the acromion projecting and the deltoid flat, the trapezius wasted and the head falling forward. The biceps in the same manner is wasted, as well as the muscles of the forearm and hand; it is in the latter that you generally at once recognise the disease. The muscles of the thumb or hypothenar eminences have disappeared, and, owing to the shrinking of the interossei, there are deep furrows between the metacarpal bones. As a consequence, the fingers become drawn back until the hand puts on the appearance of the talons of a bird of prey, and thus the French have given it the name of *main en griffe*, or griffin's claw. The forearm in like manner has lost its roundness and become flattened. The whole appearance of the patient is most striking; he stands with his head bent forwards, or even in bad cases with his chin resting on his breast; his arms hang down in front of him as if they were merely attached to him by strings or ligaments. His chest does not expand freely, and his abdomen is loose and projects. If his legs have become affected, they have lost their roundness, and the muscles of the face may at last have become involved, so that the patient presents an idiotic expression, and dribbles from the mouth. Finally, the chest may become more affected, then the laryngeal muscles; the vital process of respiration is attacked, the voice is lost, mucus collects in the tubes, expectoration fails, and death ends the scene.

It is remarkable that just as in the locomotor ataxy the disease is more especially confined to the lower end of the cord, and as a consequence the legs may be solely affected, so in the progressive muscular atrophy it is the arms which are primarily and principally paralysed. In the early cases you will have carefully to test what muscles, and to what degree they are affected, and you will find that the paralysis does not follow the distribution of any particular nerve. As you are treating your patient, you test the increase of power by making him raise his arm, then place it before him, see how far he can stretch it behind him, and then test the extension, flexion, and pronation of the forearm, etc. You may sometimes remark, as Cruveilhier pointed out, a remarkable tremor or quivering of the muscles, especially the trapezius when you attentively watch it; or you may bring the movement out by gently tapping the surface.

Case.—A man aged 46 has just died under my care with progressive muscular atrophy. He had all the symptoms which I have described in an excessive degree. He sat in his chair scarcely able to move from extreme muscular weakness; but not only did this apply to the limbs, but more important parts had become involved. Thus he could only partially expand his chest, and had great difficulty in expectorating mucus from the bronchial tubes; he also had those parts affected which are involved in the labio-glosso-laryngeal paralysis. Thus he could scarcely articulate in an intelligible manner; he had much trouble in swallowing his food, which collected in his cheeks and mouth; he could scarcely move his tongue, and hardly had any power to cough. I need not further particularise the symptoms already described in cases of glosso-labio-laryngeal paralysis, but may say in a word that he had these in addition to the general muscular atrophy affecting the body. The case was thus one of great interest; for the former class of symptoms, when standing alone, have been clearly proved to be due to disease of the medulla, and thus there existed an additional reason for supposing the whole of the morbid phenomena might be due to the same cause. All the severer symptoms increased until a complete paralysis of the chest came on, when he quickly died.

The *post-mortem* examination did not reveal any evident change recognisable at first glance, but on more careful examination by removal of the arachnoid from the base of brain, medulla oblongata, and spinal cord, very marked alterations were seen to have occurred. Thus the hypogossal nerve was very much wasted, being not more than a third of its natural size, and changed into a fine thread; in the same manner the inner roots of the spinal accessory were much smaller than usual, and the same was true of the anterior roots of all the spinal nerves. This was more especially the case in the cervical region. This atrophy was not a questionable appearance, but one extremely well marked and evident to all the students. When sections of the cord itself were made, it was found that this was not healthy; the anterior columns were smaller than natural; they were not, however, softened, but on the other hand were firm, whilst the grey matter was sunken beneath it. The latter did not present a healthy appearance; its colour was not uniform, in some parts yellowish, in others there were deep red spots with congested blood-vessels. At the lower part of the cervical region, the grey matter was much larger than natural, and its colour more dark than seen in section below. The whole of the interior of the fourth ventricle presented an unusual appearance and was evidently unhealthy, the surface having a reddish-brown aspect differing very much from the ordinary surface.

Case.—The following is one of the most remarkable examples of recovery from a malady apparently incurable that I have ever witnessed, and one of the worst cases of progressive muscular atrophy that have ever been cured, for it is simply impossible that the disease could have existed in any more severe degree than was here present.

A girl, aged 24, was sent to the Hospital on July 4, 1866, by my friend Dr. Buzzard. She lived in the country, and owing to a number of circumstances connected with family affairs she began to fail in health about eighteen months before her admission. A weakness and wasting began in her arms, and then in other parts of the body, until in six months' time she was obliged to take to her bed. During the year she kept her bed she passed her motions involuntarily, and was in a perfectly helpless condition; menstruation had altogether ceased. On admission she was seen to be in the most pitiable condition that you can well imagine—she was so emaciated that she was little better than a skeleton. She lay on her back scarcely able to move or raise her arms from her side. Her fingers were contracted into the griffin's-claw shape. The interossei seemed to have quite disappeared, so that the tips of one's fingers could be felt between the metacarpal bones. The radius and ulna showed their complete outline throughout. In same manner were the legs wasted, and the abdomen so flat that the spine could be clearly felt. In fact, all the muscles were so atrophied that I believed that they must have disappeared, a little fibre tissue remaining in their place. She had a slight blue line on the gums, which suggested poisoning by lead, and therefore Dr. Buzzard took the trouble to visit her home in order to see if she could have been poisoned unwittingly by this metal, but he failed altogether in proving it. She was, however, ordered some iodide of potassium and faradisation to the arms and legs. The galvanism produced no effect on the extensor muscles, and only a slight one on the flexors. It was, however, rigidly followed up by Mr. Branford Edwards and my other clerks, and to these gentlemen she owes her restoration to health. In two months' time it was very evident that she was better; she could move her limbs, and the muscles had grown visibly. In another month she could use a fork, and was able to write a little. In November

she was able to get up and walk across the ward by means of a chair, and the catamenia had returned. She continued the faradisation, and the cure progressed more quickly until January, when she left the Hospital convalescent. It was three or four months after this that she called on me to show herself. I did not recognise her at first, as she was a ruddy plump girl, and said she was in good health.

The cause of the disease and its pathology are very obscure. Some have considered that it was due to injury, others to cold or placing the hands in cold water. Those who trace its origin to disease of the medulla would look to causes operating on the centre, and thus, in two cases described by Dr. Gull, there was a distinct history of an injury to the spine. What we find on examination is an atrophy of the muscles. The tissue is withered, the sarcous element gone, the markings have disappeared, and granules taken their place. Some of these may be composed of fat, but the change in the muscle is not a simple fatty degeneration. Cruveilhier thought that this was the essence of the disease, and, as a consequence, the nerves supplying the muscles wasted: the atrophy being most apparent in the anterior roots as they enter the spinal cord. He found no disease of the cord itself. Virchow, however, observed in one case that the medulla was pervaded by a grey translucent substance. In the one described by Dr. Gull there was disease in the cord, and in that just mentioned lately under my own care the change in both the white and grey portions was most marked. Dr. Lockhart Clarke's researches have quite confirmed the view of progressive muscular atrophy being a central disease. This does not militate against Cruveilhier's statements that the anterior roots of the nerves have undergone a diminution in size, and especially in the cervical region, where, as he has described, they may have become changed into lustreless strings, containing only a few nerve tubules, whilst the posterior roots are healthy. To prove his position further, he states that although there might be a difficulty in discovering any change in a mixed nerve, yet in a purely motor nerve, as the lingual, there was none, for this was reduced in some cases to a third of its natural size.

We have, then, three theories for the disease: the one that it has originated in the spinal cord, another that the anterior roots of the nerves are in some way primarily affected, and a third, the theory which until quite lately has generally been received, that the disease commences in the muscles themselves. Those who hold the last opinion would not, I believe, deny that the cause might be so far nervous that the wasting of the muscle is due to a failure of nutrition, and that this might be brought about by a change in the blood-vessels, influenced by the vaso-motor nerves, but they would still maintain that the disease is peripheral and not central. This width of opinion ought, of course, to be granted in all cases where a change of tissue is spoken of, unless a special element has been actually found to be primarily affected.

An argument formerly used against the supposed spinal origin of the affection, that there is no necessary atrophy in hemiplegia or the paraplegia of spine disease, is no longer of weight, since it is believed that the nerves are compound, and that the filaments of which they are composed originate in the different functional spheres of the cord or brain, and consequently that morbid changes in particular portions of the centres would only cause paralysis of some of the nerve-fibres—that although a destruction of the whole trunk would necessitate a paralysis of every function which it possessed, yet that a disease in one part of the cord where certain fibres originated would destroy only one function, and disease in another part some other function. Thus, in disease of the brain producing hemiplegia, motion and sensation may be lost, but nutrition remains, and the same may be seen in many forms of paraplegia arising from disease in the medulla; but in the present case it would be naturally surmised that the nerves of nutrition were attacked. It has not yet, however, been positively shown whether this nutritive element of a nerve is derived direct from the cord or merely from the sympathetic, which joins the spinal nerve. If from the latter, we might suppose a disease of the cord and of anterior roots to be the prime mischief. But the experiments I formerly alluded to seemed to prove that the integrity of a nerve was due to the healthy state of the ganglion on the posterior root, and thus a disease situated therein might explain the pathology of muscular atrophy. I believe I am right in saying that this is Lockhart Clarke's suggestion. At the same time, this fact must be borne in mind—that injury to the nerve which excites the muscle to action not only paralyses the muscle, but occasions its atrophy.

Lead Paralysis.

I shall briefly allude to lead paralysis, because the disease so exactly resembles that which I have just described that it is very often impossible to distinguish between them. If the metal has been thoroughly implanted in the system, a fatal result may ensue. All the tissues of the body degenerate, the skin assumes a remarkably waxen appearance, the nerve centres more especially suffer, and the patient becomes at last paralysed both in body and mind. A mania or dementia may result, accompanied by epileptic fits. In a less degree the effects are constantly seen, as in the dropped wrist of the painter, followed by a paralysis of the whole arm, in which the muscles waste just as in the disease described. I have more than once seen a patient admitted and treated for progressive muscular atrophy, in whom there has been a lead line on the gums and a good history of plumbism. It might be thought that so analogous a result might elucidate the pathology of the idiopathic muscular atrophy; but as yet it proves no more than that nutrition is affected through the influence of the sympathetic nerves on the blood-vessels. Lead, as you know, is given to arrest hæmorrhage, and acts by constringing the vessels. You can therefore see how its overaction or its continued action would produce an atrophy of the tissues. Duchenne states in his work that we have one means by which we can distinguish between lead palsy and the idiopathic atrophy. In the latter, as I have told you, the most remarkable wasting is seen in the interossei and other muscles of the hand, so that the claw shape is produced. In lead palsy the effect is most marked on the extensor longus digitorum, and as this muscle, when healthy and excited by faradisation, is stated by Duchenne to act only on the first phalanges, and has no influence on the second and third digits, it consequently follows that if this muscle is paralysed, as in plumbism, and the arm and wrist be supported on a table, the fingers can still be extended or raised, which cannot occur in the progressive muscular atrophy when the interossei and lumbricales are affected.

A few years ago there was a woman in the Hospital who had long worked in lead, and who had become at last completely paralysed. The limbs had gradually wasted, and became at last utterly powerless, and at the same time her mental faculties had almost gone. The post-mortem examination showed a marked wasting both of the brain and spinal cord.

Mercurial Paralysis.

There are many other poisonous substances, more especially the metals, whose effects in small doses might be advantageously studied in connexion with idiopathic diseases. I have spoken of lead since the results of its action resemble so closely those of a well-known disease, and I shall now just allude to mercury, as its poisonous effects have occasionally been referred to spontaneous causes, and because, in a complete saturation of the system, the nervous centres seem to be most strikingly affected. Formerly the effects of mercurial vapour were constantly seen in looking-glass makers and water gilders, who exhibited the well-known mercurial tremor, and these same persons, if they persisted in the employment, became at last quite shattered in health. Such instances are at the present time by no means numerous. I have seen, however, within the last few years, two cases showing in a much more striking manner the destructive nature of mercury, but in neither case were they due to the inhalation of the metallic fumes as formerly witnessed.

The first case was that of a man admitted into the Hospital for a form of general paralysis from which he was suffering. It was discovered that he had been in the habit of packing the skins of animals, and that these had been washed with an acid solution of mercury. For three years he had been employed thus, when he began to experience a general muscular weakness. He could scarcely walk, and, when attempting to do so, it produced a general tremulousness over the whole body. When lying down, he had spasmodic movements of the chest and of the muscles of the body, resembling those of chorea. He gradually became more feeble, delirious at times, and he afterwards fell into a state of unconsciousness. The post-mortem examination showed no evident disease of any of the organs, but a chemical analysis by Dr. Taylor proved the existence of mercury in many of the tissues of the body.

A more marked case than even this of the destructive effects of mercury on the body I had an opportunity of seeing in St. Bartholomew's Hospital. A young man had been engaged in the laboratory in the preparation of mercurial methide for about three months, when he began to complain of dimness of sight, numbness of the hands, and general weakness. These

symptoms increased, until at last he was obliged to be sent to bed. When I saw him he was almost completely paralysed; he was lying prostrate in bed, perfectly helpless, being scarcely able to move either his arm or legs, and there was paralysis of the bladder. He could not speak, and was quite deaf. The heart's action was quick and feeble. The mouth was not sore, but I was informed that the gums had been at one time spongy, when there was also fœtor. He got weaker and weaker, and died in about a fortnight.

Another young man employed in the manufacture of the same article was also similarly affected, the symptoms being those of a complete paralysis of body and mind. He lost all feeling, all power of motion, became deaf, unable to speak, and quite idiotic.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XIX.—Part I.

THE CÆSARIAN SECTION — THE INDICATIONS FOR—THE MORAL ASPECT OF THE OPERATION AS BETWEEN MOTHER AND CHILD.

The Cæsarian Section.

The Cæsarian section occupies a doubtful place between Conservative and Sacrificial Midwifery. It is conservative in its design, in its ambition; it is too often sacrificial in fact. It is resorted to with a feeling akin to despair for the fate of the mother, which is scarcely tempered by the hope of rescuing the child. It is looked upon by the great majority of obstetricians as the last desperate resource, as the most forcible example of that kind of Surgery which John Hunter regarded as the reproach of Surgeons, being a confession that their art was baffled. On the other hand it is regarded by some enthusiastic Practitioners, dazzled perhaps by its false brilliancy, as an operation deserving to be raised into competition with turning, craniotomy, or cephalotripsy. At different times and in different countries it has been looked upon with favour because promising salvation to the child. The child is weighed against its mother; and conscience is silenced with the reflection that the possible or probable rescue of the child may rightly be purchased by subjecting the mother to the most imminent peril. It is held that this double chance, made up of odds in favour of the child and against the mother, is to be preferred to the single chance afforded by an operation which gives up the child for the sake of odds in favour of the mother.

The situation is painful, and may well perplex those who are not steady in their allegiance to those moral laws which ought to rule over all professions, and which certainly recognise no exception here.

None of us, probably, will claim exemption from these laws; but possibly some may interpret them differently. And here again we must call to mind a lesser law to which reference has before been made—namely, that the choice between two operations will be influenced by the comparative skill in them which the operator happens to possess. Under this influence the favoured operation will be more and more cultivated, and its competitor more and more neglected. Thus, to apply this law to the present discussion: the man confident in his skill in the extraction of a dead child by the natural passages with safety to the mother will be disposed to assign the narrowest possible limits to the Cæsarian section; and, on the other hand, the man who has not this confidence will be disposed to prefer the Cæsarian section, an easy operation. The operation must be studied under two aspects—*first*, as one imposed by *necessity*, as the *only* means of effecting delivery; *secondly*, as one of *election*, deliberately chosen as the *best* means of effecting delivery. The distinction is very important to be borne in mind; for, under that fatal fascination which seems to oppress the reasoning faculty in statisticians, conclusions drawn from figures representing the most dissimilar facts are accepted and put forth as the legitimate deductions of experience. With our present materials, I believe it is the most idle and unprofitable waste of intellect and of time to seek to draw rules for practice from statistical operations. It seems to me impossible in a great number of cases to distinguish or to estimate the relative shares in causing death that arise from causes antecedent to the labour, from causes arising during and in consequence of the labour, and from the operation itself. All cases, therefore, which were not selected—that is, deliberately operated upon, under simple conditions, especially freedom from dangerous disease and from protracted labour—must be put aside or considered apart. How many simple cases of this kind do we possess? A dozen? Twenty? perhaps a few more; but certainly not enough to deduce a law of mortality to estimate the risk to life from the Cæsarian section. M. Pihan-Dufeillay (*Arch. Gén. de Méd.*, 1861), indeed, declared that the operation performed under favourable circumstances, as early as the impossibility of delivery *per vias naturales* is recognised, gives nearly 75 per cent. of recoveries. But what assurance have we that an undue proportion of successful cases are not recorded, unsuccessful ones remaining in the dark?

And if this element of the comparison, the risk to life of Cæsarian section, is so defective, vague, and uncertain, it follows that comparison or ponderation in the statistical scales is impossible, even assuming that the other element, the risk to life under craniotomy, were determined. The known may be ponderable—the unknown is certainly imponderable. But do we know more of this second element, the risk to life in cases of exactly similar pelvic deformity under other modes of delivery? I am not aware that any attempt, not vitiated by the most transparent fallacies, has been made to establish what this risk is. Obviously, we cannot recognise fatal cases of craniotomy in extreme deformity, say of conjugate diameter reduced to 2″ or to 1·75″, unless the operation was begun under selected circumstances—that is, before exhaustion had set in—and conducted with due skill and after the most approved methods. We are fairly called upon to reject all fatal cases in which craniotomy was performed with bad instruments, in which the skull was either not crushed down by the cephalotribe, or the calvarium not removed so as to leave nothing but the base to bring through the brim, edge on. The point to determine is, what is the limit of contraction that admits of this proceeding, or some better proceeding, being carried out with a reasonable presumption of safety? When that is determined, it follows as a logical necessity that this proceeding ought to be adopted in cases falling within that limit.

To dispute this proposition—and it has been disputed, the disputants not seeing the dilemma prepared for themselves—is to dispute the propriety of performing craniotomy in any case. For why do we perform craniotomy or cephalotripsy in the case of a pelvis contracted to 3″ or 3·50″? Is it not because, possessing means of extracting a dead child through such a pelvis with a reasonable prospect of safety to the mother, we acknowledge it to be our duty to use those means and to save the mother? Now, assume that we also possess means of extracting a dead child through a pelvis narrowed to 2·00″ or 1·75″ with a reasonable prospect of safety to the mother, who will venture to dispute, whether as a matter of logic or of morals, that the mother shall be denied that prospect?

The case, then, as far as relates to pelvic contraction, stands on the old ground. It may be stated broadly as follows:—Embryotomy stands first, and must be adopted in every case where it can be carried out without injuring the mother. The Cæsarian section comes last, and must be resorted to in those cases where embryotomy is either impracticable, or cannot be carried out without injuring the mother. There is, therefore, no election. The law is defined and clear. The Cæsarian section is the last refuge of stern necessity.

The formula of Dr. Hull may be accepted. It affirms "that *every circumstance which can render delivery per vias naturales impracticable ought to be considered as requiring the Cæsarian operation.*"

Of course, those who advocate the Cæsarian section in cases of contraction below 2·25″, may deny the possibility of extracting a dead child through the natural passages with a reasonable prospect of safety to the mother. But this denial, of course, applies only to the experience of those who deny. I can but refer to the testimony of Pajot and many Continental authors as to the positive fact as regards cephalotripsy. I refer to that of Kelly, Osborn, Professor D. Davis, Dr. Braxton Hicks, and myself as regards craniotomy. (See Lecture XVIII.) It is right, however, to state that Scanzoni ("Lehrb. d. Geburtsh." 1867) declares the limit generally) adopted in Germany to be 2·50″.

Infant Mortality attending the Cæsarian Section.

The probability of saving the child must obviously vary

according to circumstances. Sometimes the operation is determined upon without any consideration for the child, simply as a means of delivering the woman. The child may be known to be dead. The most practical question is—What is the probability of saving the child when the operation is performed under the most favourable selected circumstances? Statistics, even upon this point, are not conclusive. But it may be assumed that the prospect of the child is less than in the case of ordinary labour. The experience of the Royal Maternity Charity gives rather more than three per cent. of still-born children. Dr. Radford says the risk to the infant is not much greater than that which is contingent on natural labour. Scanzoni ("Lehrbuch der Geburtshülfe," 1867) ascertained the fate of 81 children out of 120 operations performed between 1841 and 1853; 53 children, or 60 per cent., were born alive. In all probability several of these died within the first week. The mortality thus is something greater than in ordinary labour.

But assuming the probability of saving the child to be ever so high, are we justified by law, or by religion, the basis of law, in taking the woman's life as it were into our hands and deliberately subjecting it to the most imminent hazard for the sake of probably saving her child? It has been urged that, the woman having a prospect of a miserable existence for a few months or weeks only, whilst the child is likely to be saved and live to maturity, the child's life is the more valuable, and ought therefore to be preferred. Or, taking the case of a woman who cannot give birth to a living child by the natural passages, calling upon the obstetrician time after time to deliver her by craniotomy, it is asked, ought we not at length to refuse craniotomy and insist upon the Cæsarian section?

Dr. Denman states the question perspicuously thus:—"I cannot ("Introduction to Midwifery"), however, relinquish the subject without mentioning another statement of this question, which has often employed my mind, especially when the subject has been actually passing before me. Suppose, for instance, a woman married, who was so unfortunately framed that she could not have a living child. The first time of her being in labour, no reasonable person could hesitate to afford relief at the expense of her child; even a second and a third trial might be justifiable to ascertain the fact of the impossibility. But it might be doubted in morals whether children should be begotten under such circumstances; or whether, after a determination that she cannot bear a living child, a woman be entitled to have a number of children (more than ten have sometimes been sacrificed with this view) destroyed for the purpose of saving her life; or whether, after many trials, she ought not to submit to the Cæsarian operation, as the means of preserving the child at the risk of her own life. *This thing ought to be considered.*"

The question is indeed a trying one. We may easily go astray in the labyrinth of casuistry, unless we hold steadily to the clue laid down by the moral law. I think it will not be disputed that, in law, *he who accelerates death is held responsible for having caused death.* We are not justified in regarding that life as less sacred because we believe that, in the ordinary course of disease, it will not last beyond a very short time. We are, therefore, not justified in preferring the Cæsarian section to craniotomy in a case where the latter operation offers a fair prospect of safe delivery, because the woman is suffering from osteomalacia, which is commonly, but not always, a progressive and fatal disease. We have no right to lessen the woman's chance of life because it is already small. We cannot, even in the case of osteomalacia, be certain of our prognosis. I have known women live for many years with osteomalacia, and even recover.

Then take the case put by Denman. The conduct of the woman is assumed to be culpable, and we are assumed to be in the position of accomplices or abettors in her fault if we repeatedly relieve her by craniotomy. But are we entitled to take upon ourselves the office of the Judge? Are we to make ourselves the ministers of justice? Vengeance is not ours. When did Medicine ever withhold her merciful hand from the degraded, the sinful, the criminal? Shall we dare to put a mere vegetative life—that of an unborn child—into the scale against that of a being like ourselves accountable to the Almighty? Can we take upon ourselves the awful weight of deciding that the wretched woman was wrong—criminal, in becoming a mother? She is subject to her husband. If punishment is due, must it fall upon her? and are we to inflict it? I cannot, therefore, hesitate in expressing my conviction that we should be traitors to our trust if we were to perform the Cæsarian section, when craniotomy is safer for the woman, because, in our judgment, she was culpable in becoming a mother.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
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LECTURE II.

OF THE GERMINAL MATTER OF THE TISSUES—DIFFERENT CHARACTERS OF LIVING BEINGS DUE TO INHERENT POWERS OF GERMINAL MATTER—CHARACTERS AND PROPERTIES OF FORMED MATERIAL DEPENDENT ON VITAL POWERS OF TISSUE—GERMINAL MATTER OF CUTICLE, HAIR, HORN, NAIL, ENAMEL, DENTINE—OF SECRETING CELLS, SECRETIONS, SECONDARY DEPOSITS, FAT, STARCH, ETC.—OF CILIATED CELLS—OF PIGMENT CELLS—SALIVARY CORPUSCLES.

(*Continued from page* 609.)

EPITHELIAL TEXTURES HARDENED WITH CALCAREOUS MATTER.

LET us consider the remarkable changes which occur during the formation of those very hard tissues which are infiltrated with calcareous salts, and in which the germinal matter plays a conspicuous part. In illustration, I will draw your attention to the formation of two of the hardest and most durable textures in the body—the enamel and dentine of the tooth. Although, in their fully developed state, these tissues are remarkable for the large proportion of earthy salts they contain, there was a time when each was composed of very soft organic matter only. Although no trace of germinal matter can be detected in the fully formed dentine or enamel of the adult, at an early period of development these tissues were represented by masses of germinal matter only. Additional interest attaches to them on account of the different and conflicting views entertained as to their nature—some holding that enamel corresponds to the epithelial textures we have been considering, and that the dentine is more nearly related to bone and the connective tissues. According to this view, the neutral line between the two represents the position the basement membrane occupies in an ordinary mucous membrane. Huxley, on the other hand, and for reasons which seem to me insufficient and unsatisfactory, holds that both enamel and dentine are dermal tissues, and situated beneath basement membrane. Lastly, the position of the vessels as regards the dentine, the manner of growth of both tissues, and the fact of their origin in a collection of unquestionably epithelial cells, have forced me to conclude that both enamel and dentine are more nearly allied to epithelium than to any other tissues of the body, and that both are developed on the surface of basement membrane. The tooth grows in a manner so like a horn and a hair that it is difficult to believe that it is not closely related to these epidermic appendages, while there are not wanting instances in which an eminence covered with an epithelial texture seems to take the place of teeth. Hair and teeth are sometimes abnormally developed, and Mr. Darwin has remarked that the teeth of hairless dogs are deficient, and that over-hairy men have abnormal teeth.

The masses of germinal matter concerned in the formation of the enamel and dentine are embedded in epithelium and are arranged in two curved lines, one within the other. The slight interval between these lines corresponds to the line of junction of the enamel and dentine in the fully formed tooth. From this *neutral line* the two rows of masses of germinal matter move in opposite directions. In the outer one each mass diverges outwards from the neutral line, while the different masses of germinal matter of the inner row converge slightly as they move inwards.

Enamel.—The formation of the enamel may be very successfully studied in the canine tooth of a young pig. Preparation 29 was obtained from an injected specimen. The capillaries of the enamel membrane are beautifully injected with trans-

parent blue injection, and the enamel cells, the germinal matter of every one having been well stained with carmine, are very distinctly seen. Each appears as a columnar or cylindrical body, not unlike a cell of columnar epithelium, with an oval mass of germinal matter nearest its distal extremity. As the germinal matter moves outwards from the neutral line above referred to, it forms the column of soft material which is to become the enamel rod. After some extent of tissue has thus resulted, calcareous matter is deposited in that part of the column which was first formed. In the specimen several columns can be discerned in which the change has already commenced. The highly refracting earthy particles contrast remarkably with the smooth, faintly granular, organic matrix. The deposition of these earthy salts may be due merely to chemical change consequent upon the formation of free alkali in this the oldest part of the organic matter. While this process is going on, the germinal matter in each little column is still moving outwards, and forming more organic matter, which, in its turn, becomes calcified. This process continues until the formation of the enamel is complete, when the vessels of the membrane waste. A little uncalcified organic matter usually remains upon the outer surface of the enamel. The markings seen in a transverse section of enamel receive a simple explanation upon this view of the development of the enamel, and the outer uncalcified portion of the rods, when acted upon by acetic acid, swells up; and thus some have been led to infer the existence of a delicate membrane in this situation. Consult Mr. Tomes's "Dental Surgery," p. 268.

Dentine.—The dentine begins to form before the enamel, but very soon after the formation of enamel has commenced the two operations go on together until a short time before the tooth emerges from the gum, when the production of enamel ceases, while that of dentine is not completed sometimes until advanced age. In certain cases—as, for example, in the canines of some of the lower animals and in the incisors of the rodents—the formation of both structures continues, so that in the teeth of the adult the development of the enamel and dentine may be studied as well as at a very early period of embryonic life in other cases. The oval masses of germinal matter taking part in the formation of the dentine are larger than those of the enamel, and the formed material produced by them appears as a continuous matrix instead of distinct and separate columns. Moreover, instead of each mass forming a separate oval body, a thin line of tissue is drawn out as the mass of germinal matter moves inwards. These lines of soft tissue correspond to what are generally termed the dentinal tubes, and may be forcibly withdrawn, as in specimen, in which are also seen the corresponding "tubes" which contained them. Calcification takes place by the deposition in the matrix of rounded globular masses of calcareous matter, which increase in size and coalesce. A narrow portion of the matrix extending outwards from each mass of germinal matter still remains permeable by fluids, and the process of calcification proceeds so much more slowly around this than in the rest of the matrix that the dentine produced refracts differently, and is harder in texture. The difference in appearance seen in thin sections has led observers to regard this slowly formed layer of dentine as the wall of the supposed "tube." But in the recent state this "tube" is occupied by uncalcified matrix, which can be torn away from the calcified dentine. The calcification of the formed material corresponding to the "tube" gradually proceeds, so that the space or "tube" occupied by soft matter becomes narrower as the dentine advances in age, and at last in many cases the outermost portion becomes completely calcified, in which case there is no "tube" at all, and the tooth is usually thoroughly dried before the section is made. The "dentinal tube" of the prepared specimen results from the desiccation of the organic matter. The greater "width" of the tube near the pulp, and its gradual reduction in diameter towards the surface of the dentine, the existence of soft solid matter in the "tubes," as was first demonstrated by Tomes, and the relation of the oval masses of germinal matter on the surface of the pulp to the dentine, are all accounted for in the explanation of the formation of the dentine above given.

Is it reasonable to suppose that the dentinal tubes are for the conveyance of nutrient fluid from the surface of the vascular pulp to the dentinal tissue, when tubes do not fulfil a similar office in ivory, which is a tissue very analogous to the dentine? Surely, if the ivory of the elephant's tusk can be preserved without nutrient fluids being conveyed by tubes to every part of it, it is extremely probable that the dentine of other mammalian teeth is in like manner destitute of any special provision for its free irrigation in every part. These tissues undergo little change, and such an extensive system of nutrient channels as has been supposed to exist would be useless.

The formation of the soft tissue of dentine and enamel affords an interesting example of the growth and movement in opposite directions of masses of germinal matter destined to produce a special structure, but towards a vascular tissue which recedes as they advance, and which wastes when the formation of the tissues and their calcification are completed.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON THE

CONDITION OF THE LIMB AFTER EXCISION OF THE KNEE-JOINT, IN FOUR CASES.

By HENRY SMITH, F.R.C.S.,
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As the subject of excision of the knee-joint has been very prominently brought before the Profession by the papers recently read at a meeting of the Medico-Chirurgical Society, and as a great deal of the interest and importance of the operation as a means of treating diseased and deformed knee-joints has reference to the future condition of the limb, and as in the days of the opposition to this operation, now happily gone by for ever, the uselessness of the saved member as a means of progression was held out among the chiefest arguments against excision, I take the opportunity of giving brief details of the present condition of the limb in four instances where this operation was performed some time since, and which have recently made their appearance.

In the first case, a man now 30 years of age, in perfect health, presented himself at King's College Hospital on Saturday, November 7. He was recognised as one who had been operated on twelve years previously by Sir William Fergusson for strumous degeneration of the synovial membrane, and ulceration of the cartilages of the knee-joint. On examination, the present condition of the limb is as follows:—It is perfectly straight and well developed, the calf of the limb being nearly as big as that of the other; there is firm bony union at the knee, and the shortening of the limb is so slight that it is scarcely perceptible. This man's agility is wonderful, and as a proof of it he brought with him to the Hospital a handsome bat, which had been presented to him as a reward for his great superiority and success in cricket.

The second case is that of a man, aged 23, upon whom I operated in August, 1867, for disease of the knee-joint of many years' standing, and which had resulted in the production of a deformed, withered, and totally useless limb. I showed this man to the Fellows of the Medical Society of London in the October following, and at this date the union was not firm, and the patient's movements were difficult. An opinion was expressed at the meeting that most likely the man would get tired of his limb, and request its removal.

This same man presented himself to me at King's College Hospital in October last, fourteen months after the operation, and the following was the condition observed:—The health of the man is excellent, the limb quite straight, and the union at the site of operation perfectly firm and osseous. The leg is about an inch and a half shorter than the other, and is well developed. The man could move about with the greatest agility without the aid of a stick, and expressed himself as very well pleased with the result.

The third case is that of a boy, aged 12, upon whom I operated in May, 1867. An especial feature of interest obtained here in the circumstance that the boy had been an inmate of one of our larger Hospitals, and under the care of a Surgeon in whose sight excision of the knee does not find favour, and who is a strong advocate of a reliance upon the resources of nature to bring about a cure. These views were carried out in this instance until the patience of the Surgeon became exhausted, and amputation of the thigh was recommended. When I saw the boy, interference was clearly required, but I never met with a case better suited for excision. I was enabled to complete the operation, and yet take away but a very small section of the joint ends of the bones. In

course of time this boy left the Hospital with only a fibrous union, but he presented himself to me last week, and I exhibited him on November 10 at a meeting of the Medical Society of London.

The condition of the boy was as follows:—He was in robust health, and could move about with the greatest agility without the use of any support. This limb was apparently as long as that on the other side, but in reality about an inch shorter. It was not quite straight, but slightly bowed out. The union at the site of operation was osseous and quite firm. Limb generally well developed.

The fourth case is that of a girl, aged 14, on whom I operated just before Christmas last. She had extensive disease of the synovial membrane, and a very contracted and deformed limb. I was obliged to remove more than the usual thickness of bone in order to get good apposition of the parts. Her health was in a wretched state, and her limb had been condemned to amputation by one of those gentlemen who have had to test the qualifications of our pupils for carrying on the practice of Surgery; but I must do that gentleman the justice to say that he is now astonished and pleased at the present condition of the girl, which is as follows:—She is in excellent health, and can walk well without assistance. The limb is well developed, slightly bowed out; union at the site of operation osseous and firm. Leg on operated side is shorter than the other by one inch and a quarter.

From the results of these four cases but one conclusion can be arrived at—viz., that in each instance the patient has been restored to health, and that a useful limb has been preserved to its possessor; and these two results are what the Surgeon seeks for in the performance of excision. It may be opposed that nature would have produced a similar cure, but it has been seen that in two of the cases the limbs had been actually condemned to amputation, and in the other two the morbid condition of the parts removed was such as to totally preclude a cure from taking place.

Wimpole-street.

CASE OF GENERAL EMPHYSEMA FROM GANGRENOUS SORES AT ANGLES OF MOUTH AFTER MEASLES.

By T. P. HESLOP, M.D.,
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A boy, aged 4, was sent to the Birmingham Children's Hospital by Dr. Harrison, of Walsall, on August 19, 1868. He was labouring under great dyspnœa, and the face and trunk were emphysematous. Three weeks previously he, with several of the family, was attacked with measles. About a fortnight afterwards severe chest symptoms appeared, followed by a black-looking ulcer at each angle of the mouth. Great hæmorrhage took place from one of these. The child began to complain of pain in the neck, and the mother noticed a slight swelling under the right angle of the lower jaw, which soon became larger, and in a few hours extended over a great part of the trunk. On admission there was emphysema of the whole trunk, from the upper part of the neck to the groins and buttocks. The ulcers at the angles of the mouth had an unhealthy aspect, with thin punched-out edges. The day after admission he died.

Necropsy Twenty Hours after Death.—The body was emphysematous in the regions above described. On opening the chest, the cellular tissue of the mediastina, including the roots of the lungs, was emphysematous. There was no air or fluid in either pleural cavity, the lungs filling the chest. On the right side the lung was adherent at its posterior part by adhesions which easily broke down. There was considerable vesicular emphysema of the anterior portions of the lungs, but there were no sub-pleural bullæ. There was lobular collapse in various parts, but especially in lower lobe of left lung. Some of the collapsed lobules were undergoing a true pneumonic process; the lower lobe of the right lung was fully engaged in this process, and had arrived at the third stage. The bronchial glands very large; the tubes filled with bloody mucus, the aperture of the glottis being nearly plugged with a yellowish mucosity. The larynx and trachea were free from ulceration or other evidence of disease. Nothing worthy of note elsewhere. On minute scrutiny of the ulcers at the angles of the mouth, it was found that the mucous membrane was cleanly separated from the integument for a considerable distance, so that the handle of a scalpel could be inserted for nearly an inch into the cheek.

The opinion held during life was that the emphysema was caused by the rupture of lung-vesicles from coughing. It was not until the *post-mortem* failed to reveal any indications of this lesion that the buccal eschars were, at the last moment, thoroughly examined. They supplied decisive evidence of the method by which the emphysema was produced, though that method must be admitted to be unusual. Demarquay has given an exhaustive account of the mode of formation of emphysema of the areolar tissue in his "Essai de Pneumatologie Médicale," and says that "there are three conditions needful for the production of true emphysema. First, solution of continuity of the wall in contact with the gas (or air) which is to penetrate by that opening. Second, the existence of a force capable of causing the penetration and passage of the gas into the interior of the tissues. Third, narrow entrance and sinuous direction of the wound, so as to oppose the exit of the gas introduced." (P. 257.) He moreover declares that the infiltration of air from solutions of continuity in the buccal cavity "is always made at the moment of expiration" (p. 256). It is probable that in this case air entered into the tissues through the gangrenous sores during expiration, for during inspiration their outer layer would be drawn in towards the buccal layer, and tend to close the orifice; while during expiration the contrary would take place, and the aperture widely gape. The condition of the sides of the sore, on the one hand, and of the lungs on the other, give an easy explanation of the rapidity and extent of the air-infiltration; for, as Demarquay has observed, it is produced so much the more easily and abundantly as the air is expired with more frequency and in greater quantity, and as it finds for its exit a narrower passage.

Birmingham.

ON CERTAIN CASES OF HÆMORRHAGE DURING LABOUR.

By D. DYCE BROWN, M.A., M.D.,
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The subject on which I propose to say a few words is one, I think, of great practical importance; and as in books on midwifery it is not alluded to, so far as I am aware, it is all the more desirable that it should be brought under consideration, that one may be placed on his guard in similar cases. The form of hæmorrhage to which I am alluding is really only a variety of "accidental hæmorrhage." This condition is generally understood to occur previous to, or at, the commencement of labour, before pains have set in, or soon after. But the period in labour when the variety of hæmorrhage I am speaking of occurs, is towards the close of the second stage, and only happens in a limited class of cases. They are those in which the breech or feet have presented, or where turning has been performed either for an arm-presentation or to avoid craniotomy. In the latter case it will be specially liable to occur, as a narrow pelvis or a proportionally large head is an almost necessary condition for its presence. In these cases the expulsion or extraction of the child may have proceeded satisfactorily till the head comes to be delivered. There is, then, in cases of disproportion between the head and pelvis, a delay of more or less duration from the difficulty of delivering the head. The danger at this period of labour is generally thought to be on the side of the child, the possibility during this delay of internal hæmorrhage from the partial or complete separation of the placenta being overlooked, at least in books. The danger to the mother of such an occurrence at such a period of labour, and with the uterus of the size which it is at the full term of pregnancy, must be evident. The symptoms are the usual symptoms of internal hæmorrhage—viz., feeling of faintness or actual fainting, pallid lips and cheeks, rapid feeble pulse, etc., the occurrence of which plainly indicates what is going on; while, on placing the hand over the abdomen, the uterus is felt to be larger than it ought to be, considering that all except the head of the child is in the world. Not a single drop of blood may escape from the vagina, owing to the closeness of fit between the head and pelvis. Of course there may be hæmorrhage in many cases of a similar nature so slight as to show itself only by the escape of a few clots after the birth of the head. The treatment will divide itself into that calculated to prevent such a

condition as I have now described, and that for the actual state of hæmorrhage as evidenced by the symptoms. The first point in the preventive treatment is to know that such an accident is liable to occur; then, as soon as one finds any difficulty and likely delay in the delivery of the head, to cause the nurse to press firmly over the uterus; and if one feels the uterus inclined to enlarge, or the pulse quicken, indicating hæmorrhage already begun, to apply cold, continued firm pressure, and to give a moderate dose of ergot—of course, at the same time, renewing our efforts to deliver the head. If faintness come on, it is unnecessary to say that stimulants are called for. In most cases, the clot or clots will come away as soon as the head is born; then, if there seems the least difficulty in removing the after-birth in the usual way, giving a suspicion of its being partially adherent, or if the hæmorrhage continues, time is everything, and the immediate introduction of the hand is advisable. The following cases will illustrate the foregoing remarks:—

Case 1 happened to me when Resident Accoucheur to the Birmingham General Dispensary. Mrs. J., aged 36, married. Had had one child at full time, which had to be turned, and another at seven months. She said her present pregnancy had advanced only seven months. I was sent for at 1 a.m., June 12, 1864. I found the patient in a miserable room, with hardly a thing on the bed, and herself half-starved-looking. Said she had had very little food for several days. The membranes had ruptured a week before. Pains moderately good, and coming every five or seven minutes. On first examination the os was rather larger than a shilling. I could feel nothing but the funis. After half an hour I again examined, found the os was dilating, and felt a foot. The os continued to dilate till 2.45 a.m., when it was considerably larger than a crown-piece. Not the least pulsation could be felt in the cord, which felt flaccid and empty. This being the case, there was no necessity for hastening the labour by pulling down the feet. From this time, however, the pains got weaker in strength and less frequent, and notwithstanding three doses of liquor ergotinæ (a preparation which I was then trying, but which I found far from reliable), the pains at 3.30 had entirely gone, the foot being then at the os, and the cord hanging two inches out of it. I now left her, telling her to send for me when the pains came on again. No message being sent, I called that day about noon; found matters nearly *in statu quo*; no pains, but the foot was now out of the os, and the cord hanging out of the vagina; pulse 100; tongue clean; rather thirsty; had slight headache; no heat or tenderness of parts; had slept a little. In hopes of refreshing her by sleep, and thus giving an impulse to the pains, I gave her half a drachm of liq. opii sed. in half a glass of brandy. I was sent for again at 9 p.m.; still no pains; parts as before; pulse 120, small; tongue clean and moist; great thirst; headache; sickness; vagina hot; countenance pale and exhausted-looking; seemed restless. I at once proceeded to extract. The os was nearly fully dilated, though the anterior lip was tense. The pelvis was decidedly narrow, and on this account I found considerable difficulty in extracting the hips and shoulders. The delivery of the head was, however, the most difficult matter, from the small size of the pelvis, and from the anterior lip of the uterus being hooked tensely on the occiput. After employing as much extractive force in the usual manner as I felt justified in using, considering the tightness with which the occiput was grasped by the anterior uterine lip, the rupture of which I was afraid of, I sent for Mr. Thomason, one of the Honorary Surgeons. Immediately after this she showed signs of syncope; face very pale and sunken; pulse extremely feeble and quick. I gave her brandy, which she was with difficulty got to swallow. She then fell into a sleep, with half-closed eyes and slightly stertorous breathing. Suspecting internal hæmorrhage from partial separation of the placenta, as not a drop of blood was escaping from the vagina, I proceeded to compress the uterus, which felt decidedly larger than it ought to have been, and by keeping up firm pressure I prevented any further enlargement. When Mr. Thomason arrived, he approved of all that had been done, but considered that the danger in using too much extractive force consisted, in this case, not so much in the likelihood of rupture of the anterior lip of the uterus, as in the possibility of separating the head of the child from its body, as the child had evidently been dead for some time, the skin peeling off and the body discoloured in several places. I continued to compress the uterus, while Mr. Thomason, after using considerable extractive force for about a quarter of an hour, succeeded in extracting the head. Immediately an enormous clot, as large as an ordinary-sized placenta, and quite firm in consistence, came away. The placenta followed in about ten minutes, with little further hæmorrhage, and the uterus contracted well. The child was evidently at or near full term, and not seven months, as she supposed, the cord being at the middle point of the body. The pelvis was markedly narrow, both at brim and outlet. Before leaving her, she got 40 minims of liq. opii sed. in a glass of brandy.

June 13.—She slept little last night. Her attendant says she lost a good deal during the night; but this is to be doubted, as she could hardly have stood any further loss. No pain in abdomen. Pulse small, but quiet. She got beef-tea, wine, and a mixture containing carbonate of ammonia, chloric ether, and opium. She slowly but steadily recovered, without any further bad symptoms.

Remarks.—In this patient we had a bad half-starved subject to begin with, so that the effects of hæmorrhage told more quickly on her than they might on one in different circumstances; and having a half-starved appearance, the change into the pallid sunken countenance of hæmorrhage was much more gradual and imperceptible than it would be in many other cases. Still, had I been on the alert, and had before my mind the liability to internal hæmorrhage in such a case, I think I might sooner have detected what was going on, and have prevented the onset of those symptoms which indicated that a large amount of the mischief had already been done. The next two cases I am permitted to relate through the kindness of my friend Dr. Earle, of Birmingham, in whose practice they occurred. I relate them in his own words.

Case 2.—"Mrs. B., residing in Fleet-street, married, 38 years of age, mother of five children, a Dispensary patient, sent for me on March 11, 1863. I found one foot and part of the leg lying in the vagina. The os uteri was dilated to the dimensions of a five-shilling piece, and the membranes were ruptured. Pains occurred at very long intervals, and after waiting some time I gave a dose of ergot, and a second in half an hour. Uterine contractions gradually increased, and finally expelled the foot and breech. As soon as the greater portion of the trunk had escaped, I hooked down the arms and began to extract the head in the usual manner. I used considerable force, but without avail. The patient became very faint, and rapidly presented most of the chief symptoms indicating loss of blood, specially blanching of the lips and face. On examining the uterus externally, I found it, instead of being contracted on the head, as it was just before extraction was attempted, very much increased in size. Recognising the nature of the case and its dangerous character, I again attempted to deliver; but failing, I sent for Mr. Yates, the district Surgeon. However, before he arrived, by using still greater force, I succeeded at last in completing delivery. Immediately an immense quantity of clotted and fluid blood followed. As the patient had lost a great deal of blood, I thought it advisable to introduce the hand into the uterus and remove the placenta and any clots which might be still remaining. This proceeding was followed up by pressure and cold externally, and another dose of ergot. This patient recovered, but she was in a very critical state for some hours."

Case 3.—"Mrs. B., residing in Worcester-street, and mother of three children. I was requested to attend this patient on October 3, 1864, by her Surgeon, who was not feeling very well. The os was dilated to the size of a florin. As the liquor amnii was evidently in excess, I ruptured the membranes at 12.30 at night. Until 5 a.m. the pains were strong and frequent. The os, although quite dilatable, did not dilate any further on account of the head not being able to descend and press upon it. Her Medical attendant then took charge of her, as a private patient of my own required my services. I got my case over in two hours, and feeling sure there would be some difficulty in the delivery of Mrs. B., I had the curiosity to call and see how she was getting on. I was told that part of the child was delivered, but that the Surgeon had failed in extracting the head, and had left to get the instruments. The patient presented similar symptoms to those in the first case, such as large uterus, pallid lips, and quick and feeble pulse. I therefore determined to make an attempt to extract the head, although I did not expect to succeed, considering her Surgeon, who was a first-rate accoucheur, had failed. To my surprise the head was delivered with very little difficulty. A quantity of clots and blood followed, and I extracted the placenta by introducing the hand. The uterus was somewhat bulky, and I was subsequently informed that rather free draining kept up till next day."

22, Union-place, Aberdeen.

THE HYPOPHOSPHITES IN CONSUMPTION.

Dr. Churchill's Reply to Dr. Cotton.

[To the Editor of the Medical Times and Gazette.]

Sir,—I appeal to your sense of justice and impartiality to give insertion to the following answer to Dr. Cotton's paper on the hypophosphites which appeared in your number of the 14th. I am, &c. J. F. Churchill.

Paris, 7 Rue Scribe, Nov. 21.

Dr. Cotton's paper on the hypophosphites in the *Medical Times and Gazette* of Saturday, November 14, is a repetition of the line of argument published in the *Lancet* four years ago,(a) and completely demolished by me in 1864.(b) There is, however, one marked difference between his last experiments and his former ones. In 1863 Dr. Cotton had used my own hypophosphites as supplied by Mr. Swann, and the number of cases which improved was eight out of twelve, four of which, as I have shown, were cured. In the present instance the hypophosphites were supplied by the Brompton Hospital, and the proportion of cases benefited was only four out of twelve —that is, half the proportion obtained in 1863. Dr. Cotton argues now, as in 1863, that if a patient who was improved while taking the hypophosphites still continues to do so for a short time after they were omitted and carbonate of soda used instead, the continuation of the improvement is due to the carbonate—that this latter is as effective as the hypophosphite—and that, in fact, both were of no use.

Why does not Dr. Cotton try carbonate of soda first and alone, and then compare the effect produced with that of the hypophosphites?

Of course, in a comparison of this kind, the final result only is to be taken account of. True it is that the discoverer of the medical action of the hypophosphites has been at great pains and labour to show that the extent of organs involved, the stage of the disease, the many and varied complications attending its progress, the type of the attack, the possible existence of inflammatory adjuncts, together with the conditions of hereditariness, constitution, temperament, sex, age, and many others, involve a practical consequence of the highest value as to the mode, form, dose, and time of administering the remedies, while, at the same time, they lead to positive and almost mathematical data for the prognosis of each individual case.

But Dr. Cotton does not descend to such minutiæ. Still, they will have to be taken into account. His statements are in direct opposition to those of many eminent members of the Profession, amongst whom, to cite only a few of those at home, I would mention Drs. C. J. B. Williams and C. J. Williams (the latter one of the Physicians at the Brompton Hospital, whose able paper on the nature and treatment of pulmonary consumption I have perused with much interest), and Dr. Thorowgood, Physician to the City of London Hospital for Consumption. Independently of these individual testimonies, I commend to the timely meditation of my adversaries the following facts:—

Fact 1.—Up to the year 1857 the hypophosphites were of no practical use, were known merely to a few chemists as samples in the laboratory, and to the Medical Profession were not known even by name.

Fact 2.—In that same year they were brought before the world by me, as the specific remedy for consumption.

Fact 3.—Their use has spread over the whole civilised world—from Russia to Australia, and from India to Peru.

Fact 4.—These salts, which were unknown ten years ago, are now in such general use that at the Paris Universal Exhibition last year they were to be seen in the show-cases of one half of the exhibitors in the chemical department.

Fact 5.—The last report of the Registrar-General shows that in England there has been a marked decrease in the number of deaths from consumption within the last ten years.

It may be that even from Brompton a voice may come, like that of a skilful and honest Belgian Physician, saying:—"Seven years ago I stated(c) that I had used Dr. Churchill's hypophosphite of soda without succeeding in a single case. Truth compels me to declare that I now prescribe the hypophosphites in my daily practice. I have observed several cases of complete recovery, and acknowledge that the hypophosphites undoubtedly possess the power of curing consumption."(d)

(a) *Lancet*, April 25 and May 2, 1865.

(b) In my book, "De la Cause Immédiate de la Phthisie Pulmonaire et des Maladies Tuberculeuses," p. 933. Paris. 1864.

(c) *Journal de Médecine de Bruxelles.*

(d) Dr. Holsbeck, "Le Scalpel," December, 1865.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF PERFORATE UMBILICUS.

(Under the care of Mr. MARSHALL.)

For some time past Mr. Marshall has had under his care a male child, who on admission presented the following singular condition:—Projecting from the umbilicus was a tumour of the size of a large hazel nut, of a florid red colour, and perforated at its apex by an orifice from which there was a constant mucous discharge. This led into a long canal, into which a probe could be passed for some distance. The existence of a long passage in this region at once calls to mind the occurrence of persistence of the urachus, cases of which have been recorded by Boyer and others; but in this instance the probe passed backwards and to one side, and not downwards towards the bladder, and urine had never passed by the umbilicus. The direction of the canal, and the statement of the child's friends that fluid resembling in colour and smell the contents of the intestines had occasionally exuded from the external orifice, led Mr. Marshall to diagnose the case as one of that extremely rare condition, persistence of the early connexion between the umbilical vesicle and the intestine of the embryo. The red protrusion was the enlarged stump of the umbilical cord. The external opening of the canal was closed by dissecting away the mucous membrane and bringing the raw edges into close apposition. After this operation had been attended with complete success, a large portion of the umbilical tumour was removed by the galvanic cautery, a means by which the Surgeon is enabled to apply to any part of the surface of the body an intense and, at the same time, a localised heat. The actual cautery, from the size of the button which is necessary for importing sufficient caloric for the purpose of cauterisation, has the disadvantages of heating and causing congestion of parts not involved in the disease. Mr. Marshall, in some remarks upon this case, stated that though the external orifice of the canal might remain permanently closed, and the child be relieved of its external deformity, there would always be a risk of some contents of the intestines passing into the canal and setting up irritation and suppuration in the region of the umbilicus. In cases of abscess in the anterior wall of the abdomen, where a cherry-stone or some hard foreign body has been discharged with the pus, the inflammatory mischief is often to be attributed to the existence of an intestinal diverticulum formed, according to Meckel, by a persistence of the vitelline duct.

GANGRENE OF THE TOES IN A YOUNG SUBJECT.

(Under the care of Mr. MARSHALL.)

The great majority of cases of localised gangrene of the lower extremities observed in Hospital practice are due either to some arterial changes in aged subjects, or to the effects of cold associated with moisture on the toes and fingers of adults caused in consequence of insufficient nourishment or by an abuse of alcohol. In the following case, treated by Mr. Marshall, gangrene of the toes occurred in a boy about eight years, under the following circumstances:—The patient, for some reason or other, ran away from his home, and wandered about the streets for some days, earning nothing, and very badly fed. For five nights he slept in a cab without taking off his boots. The feet then became swollen and painful, and black patches appeared on the toes. At the time of the boy's admission into the Hospital, the first, third, and little toes of the right foot were in a state of gangrene, and hopelessly affected; the second and fourth toes were perfectly healthy; small dark-coloured bullæ and superficial black patches were found on the left foot, but these did not increase either in depth or in superficial extent, and soon disappeared. This gangrenous condition was attributed by Mr. Marshall to cold and compression, acting upon remote parts of a subject insufficiently nourished. A line of demarcation formed near the metatarso-phalangeal joint of each affected toe, and on November 26 the gangrenous parts were removed by the knife.

APPLIANCES AFTER AMPUTATION.

(Case under the care of Mr. MARSHALL.)

As an addition to the many evidences of the attention now paid to the after-treatment of Surgical wounds, and of the endeavours to obtain speedy and healthy cicatrisation after operation, we will briefly describe some ingenious modifications recently applied by Mr. Marshall in the dressing of a stump after amputation. The subject was a pale unhealthy-looking man, 28 years of age, whose right upper limb, in consequence of obstinate disease of the bones, had been previously curtailed, first by removal of the hand five years before, and afterwards by an amputation at the forearm in February of the present year. As the stump formed by the second operation also became affected by the old disease, Mr. Marshall performed amputation above the elbow on October 8. Two lateral flaps were made, and the bone sawn through in the usual manner; the bleeding was arrested by torsion; the flaps were then brought together, and their raw surfaces kept in close contact by three long wire sutures passed through the thickness of both flaps far above the edges of the skin, and about half an inch below the end of the bone. The ends of these wires were then brought together over the extremity of the stump, and the edges of the flaps kept in contact after the usual manner by small wire sutures. Collodion was brushed over the line of incision, and two short splints of wood, thickly padded, were applied over the flaps and fixed by a bandage so as to cause slight compression. During the operation care was taken to prevent any sponge from coming into contact with the raw surfaces of the flaps. A slight erythematous blush was observed about the edges of the wound a few days after the operation; but this soon disappeared. The splints were kept applied to the stump during the healing processes. The discharge from the wound was thin and very slight. The patient made a very favourable and rapid recovery, and at the end of the third week was discharged as cured.

To Mr. Barslett, House-Surgeon to Professor Erichsen, we are indebted for the following reports on two cases in which severe and extensive wounds were treated with much success by carbolic acid.

EXTENSIVE PUNCTURED WOUND IN THE BACK OF THE RIGHT THIGH TREATED BY CARBOLIC ACID DRESSINGS—RAPID RECOVERY.

(Under the care of Mr. ERICHSEN.)

W. M., aged 60 years, a strong healthy man, was admitted into University College Hospital on September 26, 1868. A few hours before admission, whilst engaged in lopping a tree, fell from a ladder on to some railings, two spikes of which entered the posterior part of the right thigh, and produced large painful wounds. On admission two wounds were found, one near the outer part of the back of the thigh, and situated about four inches below the fold of the right buttock, and the second towards the inner surface, about six inches below the buttock on the left side. The middle finger could be passed for its whole length into either wound without reaching any termination, and it was evident that a continuous track extended from one orifice to the other. There was very little hæmorrhage; the man complained of great tenderness at the seat of injury, and also of severe headache.

Treatment.—The wound was injected with a mixture of carbolic acid and rectified spirit, one part of the acid to four parts of spirit, which in the course of five minutes relieved the local pain. The edges of the wound were then brought together by silver sutures, and covered by lint dipped in carbolic acid and linseed oil; over this were applied carbolic acid plaster and a bandage.

September 27.—Patient is anxious and restless, but complains of very little pain. No suppuration in the wound. Carbolic acid dressings applied as before.

28th.—Complains of pain and of want of sleep. Wound again dressed with carbolic acid.

29th.—Patient still restless and troubled with pain at the back of injured thigh. A slight erysipelatous blush and dark-coloured ecchymoses were observed this morning round edges of wounds; slight suppuration. Fomentations to be applied.

October 1.—Patient much relieved since yesterday. Blush still present around the wounds, and more diffused; very little suppuration. Wound again dressed with carbolic acid.

5th.—Patient has been going on remarkably well since last report; his general health is very fair, and the appetite good. The erysipelatous blush has quite disappeared, and there is scarcely any suppuration in the wounds, which were dressed as before. The man was placed on an extra diet, with ten ounces of brandy, and a mixture of carbonate of ammonia and infusion of bark was ordered to be given three times in the day.

7th.—Still progressing favourably. No pain in the wound, and but slight signs of suppuration.

18th.—To-day the carbolic acid dressing has been discontinued, as the wounds are now perfectly healed, with the exception of a small open surface on outer side of thigh, which is about half an inch in length. No sinus exists, and the long wound seems to have healed along the whole of its subcutaneous course. Patient states that he is perfectly free from pain and uneasiness in the injured limb, and wishes very much to get up. His general health is very good. Small wound dressed with red lotion.

28th.—Discharged as cured.

CONTUSED AND LACERATED WOUND OF HAND, WITH COMPOUND FRACTURE OF METACARPAL BONES—SPEEDY RECOVERY AFTER THE LOCAL APPLICATION OF CARBOLIC ACID.

(Under the care of Mr. ERICHSEN.)

James P., aged 8 years, was admitted into University College Hospital on October 7, 1868, with a severe injury of the right hand, caused by the machinery of a cotton mill. On admission there was found a large contused and lacerated wound on the dorsum of the hand; the metacarpal bones of the middle, ring, and little fingers were fractured and much comminuted. There was also a compound dislocation at the metacarpal articulation of the middle finger. A large wound, with jagged edges, extended from the wrist over most of the dorsum, and along the contiguous surfaces of the injured fingers, and also to the muscular eminence on the palm corresponding to the little finger.

As the bones of the middle finger were much crushed, and the periosteum and soft parts extensively detached, Mr. Barslett, the House-Surgeon, had the patient placed under the influence of chloroform, and then removed the injured finger at the metacarpo-phalangeal articulation by extending the original wound upwards and downwards. The arterial hæmorrhage was arrested by torsion. The whole of the divided parts were then washed over with a solution of carbolic acid—one part to twenty—and the edges were brought together at different parts by wire sutures. Muslin dipped in a mixture of carbolic acid and linseed oil was placed in two layers over the seat of injury, and covered by carbolic plaster. A straight splint was then applied to the arm and hand, and the whole of the upper extremity was kept at perfect rest. Patient did not suffer much pain after the operation, and there was no marked constitutional disturbance. The discharge from the wound was slight, and had never a bad smell. The carbolic dressing was removed at the end of a week, and the wound was then found to be covered with granulations and looking very healthy. The raw surfaces were then dressed with a weak lotion containing carbolic acid—one part to forty of water—under which local treatment it rapidly healed. The patient did not present a single bad symptom up to the time of his discharge on November 5, when he was sent into the country as cured. A very small and healthy granulating surface still existed on the back of the hand.

EPIDEMIC CYANOSIS AT CALCUTTA.—The *Indian Medical Gazette* for October criticises with deserved severity the mortuary returns of the Calcutta Municipality, which are full of all sorts of impossible and improbable statements. Thus it is gravely declared that, during 1867, in a population of considerably less than half a million, no less than 704 cases of *cyanosis* were met with!

HYDROPHOBIA.—Dr. Beerel relates a curious case as regards the obscurity attending the causation of hydrophobia. He was called to a robust factory worker, aged 18, who after a while presented all the signs of hydrophobia, which, after running a rapid course, terminated fatally. Forgetting it at first, the patient on cross-questioning recollected that, two days before, he had been slightly bitten on the ankle by his own dog, which he had disturbed while eating. He thought no more of it, and when the part was examined, an insignificant wound already cicatrised was found. This dog, at the time of his master's death, was perfectly well, as he had indeed seemed to be when he bit him, and as he continued to be long afterwards while under the surveillance of the police.—*Berlin Klin. Woch.*, Oct. 19.

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Medical Times and Gazette.

SATURDAY, DECEMBER 5, 1868.

THE ALLEGED PRACTICE OF HOMŒOPATHY IN THE ROYAL INFIRMARY, ABERDEEN.

We have recently heard a good deal about a dispute among the Physicians of the Royal Infirmary, Aberdeen, the subject being the alleged practice of homœopathy in the wards of that institution by Dr. Reith, one of their number. Open warfare began by Drs. Harvey and Smith, the two other Physicians, writing to Dr. Reith protesting against his employing "acknowledged homœopathic medicines and preparations" in the Infirmary, and also remonstrating with him on prescribing the medicinal preparations of the Pharmacopœia in much smaller doses than those recommended in the authoritative work. In reply, Dr. Reith asked the grounds of their objection to homœopathic medicines and small doses of officinal preparations. Two letters follow, first from Drs. Harvey and Smith, maintaining the general acceptance of their views as orthodox, and the valuelessness of homœopathy, requesting the discontinuance of homœopathic practice in the Infirmary, and declaring their intention of laying the whole correspondence before the Board of Managers. Dr. Reith, in reply, speaks of the disgraceful state of therapeutics, the liberty of every Practitioner to choose his own mode of treating disease, and then enters somewhat discursively on the merits of homœopathy. At a special general court of the managers, held to consider the matter, on Tuesday, November 10, these letters, along with certain others, including one from the Consulting Physicians of the Hospital, Drs. Dyce and Kilgour, whose advice had been asked in the matter, were discussed. The conclusion arrived at was that the Board was not then in a position to decide as to what should be done in the matter, so that its consideration is deferred until the next regular quarterly meeting. Thus the affair now stands, and we may take the liberty of saying a very few words upon it.

We hope we shall be pardoned for expressing our belief. Dr. Reith is an ingenious and honourable man, who has let himself be entangled in a metaphysical puzzle, and, when justly called to account by his colleagues, has written indiscreetly and defiantly, and so given the world ground for believing him to be worse than he really is.

The metaphysical puzzle is the well-worn doctrine of *similia similibus*. Everybody remembers how, in Æsop's Fables, the Satyr could not understand how a poor frozen traveller could blow on his fingers to warm them and on his porridge to cool it. Before the phenomena of the case were analysed by physical science, the Dr. Reith of the day might have pointed it out as an illustration of some supposed law. It is quite possible to rake together a considerable number of instances in which some given agent seems to undo at one time what it does at another. A breath will blow out a candle and blow up a fire; oil will burn brightly, but too much oil makes the lamp smoke or puts it out; a small fire will fill a chimney with soot, and a large fire will sweep the chimney by burning the soot out; put a short chimney to a lamp, and the flame brightens, but lengthen the chimney, and the light decreases; an explosion of gunpowder may put out a fire; a little bit of cheese will help to digest a dinner, whilst a great bit might lie in the stomach like lead; a thin fall of snow chills the plants in the garden, whilst a heavy fall keeps them warm; a small puncture may create an abscess, to be cured by a large incision; and so we might go on reckoning up a score of seemingly *similia similibus* cases in daily life. When each of these is analysed, it is found that difference either in the quantity of the agent or in the nature of the thing acted upon alters the whole problem; so that no general law can be got out of them—nothing but a set of stray coincidences. When the small globe of incandescent gas which surrounds the wick of a lighted candle is bodily displaced and blown away, out goes the light; but the blowpipe shows that air applied under other conditions acts on a flame as it does on incandescent carbon in the most fixed form. There is positively no general law of the kind assumed.

It is the same with the alleged instances of the *similia similibus* in the case of disease. If diarrhœa be caused by retained feculent matter, it may be cured by a purgative which sweeps away the cause; but we cannot predicate of any purgative that it will in any dose cure any diarrhœa by virtue of any general law. An astringent lotion cures a mucous discharge by destroying infected germs, restraining growth, and checking the flow of blood. Its alleged power of creating discharge if misused has no connexion in reason with its power of curing discharge if rightly used. There are many remedies which might, if carelessly considered, be supposed to support this law, as acids in diarrhœa. Most acids in large doses disorganise and dissolve any membrane they are applied to. What connexion has this with their effect in smaller doses? In small doses the acids act according to the state of the membrane. If this be irritable, thinly covered, and red, they will cause griping; if thickly coated with alkaline mucus, they may do great good. We deny *in toto* the existence "of a law of cure as universally applicable within its own sphere as gravitation or any other physical law,"(a) and that that law, if it exist, is found in homœopathy. Any hypothesis of this kind belongs to that infantine stage of science which is satisfied with metaphysical phrases; whereas modern science, which counts, and weighs, and measures, ascertains, as far as is possible, the chemical or physical conditions of disease, and operates against them, not by a general formula, but by chemical and physical means varied infinitely.

To confine ourselves to *similia similibus* in therapeutics would be to discard all possibility of borrowing from the advance of chemistry, physiology, and diagnosis, and to limit ourselves to a barren dogma. As regards the blood-vessels and the effects of various agents in causing contraction or dilatation, that is but a very narrow strip of the field of Medicine; it ignores all the wonders of cell or germinal growth, and is but a reproduction of the antiquated theories of Cullen. He despaired of a knowledge of the *composition* of the body, and confessedly built his theory on its supposed *actions*; and the "extreme vessels" were the smallest elements whose existence was surmised in his time. And Dr. Reith would take us back to that!

But the *similia similibus* which so fascinates Dr. Reith is but a very little part of homœopathy. Upon that dogma is raised the grotesque superstructure of infinitesimal doses, of

(a) Quoted from Dr. Reith's pamphlet "Homœopathy: its Nature and Relative Value. By Archibald Reith, M.D. With an Appendix by D. Dyce Brown, M.A., M.D. Aberdeen: Wyllie. 1868."

virtues excited in inert drugs by friction, of the identity of these virtues with the powers of animal magnetism (which is reasonable because 0=0), of the impossibility that diseases can be other than dynamic, and so forth. Dr. Reith, we are glad to find, repudiates these absurdities, yet he is rash enough to accept and defend the term "homœopathy," which, as he ought to know, signifies to the popular mind not merely the folly of *similia similibus*, but the graver nonsense of the true Hahnemannic dogmas.

To sum up the matter, Dr. Reith, if well-advised, will make the *amende honorable* to the Profession for his seeming defence of the homœopathic quackery, and for his positively untrue and unfair statements that homœopathy has not been examined and tested by Physicians. He ought to confess that *similia similibus* goes a very little way in practical Medicine. And whilst claiming the right to pursue his investigations into the action and effects of drugs, he may be advised to select those which have no suspicious stamp about them, and to abstain from injudicious arguments which the public might take to be a vindication of a popular form of quackery.

Certes, it will bode no good to the Aberdeen School to have a clinical professor whose teaching is based on an assumed law which does not embrace half the facts of Physic.

ARMY HOSPITALS.

We are glad to see that attention is being called to the extravagant system of governing our military Hospitals. A short time ago we commented upon this subject, and since then our views have been confirmed by the opinions of others published in the columns of our contemporaries. We are, however, desirous of strengthening our position by reference to a few figures. The sum of money voted by Parliament for the annual support of what we must call superfluous administration in the Netley and Woolwich Hospitals amounts to £4450. This sum is exclusive of considerable pensions enjoyed by the governors of these institutions. In this way the governor at Netley derives from the public purse a yearly stipend of £956 5s., in addition to certain allowances and a commodious house with grounds attached, the assistant-governor £303, and the head of the Woolwich Hospital £550 and their respective allowances. Irrespective of these sums, the public pays two captains of orderlies, an adjutant, and other functionaries, to support this very absurd system.

One would naturally suppose that the governor of such an institution as Netley Hospital must find the labour of his office very arduous when he requires an assistant-governor, a captain of orderlies, and an adjutant to assist him. Such, however, we believe, is not the case. His duties are of a very commonplace nature, and chiefly refer to the transmission and signature of official documents prepared by clerks and others. The captain of orderlies, or the adjutant, or, indeed, any intelligent sergeant-major, could efficiently manage the discipline of the station, and the same officer, or the principal Medical officer, would be as effective, and a far cheaper medium of postal communication with the London offices than a shelved major-general or a colonel.

But it is quite unnecessary to maintain so great and expensive a system. The duties of these offices are neither so arduous nor of such a martial character as to require plumigerous administrators. The work can be done at a much less cost. The Medical duties of the principal Medical officer are not incompatible with the general administration. Both can be safely entrusted to the same individual, and by placing them in the hands of the principal Medical officer, the country would save in these two Hospitals alone about £4000 a year.

What, then, is to prevent the inspector-general at Netley, or the deputy inspector at Woolwich, doing the administrative work of their respective Hospitals, aided, if need be, by the captain of orderlies for discipline? Nothing in the world, excepting the stupid prejudices of our Horse Guards' authorities, and the pecuniary interests of certain military men—in other words, we would say military jobbery. We are quite aware that nepotism in some form or other exists in every kind of human pursuit—the Church, the law, the army, and the State. The army Doctors are not exempt from this failing, and principal Medical officers have been known, without any compunctious visitings of conscience, to stretch a point for a *protégé* to gain him promotion or a snug berth, regardless of the overweighing claims of others. This is very naughty, but it is natural. Immaculate government and impartial administration are incompatible with human nature; but when jobbery, such as the introduction of combatant Gamps into our military Hospitals, costs the country thousands of pounds yearly, without even a shadow of advantage resulting therefrom, it is high time for an overtaxed community to cry out. This is strong language, we know, but we unfortunately labour under an infirmity which compels us to call things by their right names.

THE WEEK.

TOPICS OF THE DAY.

Before our journal is on our subscribers' library tables the result of one of the Scottish University elections, that of the Universities of Edinburgh and St. Andrews, will be known. Whilst we write, the neck-and-neck character of the race invests it with a factitious interest. In Edinburgh on the first day Mr. Swinton polled 289 votes against Dr. Playfair's 265. At the close of the second day's poll, exclusive of the second day's votes in St. Andrews, the Conservatives numbered 811, against 793 Liberal votes. The St. Andrews voters on the second day polled wonderfully evenly, for they raised the numbers to Swinton 1088 and Playfair 1071; the Conservative polling 277 votes against his opponent's 278. At the close of the third day's poll Mr. Swinton was 8 ahead of Dr. Playfair, the numbers being Swinton 1698, Playfair 1690. The polling in Glasgow and Aberdeen began on Tuesday. At the close of the day Mr. Moncreiff and Mr. Gordon had each polled 725 votes. Their agents are evidently adopting the plan of registering vote for vote until one side is exhausted.

In our list of Medical Members of Parliament we unintentionally omitted the name of Mr. Donald Dalrymple, the well-known Surgeon of Norwich, who has been returned for Bath. Mr. Dalrymple will sit on the Liberal side of the House.

The students of St. Andrews evidently prefer a literary reputation pure and simple to a political *plus* a literary one, unless, as is most probable, political feeling were the determining cause in the late election to the Lord Rectorship. Mr. Disraeli has been rejected for Mr. Froude by a majority of 14, the writer of history obtaining 91 votes, the maker of history 77. Thus the Prime Minister *in esse* and the Prime Minister *in posse* have both been rejected within a fortnight by Northern Universities. In the case of Mr. Gladstone's defeat, however, for the Edinburgh Lord Chancellorship, the electors were the graduates of the University, whilst Lord Rectorships are in the gift of the students only.

Dr. Richardson, amongst his multifarious undertakings, has found time to write a paper for the Social Science Association, embodying a new scheme of poor relief. The main point in his plan is undoubtedly a good one: it is to make a grand distinction between the able-bodied and helpless poor, the latter term including the aged, the sick, and the young. He would do away with the word pauper and with "the house," and in the case of the able-bodied, he thinks there should be no alternative between work, which ought to be provided by the authorities, and for which the poor ought to be paid, and—the gaol. The sick he would send to Hospitals, the children to national schools, and the old people he would put into asylums made as enjoyable as county lunatic asylums at present are. Of

course it would be easy to raise objections to such a scheme, and the impression it leaves on the mind at first sight is undoubtedly that it is Utopian. But, in our opinion, the question of poor relief and the relations of English society to its pauper understratum is the question of the day, and any attempt to grapple with it deserves a fair hearing. Dr. Richardson is perfectly right in saying that the present system is a demoralising as well as a pauperising one. But the difficulty is to adjust the balance between the claims of the pauper and those of the tax-payer. State relief, as we have often repeated, is only a matter of justice; to relegate it to the domain of generosity is only to commit a fresh injustice. Any scheme, therefore, which would change healthy paupers into bread-winners, even at the risk of a little infringement of the liberty of the subject, would diminish a difficulty which began at the Reformation, when the means by which the Church provided for the poor were secularised, and which has been steadily increasing as years have rolled on.

The managers of the Central London District Schools at Hanwell have issued a peremptory order to the Guardians of St. Pancras to remove their pauper children, who have hitherto been maintained at those schools on the payment of 7s. per head, or to submit to the price being raised to 10s. 6d. per head. We suppose that the Board of Management of the Central London District Schools consider themselves at liberty to impose what terms they like, but they are clearly not supported by public opinion in demanding such an unreasonable expenditure for the maintenance of pauper children. Meanwhile the St. Pancras Guardians appeal to the difficulty in which they are placed by the Hanwell authorities in proof of the necessity of imposing on the ratepayers an enormous outlay for new schools, forgetting that, by hiring houses at Poplar as school houses, they, according to the statement of the chairman of their School Committee, managed to house, maintain, and educate a certain number of their children at 5s. per head per week. We have yet to learn that there are not plenty of large houses to be rented for a very moderate cost either in the neighbourhood of London, or, what would be still better, in the country.

We see that it is stated in the *Parochial Critic* that the ground on which the new St. Pancras Infirmary is to be erected at the foot of Highgate-hill is still undrained, and that the expense of the drainage is estimated at £10,000. The Chairman of the Committee of Works proposed that temporary cesspools should be made, a proposition which was seconded by a Mr. North, but which, we are glad to see, there was sufficient common sense amongst the Committee to reject. The first stone of the Infirmary is to be laid on December 10 by Mr. Wyatt, the Chairman of the Board of Guardians.

The vestry of St. Pancras have passed a resolution that their future Medical Officer of Health shall reside in the parish. The result is that the present incumbent, Dr. Green, besides several gentlemen whose names have been spoken of as probable candidates, are disqualified.

The Provisional Government of Madrid have rescinded the liberal measures in matters of quarantine which had been passed previously to the revolution. The sanitary authorities of Malaga have, therefore, re-established quarantine for all vessels coming from Great Britain, Gibraltar, and Malta, on the plea that our ports are not believed to be free from cholera. The subject of quarantine will, we suppose, be one of the first which will be brought before the Royal Sanitary Commission, and we hope our Government will, by proper representations founded upon the advice of that Commission, induce the Governments of the South of Europe to modify in a scientific spirit a system which has degenerated into little more than a gratuitous interference with commerce. We are aware that the action of the Spanish Government was based upon the Registrar-General's returns of last summer. But the difference between cholera infantum and Asiatic cholera is now pretty generally recognised, and our imperfect nomenclature can no longer afford a pretext for the imposition of restriction. A new nomenclature, however, for diseases of the ordinary diarrhœa class is a necessity.

Whilst infection from a person suffering from the disease is not, in all probability, the only means by which scarlatina is propagated, there is no earthly doubt that it is one of the chief. It is also pretty clearly proved that the power of transmitting the disease to others is retained for a time after the disappearance of the rash. A writer in the *Times* calls attention to the fact that boys have been sent from Marlborough College to travel in first-class railway carriages at too early a period after having been shut up for scarlatina in the sanatorium. We wish some investigation could be undertaken to determine at what time the power of giving off the morbid poison fails during convalescence from the exanthemata. The general notion is that the whole period of desquamation is at least attended with risk, but we do not know that it is founded on reliable data. We believe that fomites will retain *contagium* much longer than the human body will give it off.

A railway Medical tournament is reported in the papers. It took place in the Court of Queen's Bench on November 30. On the plaintiff's side were Mr. Walsh, of Worcester, Sir W. Fergusson, Mr. Henry Smith, and Mr. Erichsen. For the company were Mr. Oliver Pemberton, Mr. Barnard Holt, and Mr. Savory. The disputed ground was whether the brain and spinal cord of a Mr. Allan are or are not permanently injured. The jury, acting as umpires, declared for the attacking party, who thereby gained for the said Mr. Allan the sum of £2650. Whether the reputation of the Profession to which both parties belong gain by such public encounters hardly remains an open question.

Dr. Paget has again been chosen to represent the University of Cambridge in the General Council of Medical Education and Registration. As far as at present appears, there will be no change in the constitution of that body when it shall again meet. The Crown nominees were all rechosen two or three weeks ago.

The investigation into the circumstances under which the death of Mr. Miles, the Medical student who was reported to have been murdered in College-street, Dublin, took place, proved that the unfortunate occurrence was the result of a street row, in which Mr. Miles is said to have been the aggressor, and that, as far as it could be judged, the quarrel was entirely unpremeditated. There seemed to be a doubt as to who were Mr. Miles's actual assailants, and an open verdict was accordingly returned. The three men who were in custody, however, are bound over to appear if called on.

A case of suicide by sulphuric acid is reported from Tunbridge Wells. It seemed probable that the deceased, who was a cook, mistook a bottle containing oil of vitriol and water for a bottle of gin which she kept on the same shelf. She was partly intoxicated when she took the poison. She died in about four hours. Considerable corrosion was found after death.

A case of robbery by the aid of chloroform is reported to have occurred in Alderman's-walk on Saturday last. A gentleman was suddenly stopped by an arm put round his neck, rendered insensible (?) by chloroform, and then robbed. This was done in the sight of a man who was standing by a neighbouring house, and who pursued and captured the thief. The lips and mouth of the person robbed are said to have been very sore the next day from the chloroform. The account is so circumstantial that it seems rash to dispute it; but certainly in Medical practice the use of chloroform does not produce insensibility so instantaneously.

At the Medical Society on Monday night, Mr. Charles James Fox related a case of secondary operation for the removal of a cicatrix and unhealed portion of a female breast performed by Mr. Carr Jackson, in which he had administered

nitrous oxide as an anæsthetic, and had kept the patient under the influence of the gas for twenty minutes. This, he said, was the longest period during which anæsthesia had been maintained by nitrous oxide in England. Equally prolonged use of the gas, however, has been made in America and in France. It has been given many hundred times now in this country, and we have heard of no bad results. The gloomy prognostics that greeted its first introduction seem not at all likely to be verified.

Palæo-pathology was introduced for the first time by Mr. Busk at the Pathological Society on Tuesday. The specimens were a bone of a fossil rhinoceros which seemed to have suffered from rheumatism; a repaired fracture in a cave bear, which Mr. Busk suggested, considering the carnivorous nature of the animal and the constant use it made of its limbs, must have met with its accident just before hybernation; and a pelvic bone, also of *Ursus spelæus*, which seemed to have been the seat of bony growth looking very like a node—a case which the President, Mr. Simon, observed might perhaps be held to suggest the great antiquity of the causes of disease.

A ROYAL COMPLIMENT TO MEDICINE.

Many little "signs of the times" seem to confirm the pleasant impression that in social position our Profession is decidedly mounting higher and higher. A few years ago it was thought a great thing for a Royal Prince to honour Sir Henry Halford by attending a *soirée* at the College of Physicians. The notion of a Prince dining with a Doctor would have been received as an incongruity. Yet last week the Princess Royal of England, accompanied by her husband the Crown Prince of Prussia, and attended by their *suite*, took luncheon by special appointment with the Princess's Accoucheur, Dr. Gream; and nobody sees anything more in the occurrence than a kind feeling on the one side, and a natural gratification at a great compliment on the other. But we *do* think there is sufficient Professional significance in the fact to render it worthy of record in these columns. And we are glad to think that our Princess and her husband must have taken a very favourable impression of the manner in which a London Doctor can receive an honoured guest.

THE NEW INFIRMARY FOR EDINBURGH.

Most of our readers are acquainted with the immense energy displayed in forwarding the recently projected Medical Hospital for Edinburgh, and how large a sum of money has already been collected for the purpose of erecting a building worthy both Edinburgh as a city, and as the site of perhaps our greatest Medical school. Those of our readers who remember the condition of the Medical wards, especially those devoted to clinical cases, will readily appreciate the proposed change. The Surgical wards were, however, in a much healthier state, and it was resolved that no change should in the meantime be attempted with regard to them, beyond improving the existing premises as much as possible. Professor Syme would seem, however, to have latterly arrived at the conclusion that a new Surgical as well as a new Medical Hospital was required, and has been writing to the Edinburgh papers, pointing out the deficient sanitary condition of the Surgical wards now extant. Professor Spence has joined issue with him, and maintains that, with certain changes, these wards may be made sufficiently good and healthy, whilst, even now, the results obtained by him are equal to any obtained in a large city Hospital. The statistics cited by Professor Spence are very reassuring; but we should be extremely sorry were the present opportunity lost, and Edinburgh thereby prevented from acquiring a Hospital perfect in every respect, both Medical and Surgical, one which would be a credit to Auld Reekie, and an honour to her great School of Medicine.

MEDICAL MAYORALTIES AND PARLIAMENTARY REPRESENTATION.

At a meeting of the Corporation of the City of Dublin, held on December 1, Sir John Gray, M.D., M.P. for the City of Kilkenny, was, by a large majority, chosen to to fill the office of Lord Mayor of Dublin for the year 1869. It is generally supposed that Sir John's numerous avocations will prevent his accepting the honour offered to him by his fellow-citizens, in which case Sir William Carroll will probably, according to the Act, remain in office until January, 1870. Under either alternative, therefore, it is likely that the mayoralty of Dublin will continue in Medical hands for another year. Dr. Thomas H. Babington has been elected Mayor of the City of Londonderry. Dr. Babington is a M.D. of Dublin University, Fellow of the Royal College of Surgeons in Ireland, and a Member of the Royal Irish Academy. He is Surgeon to the Londonderry County Infirmary and Gaol, and has contributed papers to the *Dublin Quarterly Journal* and the *Dublin Hospital Gazette*. Within the last few days a rumour has been current in Dublin to the effect that one of the members of Parliament recently elected for an Irish county is about to resign in favour of Sir Dominic Corrigan, Bart., in which case the Profession would, notwithstanding the result of the late Dublin election, have the advantage of the able advocacy in Parliament of the learned Baronet.

PRESENTATION TO DR. CHOWNE.

On the retirement of Dr. Chowne from active duty at Charing-cross Hospital, it was judged fitting that a more substantial mark of approbation for past services should be given him than a mere appointment as Honorary Life Governor or Consulting Physician to the institution implies. A few gentlemen were therefore constituted a committee for the purpose of collecting funds towards a testimonial to Dr. Chowne for his long and zealous services. A meeting was summoned for Thursday, the 3rd inst., in order that this token of general approbation might be presented to the gentleman whose services had called it forth. Attention was directed by the chairman to the great number of years Dr. Chowne had served the Hospital, especially in its obstetric department, to the active share he took in increasing its means for assisting the sick poor, and to the interest he had taken in the Medical School connected with the Hospital, which was described as greatly indebted to him in more than one respect. Upwards of one hundred guineas were collected towards the testimonial, which took the form of three pieces of plate; the centre piece, large and beautifully carved, bearing on one side a figure of the Hospital, on the other the arms of the borough of Westminster. The testimonial having been presented by Mr. Few, treasurer to the committee, Dr. Chowne replied at some length, detailing his connexion with the Hospital, and the various changes the institution had seen during his prolonged tenure of office.

FOURTH ANNUAL REPORT OF THE SANITARY COMMISSIONERS WITH THE GOVERNMENT OF INDIA FOR 1867.

This Report has just come to hand. It is full of the most important information as to the origin and spread of the epidemic of cholera in the North-West Provinces and Punjaub during 1867. The connexion between the contamination of the waters of the Ganges at the great annual pilgrim fair at Hurdwar in April, the bathing in, and drinking of, the river water by the pilgrims, the rapid dispersion within two days of fully 3,000,000 people among whom the seeds of cholera had been scattered, their arrival at various stations and subsequent appearance of cholera in the same, appear to be established beyond the possibility of doubt. The Report is compiled by Dr. J. M. Cunningham, the officiating Sanitary Commissioner, who is evidently well suited for the task, and ought not to have the qualifying epithet "officiating" attached to his official designation.

A PRUSSIAN MEDICAL HISTORY OF THE ABYSSINIAN EXPEDITION.

Dr. Roth, Staff-Surgeon of the Prussian army, has compiled in pamphlet size, for the information of his own Government, a Medical report of the Abyssinian expedition. He has made free use of all official information afforded to him by the Director-General of the Army Medical Department during his recent visit to this country, and gives the greatest praise to the sanitary and Medical memoranda issued by the Director-General with reference to the expedition, and to the efficiency with which the duties were performed by the Medical officers more immediately engaged in it.

EXPLOSIVE BULLETS IN WAR.

The St. Petersburg conference on the use of explosive bullets in war has succeeded in putting rather too fine a point upon its humane intentions. Henceforward no explosive missile of less than 400 grammes, or about 14½ oz. in weight, is to be used by civilised nations in war. No restriction, however, has been put upon the employment of shells of any size between the authorised 14½ oz. and those of the largest dimensions and most destructive powers. It is now well known that the hollow conical bullets used in the Snider and Chassepot rifles produce, by their expansion on striking and penetrating, internal lacerations fully as destructive as those caused by explosive bullets of the same size and weight, so that, on the grounds of humanity, these also ought to be interdicted. But the idea of limiting, on humane principles, contending armies to the use only of such weapons and appliances as may be beforehand determined upon is manifestly absurd. Every nation engaged in war has a right to use every means of advantage which it can obtain from its own mechanical skill; and military principles, instead of humane pretexts, are the only sound arguments against the use of explosive bullets. The Geneva and Paris conferences for the succour of the wounded in war having established the neutrality of all means of relief, and having declared the wounded of a defeated enemy to be as much the objects of care of the conqueror as his own, have abolished all advantages hitherto obtained by maiming and crippling instead of killing the enemy outright, so that inducement to use less effective weapons has no longer any weight. As far as this country is concerned, the decision of the St. Petersburg conference is a matter of perfect indifference, as we have never used explosive rifle bullets.

MEDICINE IN MADAGASCAR.

We glean some interesting information as to the prevalent diseases of Madagascar from a report on the Antananarivo Dispensary by its Physician, Dr. Davidson. This Dispensary was instituted by the London Missionary Society in the capital of Madagascar with the object in view common to other Medical missions, the bodily and moral well-being of the natives. Such institutions, if properly worked, are calculated to do much good, not only to those more directly concerned, but also in the cause of Medicine. Dr. Davidson is a careful observer, and many of his facts are extremely interesting. Typhus fever, he says, is unknown, but typhoid is not uncommon; he describes one case in which obstinate constipation prevailed. Malarial fevers are not common so high above the level of the sea, but are frequent nearer the coast. Measles is known epidemically, and then proves frequently fatal. Small-pox also prevails in the same way, and is much dreaded by the natives. It is reported to have been customary for the parties to bury alive such as were seized with this complaint—a thorough, if summary, method of stamping out the disease. Vaccination has been introduced into the island, and, although at first unpopular, and not altogether efficacious, it is now making way satisfactorily. Hooping-cough, although apparently long known, was not distinguished as a separate disease until its peculiarities were pointed out by Dr. Davidson. Some peculiar forms of pneumonia have been noted, especially in those labouring under a malarial cachexia. Undoubtedly, however, the most interesting portion of the report is that relating to syphilis. This appears to be very common, not in its primary form, for which the natives do not appear to care, but in peculiar secondary manifestations which would seem to be capable of direct transference. The peculiar eruption is condylomatous, not, however, limited to any single portion of the body, but spread all over; it is both hereditary and acquired, when hereditary manifesting itself even when the child is several years old, when acquired usually without any history of primary hard sore, although capable of giving rise to such by inoculation. Further, such eruptions are followed by the well-known sequelæ of syphilitic infection, ulcerated throat, sunken nose, caries of bone, etc. The disease would, in fact, seem to closely resemble that known as the yaws. Ordinary contact, altogether apart from sexual intercourse, is sufficient to insure the spread of the disease, as among childish playfellows of tender years. These facts, and the cases narrated by Dr. Davidson, are of extreme interest, insomuch that one is compelled to regret the scanty details which the nature and size of the document permit. We trust that Dr. Davidson will make his extended experience more widely known to the Profession.

FROM ABROAD.—MORTALITY FROM WAR—CRIMINAL POISONING BY ATROPIA—GONORRHŒAL SCIATICA.

In a recent article in the *Moniteur*, General Ambert, treating on the mortality caused by modern warfare, after referring to the losses entailed by wounds and sickness in the recent Bohemian war, the Crimean campaign, and the civil war in the United States, goes on to say:—

"We have now shown by figures how large is the number of sick and wounded, and we may add that no government at the present day can, from its own resources alone (*i.e.*, unaided by voluntary efforts), provide the necessary succour. Not that modern inventions or the improvements in firearms have increased the losses on the field of battle, which, on the contrary, as we shall show, have decreased; but wars are carried on with so much more energy, and the number of combatants engaged is so much more considerable. They are now waged with feverish activity in all seasons of the year, without truce or shelter, and whole masses of men are hurled against each other. In proof of how mistaken public opinion is in supposing that the improvements of modern firearms have led to greater losses on the field of battle, we may cite a few examples from past and present times. At Austerlitz the losses of the French were 14 per cent. of the effective combatant force, of the Russians 30 per cent., and of the Austrians 44 per cent. At Wagram the French lost 13 and the Austrians 14 per cent. At Moskowa the French 37 and the Russians 44 per cent. At Bautzen the French 13 and the Russians and Prussians 14 per cent. At Waterloo the French 36 and the Allies 31 per cent. At Magenta the French 7 and the Austrians 8 per cent. At Solferino the Franco-Sardinians 10 and the Austrians 8 per cent. This battle of Solferino also teaches us another lesson—viz., that the French, with their artillery perfected by new discoveries, lost more men than their adversaries still employing the old system. We must, therefore, not be deceived as to the effects of these discoveries and improvements in muskets and artillery. The arms of the soldier prove far less fatal in warfare than do the attendant fatigues, privations, and miseries of every description."

A case is about to occupy the tribunals of Geneva which bids fair to be a *cause célèbre*. Mademoiselle J. stands charged with causing the death of several persons by means of the sulphate of atropia, which she obtained in the form of a collyrium by the pretext of consulting various Practitioners for disease of her eyes. Her pupils were habitually dilated, and she wore green spectacles. She had visited various cantons offering her services as a nurse to Doctors, or whoever had need of such a person, and carried about with her the names and addresses of some of the most influential persons in Switzerland. She was very assiduous in her attendance upon

all those who were consigned to her care; and her conversation, knowledge, and long experience imposed upon even the most experienced persons. At Geneva, however, after several of her patients dying, suspicion was aroused, and she was carefully watched, especially by Dr. Rapin, one of whose relations was among the number of her victims. At a boarding-house where she gained admission several persons died, and one morning the inmates were startled by finding an unknown hand had conveyed its warning by placarding at the door these ominous words:—*Ceux qui entrent ici n'en sortent pas*. The public became alarmed, and suspicions were more and more pointed at J., who had become very dexterous in persuading her victims not to seek for Medical advice. At last one of them, a young German governess, to whom she had given some atropia, was brought to the Hospital, having all the symptoms of poisoning by atropia, great dilatation of the pupils being especially remarkable. She recovered, and stated that Mademoiselle J., while professing to instruct her in French, gave her from time to time some fluid to drink, saying it was *kirschenwasser*. Mademoiselle J. has been arrested and awaits her trial. Several phials containing atropine were found at her residence, and seven bodies have been exhumed and submitted to Medico-legal investigation, with the result of the discovery of atropia and other poisons. (Since the above was written, the prisoner has confessed, and been condemned to penal servitude, notwithstanding the plea of insanity.)

M. le Sourd, editor of the *Gazette des Hôpitaux*, takes the opportunity of the relation of this curious occurrence to impress upon Practitioners the necessity of observing the greatest care in manipulating so dangerous a drug as atropia, and especially its sulphate. Employed under conditions usually considered normal, it sometimes produces the most dangerous effects, and cannot be watched too carefully. Individual peculiarities should always be borne in mind, so that only very small doses be used at first, and subcutaneous injection not ventured upon.

M. Fournier recently brought under the notice of the Paris Hospital Medical Society the subject of "Gonorrhœal Sciatica," which he believes to be a real variety of this painful affection, and not a mere coexistence of sciatica in a subject suffering from gonorrhœa. This he does for the following reasons:—1. The sciatica figures among the number of the manifestations of gonorrheal rheumatism. In an ordinary case of this in which the joints and eyes are characteristically affected, sciatica springs up without any obvious cause, and in a few days again disappears. 2. In the course of several successive attacks of gonorrhœa, sciatica has been observed associated with other indubitable signs of urethral rheumatism. This prevents our attributing the occurrence of the affection to a mere coincidence. M. Fournier not only illustrates this successive appearance of the affection from his own practice, but by reference to Home's "Practical Observations on Stricture," which contains two remarkable cases. 3. In those subjects who have the singular peculiarity of not being able to contract gonorrhœa without also suffering from rheumatic accidents, we sometimes find the sciatica alternating in the course of a series of such attacks with other rheumatic symptoms of a different order. 4. Gonorrheal sciatica differs from ordinary sciatica in its mode of evolution. Commencing usually quite suddenly, it at once reaches its *summum* of intensity; and then the pains, at first excessive, soon become more tolerable, so that by the third, fourth, or fifth day relative ease is established and continues, the entire duration of the affection being usually very short as compared with ordinary sciatica. 5. Gonorrheal sciatica differs in another notable particular from the ordinary disease in being easily curable, cupping cutting it short with remarkable rapidity, so that a second application is rarely required, and the external use of narcotics completes the cure. 6. M. Fournier calls attention to a curious lesion which is but little known, and may during the course of a gonorrhœa give rise to an erroneous supposition of the existence of a sciatica. It consists in an acute *hygroma of the ischiatic bursa*, often accompanied by great pain and symptoms simulating sciatica. Hidden beneath the soft parts, it can be appreciated only with difficulty, and has often been mistaken for a partial sciatica. Since M. Fournier read his paper he has published it in detail, with cases, in the *Union Médicale* for November 24.

ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.

DR. RICHARDSON'S ADDRESS.

The World of Physic and the World.

Dr. Richardson took as the subject of his address the mutual relationships which should exist between the world of Physic and the world altogether. He gave first a description of the world of Physic as a distinct or professional organisation. Next he traced out the relations of the community to Physic, and what the great world could reasonably expect the Profession to accomplish for it. Lastly, reversing the question, he considered Physic in relation to the public, and the objects it should have in view as due from it to mankind. We select from the address a few passages under each of these heads in way of illustration.

Physic: Its Direct and Indirect Power.

From the universality of the working life of our world of Physic, its power is indefinite, better perhaps say indefinable. The power of the priest is not ours; the power of the lawgiver is not ours; the power of the soldier is not ours; we have never in our history, as a class, been connected with national revolutions, national conquests, national crises of any kind, for good or evil. And yet, negative though we appear to have been, and appear to be, we have at all times and in all countries exerted a veiled influence, which, like all great natural forces, has been the more potent for that it has not been ostentatiously exposed to public view. When great catastrophes of disease have shaken the hearts of men, the world of Physic has ever been at hand, a firm and reliable power, keen to investigate, bold to intervene, and, by natural contempt of danger, qualified to sustain hope and prevent the panic of despair. In our daily routine it is a part of our accepted duty to upraise the downcast; while we hold up to the world, by the constant strain of our efforts and ambitions to improve our science in all its parts, the indisputable proof that we are prepared, to any extent, to lessen the necessity which calls us into action, and brings into our hands the labour on which we depend for our daily bread. Thus the world of Physic is in many ways a present power; a power silent but sure; a passive power, inoffensive yet propulsive; acting solely by its units, yet strong because its units a million times multiplied have a common intention and will.

To this direct power of the world of Physic, past and present—a power honestly claimed by every honest member of that world—may be added certain indirect influences which have not been without their value. Physicians have at all times yielded men who have cultivated pure physical science with an energy and perseverance shown by no other special class of mankind. Our Kepler laid the first steps in the study of vision, and with these the first steps in optics as a part of physical science. Our Mayow first suggested the compound character of the air, and the existence in it of a something that sustained the combustion of flame and the combustion of the living body. Our Boerhaave gave a taste for chemistry and a character to that science which since his day have never declined. Our Black determined the product of burning carbon, and showed that product as exhaled from the ordinary furnace and the living lung. Our Young propounded the accepted theory of light as undulation. Our Hunter remodelled the study of natural history, and laid the foundation of that study of the history of nature, past and present, to which Cuvier, who in exile practised Surgery, devoted his best life, and which the still living master, Owen, also of the same Profession, has so splendidly advanced. Our Hartley expounded the fact of the communication of motion in vibrations from the outer universe into the animal body. Our

Locke made logic a true science, and gave meaning to the study of the human understanding itself. Our Erasmus Darwin wrote the earliest accurate readings of the living relationships between plants and animals, and bequeathed the study which his great descendant and namesake, who is still with us, has so marvellously elaborated. Our Linnæus and De Candolle vie with each other as founders of that philosophical study and classification of plants which the distinguished Hooker, with a zeal worthy of his masters, in this day maintains. Our Metcalfe, with labour of learning not often seen, revived and reinstilled into science the theory of the unity of force. Our Haller supplied precision and breadth of expression to the literature of science; and our Goldsmith introduced into works of fiction a purity, beauty, and chasteness which before his time were unknown. Our Mungo Park was the traveller who made the first decided progress in discovering the interior of Africa and the sources of the Nile; and our noble Livingstone, whom we hope soon to see amongst us again, has completed what his less fortunate brother even at the sacrifice of life left unachieved.

In naming these simple matters of history, shall I say too much if I claim that, in the advance of the physical sciences, the world of Physic has taken and sustained a pre-eminence which those who have made pure physics their sole study have not surpassed?

If we turn from physical to social science, we find again in the world of Physic the same pervading influence. The foundations of sanitary science were laid by Southwood Smith and his army of Medical followers at home and abroad. From the galled limbs of the insane the iron fetters were boldly and for ever struck off by one of our brethren, who this day is even here amongst us, Gardiner Hill; while by the labours, profound as beautiful, of Conolly, the humane management of the insane was not only consolidated, but the whole subject reduced to an order, simplicity, and advancement which contemporary narrative could not possibly reveal in all its meaning, plenitude and beneficence.

The Demands of the World.

The man representing the world at large should, I think, first consider what in the fullest sense he can expect the man of Physic to do for him, and how far Nature herself ordains that the success of the man of Physic shall be permitted. In this sense he, the man of the world, should make the utmost allowance for the tremendous odds which the Medical man has to contend with, by reason of the inevitable law of Nature, that the continuance of life is based on the continuance of death. If we save the life of an individual never so many times, a time will come when we shall be utterly unable to save that life. So art at last must fail. Or to proceed to a more general proposition: so inexorable is Nature in maintaining the balance of life and death, that she sometimes strikes down portions of mankind wholesale, by causes which she does not give us time to study until the event has swept by us; she apportions mortalities to seasons, and diseases to races; she puts on earth, for her own purposes, beings so differently constituted that they defy the application of any one absolute rule of treatment; she stamps character and build by hereditary transmission, and brings us face to face with special differences which we cannot possibly control. These rules, set by Nature herself, enforce limitations on the skill of the Physician which are primary and should be at once conceded as inevitable. Physicians would be gods should they be other than they are, units of Nature, contending with Nature altogether, contending always, often losing, and never winning actually, but sometimes seeming to win when to win is in accord with the great argument of natural necessity.

The representative of the world at large should remember again that the man of Physic, having in all cases to deal with free will in man, must needs be perpetually crossed in his finest knowledge by the fruits of free will. If we could raise the dead, there are men who so raised would die again as quickly as they could. We do not raise the dead, but it is our constant duty to put men into such mode of life that they shall be raised from the misery of sickness into comparative health and comfort; after which we find, as constantly, they go back against their reason to their old ways, and are the same as ever. I think I may say it for all my learned brethren, present and to come, and there is not the remotest expectation this difficulty will ever be removed; for turning to our own selves we find that we, by example of free will, are the most determined specimens of it. We are retail and wholesale specimens at one and the same time: by thoughtless habit we run into special dangers from which other men instinctively shrink; and although we are conscious of practising a profession which will make us have the shortest life value of the community, we stick to it as if it were the elixir vitæ itself and something more.

A man is not engaged in the practice of Medicine a twelvemonth before he learns this resistance of free will. Some Medical men grow hopeless thenceforth, and practise, feeling that whatever they do it is so much the same, that if they only use the knowledge they have gained it is as good as any new knowledge, and that for them to endeavour to discover new truths were indeed a task pitiably bootless. Others more enthusiastic make straight ahead, always determining to do, in spite of the more than dead opposition which so constantly meets them. But even these, after the days of youthful inspiration have passed, sigh as they labour; they believed in the beauty of life, in the glory of saving life, in the admiration of mankind for the duty. A dream! They wake to the consciousness that of all things least appreciated, life is that thing. They see riding in the heart of every adult, man or woman, the disease *atra cura* "black care," worry, which sits deadly, and for which there is no physical remedy save death. They see men, without any obvious reason, running tilt against each other, and dogging each other, and persecuting each other, all for mere dross, unless it be that collision of mind is necessary for existence of mind: they see the affections of the young wounded, and the parental soul stabbed until it is lifeless. They see men ready at all times and ages to sacrifice any length of life to any shortness of ambition. Now a line of youths in their prime is in view, with fathers, mothers, sisters, and hosts of friends cheering them. They are going to row a race. If that act did of necessity deprive those youths of half an eye, or half a nose, or even half a finger, they would not be induced to enter the lists so readily, neither would they be cheered so vociferously; but because it costs them half a life, on they go: for, what is life? Again, there is a line of older men, some very old, as we have seen recently, with boisterous friends, wives, sons, and daughters this time cheering them on, and noisome enemies hissing in discord. These men are running to row in the boat of the State; they spend a year's accumulated animal force in shouting to a crowd that will not listen, but shouts again; and they get, or get not, the famous two letters to their names by giving up a good tenth of all that remains of their ephemera.

I refer to these things not in slight of reasonable competitive effort, physical or mental. I, who in the enthusiasm of scientific research have never hesitated to accept what the pusillanimous would call personal risk have least of all a right to uphold fear of death or fear of shortening life as a virtue. I do nothing of that sort, but look on the little general regard paid by humanity to its own individual existence as one of the most perfect of natural ordinances. I think no more noble words were ever spoken than those of brave old Sir Humfrey Gilbert, "Give me leave therefore, without offence, always to live and die in this mind: that he is not worthy to live at all, that for fear or danger of life shunneth his country's service and his own honour, seeing that death is inevitable and the fame of virtue immortal." I think that our Professional enemy, free will, is never so useful as when it is sustaining the brave: the truth that

> "All men think all men mortal but themselves,

is to me a great truth. I see free will setting the world proudly and properly above the most skilled of curers. I would not ask even for a miracle to save myself from death, at the loss of free will; but I point out none the less earnestly that the world can never have those perfect results of Medical science it craves for while a greater power than science, that which makes science, the independency of the individual mind, reigns divinely supreme.

Mental Curative Medicine.

I do not stop to name minor advances of the world of Physic, though many tempt me by the way, but pass finally to consider one which refers rather to a neglected than an unrecognised subject. I mean the careful study of moral and mental curative measures as supplementary and conclusive to those which are purely physical. The most scientific Physicians have, I think, fallen into the error of studying with too exclusive a care the observable conditions of the body, healthy or diseased, and those agents or agencies for curing diseases which produce the most obvious effect; such as knives and other instruments, anæsthetic vapours, active drugs, heat and cold, electrical shocks, and the like. I take it truly that these

are naturally first studies. It is fair to infer from the general plan of creation, that the simplest organism is the primitive, and that the pure physical existence is the groundwork and the primary necessity of the highest form of living thinking things. But granting this, we men and women, highest forms on this earth at all events, are, as Plato magnificently teaches, "plants not of earth but of heaven, and from the same source whence the soul first arose, a divine nature, raising aloft our head and root, directs our whole corporeal frame." While therefore it is, by nature, the first duty of the healer to make that corporeal frame pure and whole, is it not equally his duty to study what shall enter by the senses or windows of the mind, and, though invisibly entering, be potent forces for evil or for good? Because an agency is not visible, not tangible, is it less real? If a man lose his mind by the failure of his blood, that, it is said, is plain to understand, for it is physical. But if some horror come upon the man through his mind, so that, like poor Horatio, he is distilled

> "Almost to jelly by the act of fear,
> Stands dumb and speaks not;"

is not that, too, physical; an action direct of mind on matter, reversing the physics of the body and creating disease? It must be so, and in the study of this action from the universe into the man there lies a world unknown. With strange acuteness, charlatans of all kinds have touched without understanding this unknown world. They have played, it is said, on the credulity of man; they have done more, in ignorance of what they were doing—they have touched the animal motion through the direct entrances by which the universal spirit enters also. The need for new contemplation here, increases with the intellectual development of the race. The cave-dweller is gone; the Norseman is gone; the crusader is gone; the animal body, living with powers superior to the soul within it, must also, in the course of the suns, altogether pass away, to be replaced by an organism more finely moulded, more accessible to the external beauty and harmony, more sensitive of pain, more sensible of weakness, less susceptible of maladies evidenced through matter, more susceptible of maladies evidenced through mind, and more impressionable to cure or to injury through the mind than through the baser body. To study these changes of existence and action, to open this unknown world of natural truth, not to trade upon the knowledge of its existence, but to comprehend it with the grasp of a philosopher, is a duty to which the man of Physic must devote himself with zeal, or recede with humiliation from one of the strongest seats in philosophy.

Our million of Physic—scattered over every part of the planet where there is enfeebled humanity to be tended, cherished, and upheld, by night and by day—it and its relations to the world, its good, its bad, its hopes, its despairs, we can on this occasion follow no longer. I have tried to present it faithfully. I have tried to show its strength; I have not tried to conceal its weakness. Called forth by the world itself from dire distress, a natural birth, its mere existence proves it to be a useful million of the hundred thousand millions in which it lives and moves. Who follows its work with his whole heart, and for itself, must needs be one whom the best may envy and approve; who follows its work with no heart, and for himself alone, must needs be one the worst may pity and contemn. Its plainest, simplest work well done, the world of Physic must remain in fair comparison with all the world beside; its noblest work realised, it must make all science subservient to its grand intents, and ultimately reveal the mystery of life with a crystal clearness and simplicity that shall render only the more wonderful and the more sublimely unapproachable, the wisdom of the "uncreated, super-essential, and all-beauteous mind."

REPORT OF THE ANNUAL SESSION FOR 1868.

The first general meeting of the annual session was held on Wednesday, at Willis's Rooms, at 7.30 p.m. Dr. Richardson, F.R.S., the President, occupied the chair. There was a good attendance.

After the reading of the minutes of the last session, the following graduates were elected new members—Drs. Reid, Foote, Campbell, Black, Holman, Padmore, Walker, and Lush, M.P.

The following were also elected associates—Messrs. Whitehead and Whiteman. Professor Owen, F.R.S., Dr. Wm. Farr, F.R.S., and the Lord Rector of the University, were unanimously elected honorary members.

The Treasurer's report was read, and showed a balance in favour of the Association.

The report of the Council was read. The Council very warmly congratulated the Association on the fact that the franchise had been obtained for all the graduates, together with a seat in the council of the University, and a voice in its government. The Association continues steadily to increase, one hundred and thirty-nine new members or associates having been elected during the year. The deaths of three honoured members were noticed with deep regret—viz., Dr. Ray, of Dulwich; Dr. Fayrer, of Henley-in-Arden; and Dr. Stookes, of Liverpool. The Council called the attention of the Association to the regulation which prohibits the degree of Doctor of Medicine to a greater number of non-resident graduates than ten in each year.

On the motion of Dr. PIKE, seconded by Dr. WATSON, the report of the Council was unanimously received and adopted.

Dr. CRISP moved as a resolution "That the Council be instructed to take such steps as they may deem expedient to obtain the repeal of the regulation limiting the number of non-resident graduates to ten annually."

Dr. DRYSDALE seconded.

A debate took place, in which Dr. Davey, of Northwoods, Dr. Wynn Williams, Dr. Pipe, Dr. Day (of Stafford), Dr. Cleveland, and the President, took part.

The resolution was unanimously carried.

The following officers and councillors were unanimously elected:—*President:* Dr. Richardson, F.R.S. *Vice-Presidents:* Dr. Davidson, Dr. Day (Stafford), Dr. Greenhalgh, Dr. Macintyre, Dr. Lockhart Robertson, and Dr. Tuke. *Council:* Drs. Ballard, Bloxam, Cholmeley, Cleveland, Collett, Crisp, Davey, Drysdale, Dudfield, Fairless, Fox, Day, Goss, Hughlings-Jackson, James Keiller Nichols, O'Connor, Proctor, Seaton, Rogers, Roberts, West, Whitmore, Wynn Williams, Brodie, G. Buchanan, W. H. Day, Griffith, Lawlor, Morris, and Wiltshire. *Honorary Treasurer:* Dr. Paul. *Honorary Secretary:* Dr. Sedgwick. *Auditors:* Drs. R. Williams, Cooper, Rose, and Ballard.

The PRESIDENT, in returning thanks for his re-election, said he had agreed to the recommendation of the Council for his re-election, because the Council was unanimous in its vote on this question, and had urged upon him that for the next year it would be for the benefit of the Association that he should retain the chair. He had bowed, but not without much hesitation, to the wishes of the Council. He expressed his deep sense of gratitude for the confidence the Association once more reposed in him.

The ordinary business having been completed, the Association passed to the consideration of scientific subjects.

REPORTS.

Dr. SEDGWICK read a report on "The Parasitic Theory of Disease." The report, which occupied an hour, was a complete *résumé* of the whole of the important subject of the parasitic theory.

A brisk and interesting discussion occurred, in which Drs. Crisp, Drysdale, Tilbury Fox, Tuke, Day, Ballard, and the President took part. Dr. Sedgwick having replied, the Society adjourned.

A MONUMENT to William Hunter has been erected in St. James's, Piccadilly. The inscription runs thus:—"Sacred to the memory of William Hunter, M.D., F.R.S., celebrated as a Physician and Physiologist. Born at Kilbride, in Lanarkshire, May 23, 1718."

PREVENTION OF PREMATURE INTERMENTS.—All the formalities in reference to the prizes bequeathed by the late Marquis d'Ourches have now been settled, and memoirs, etc., relating to it are to be sent to the Académie de Médecine, which has consented to act as adjudicator. The prizes are two in number:—1. One of 20,000 francs is to be given to the discoverer of a simple and vulgar method for the recognition in a certain and indubitable manner of the signs of real death. The express condition of this prize is that the means in question may be capable of employment even by poor ignorant villagers. 2. Another of 5000 francs for the discovery of a certain and indubitable means of recognising the signs of real death by the aid of electricity, or any other procedure requiring the intervention of a Medical man, or by the application of knowledge, the use of instruments, or the employment of substances, beyond the scope of ordinary persons. If either or both prizes remain unadjudged, the funds devoted to providing for them are to revert to the estate of the deceased.

MEDICAL TEACHERS' ASSOCIATION.

ADJOURNED MEETING, November 30.

(*Specially Reported.*)

At the adjourned meeting of this Society held in Middlesex Hospital on Monday evening, the 30th ult., Dr. Greenhow, in the absence of the President, Sir W. Jenner, was called to the chair, and the discussion of the Report by the Council on the subject of Medical Education proceeded. The various modifications suggested at the last meeting having been read and confirmed, the Association proceeded to discuss clause 6, the first point being whether one year was enough to devote to the study of anatomy, especially when physiology had to be taken up at the same time. Dr. Salter repeated his objection made at the former meeting. He accepted the plan proposed by the Council as good, on the whole, but he thought anatomy had better be taken the first year as well as the second. The subjects for the first year would not even then be too numerous or too heterogeneous. A certain section of anatomy might be taken up, say the bones, muscles, and ligaments—in other words, the organs of locomotion. If it was thought that too much was thus crowded into the first year, they might make some of the scientific subjects preliminary.

Mr. J. Wood thought that anatomy in the first year need not clash with the other subjects, as botany was really a summer subject. He thought it unwise to confine men during their first year of anatomical study to any specific subject. Altogether two years was quite little enough to devote to anatomy.

Mr. Heath said the curriculum they proposed was intended to make practical men, not students only, and they should not limit men to merely theoretical work for two years without an opportunity of seeing any practice. Some men, as when preparing for the University of London, even now worked three years at anatomy, and it was desirable to allow this. It was wrong to limit men to certain studies by pass examinations. He was surprised at such restrictions in a report which was specially intended to remove all restrictions, and to promote free education. Men should be permitted to study when they liked and as much as they liked.

Mr. Nunn asked if it would not suit all if comparative anatomy as well as zoology were introduced into the first year.

Professor Williamson would greatly regret overcrowding the first year. Men rarely did more than one thing well at a time, and chemistry, with physics, was quite enough for one winter. They should not consider one point only, but rather the balance of the whole curriculum.

Mr. E. Hart said it would hardly do to resist the general opinion of anatomical teachers. Still they must remember the kind of teaching and curriculum proposed; these were totally different from what now prevailed. The two years as now spent were less than the one year as recommended; both system and curriculum were altered. We must not estimate the proposed system by the existing one as to time. As to the argument with regard to subjects for dissection, the supply would not be altered, as there would only be half the men dissecting at one time.

Dr. Sibson maintained that a man must break down with continuous anatomical work, and that in reality dissection was limited to winter. Two years were to be spent out of the wards, and these would be practically barren to the student.

Mr. Rivington had two faults to find with the proposed curriculum: the first was that enough time was not given for anatomy; the second was the introduction of scientific subjects into the Medical curriculum. A man could not even learn to dissect properly in six months. A student should surely be allowed to acquire his scientific knowledge, if he liked, before he began his curriculum. As matters now stood, thre were too many students in the wards; the first year's men should be excluded when the practical men were there.

Mr. De Morgan did not think anatomy constituted such a difficulty. When a student at University College the men mostly devoted their first year to anatomy, and it was those who did so who commonly carried off the medals.

Professor Williamson said that in any new system the working of each part would be different from what it was in the old plan. We were now in a jumble; studies were spread over a long period, but little thorough work was done. In reality, men could not work at more than one subject at a time. The proposed scheme actually extended the period for work. It was better not to do this too far, nor yet ask too much at first.

Mr. E. Hart maintained that the present system was incompatible with modern examinations, and for that reason the proposed system was needed.

Finally, Dr. Salter's motion that anatomy be included in the first year's studies was carried.

Dr. Silver proposed that, a difficulty as to time for all the various studies during the first year having been raised, this might be obviated by making a certain portion of the scientific subjects matter for preliminary study. This plan was advantageous in itself, apart altogether from the question of time.

Mr. Rivington seconded the motion, but maintained that all scientific study should be made preliminary.

Dr. Dickinson objected to botany being made a portion of Medical studies at all. It was all very well when the range of subjects was limited. That, however, was far from being the case now.

Finally, some difficulty having been raised as to the exact amount of scientific knowledge to be demanded at the preliminary examination,

Dr. Sibson proposed, and Professor Williamson seconded, a motion that physics and elementary chemistry should be included in the preliminary examination of general knowledge, as in the matriculation examination at the University of London.

This motion having been accepted *pro tanto* by Dr. Silver and Mr. Rivington, the meeting was again adjourned for a fortnight.

REVIEWS.

RECENT WORKS ON OPHTHALMIC SURGERY.

The Natural and Morbid Changes of the Human Eye and their Treatment. By Charles Bader, Ophthalmic Assistant-Surgeon to Guy's Hospital. Illustrated by Ten Plates. London: N. Trübner and Co. 1868. Pp. 505.

Treatise on the Diseases of the Eye, including the Anatomy of the Organ. By Carl Stellwag von Carion, M.D., Professor of Ophthalmology in the Imperial Royal University of Vienna. Translated from the Third German Edition by Chas. E. Hackley, M.D., and D. B. St. John Roosa, M.D., of New York. London: Robert Hardwicke. 1868. Pp. 774.

A Manual of the Diseases of the Eye. By C. Macnamara, Surgeon to the Calcutta Ophthalmic Hospital, etc. London. 1868.

An Improved Method of Extraction of Cataract; with Results of 107 *Operations.* By J. R. Wolfe, M.D., F.R.C.S.E., Ophthalmic Surgeon, Aberdeen Royal Infirmary, etc., etc. With Illustrations. London: John Churchill and Sons. 1868. Pp. 70.

Du Diagnostic des Maladies des Yeux. Par X. Galezowski.

On the Diagnosis of Eye Diseases by the Chromatoscopy of the Retina. Preceded by an Essay on the Physical and Physiological Laws of Colour. By X. Galezowski, M.D., etc., Professor of Ophthalmology. With Thirty-one Woodcuts, etc., etc. Paris: J. B. Baillière and Sons. Pp. 267. 1868.

The Royal London Ophthalmic Hospital Reports and Journal of Ophthalmic Medicine and Surgery. Edited by J. C. Wordsworth and J. Hutchinson. Vol. VI. Parts 1 and 2. 1867-1868. London: John Churchill and Sons.

[First Notice.]

The works of Mr. Bader and Professor Stellwag von Carion are amongst the most recent contributions to ophthalmology that have been published in the English language. Both are treatises on "general ophthalmology," written by authors whose position as special teachers, and whose great opportunities for acquiring clinical experience, render their opinions and views worthy of careful study. Both are decidedly German in their teaching, and both works, in common with a recent valuable contribution from the pen of Mr. Power, present us with the most advanced views in ophthalmology of the schools of Vienna, Berlin, and Utrecht.

Mr. Bader's work embraces the practical portions of modern ophthalmology. The details relating to the structure of the organs of vision and their changes in health and disease have been gathered from the various contributions to ophthalmic literature, and condensed and adapted to the requirements of general Practitioners, whilst the views and instructions as to treatment are those adopted by the author himself, and carried

into practice in the ophthalmic clinique of Guy's Hospital. Mr. Bader's work combines the advantages of being a well condensed epitome of a great mass of recently acquired information, and at the same time a thoroughly practical treatise. We regret, however, that the author's manner of treating his subject is far from felicitous: the chapters are broken up into short paragraphs, each of which is full of details arranged in condensed and, in many cases, obscure sentences. Another thing rendering this work dry and uninteresting is that the author never reveals himself. No information is offered as to Mr. Bader's opinions on certain disputed points of pathology and practice, nor do we even meet with any decided views on the advantage of one plan of treatment over another.

Published with Mr. Bader's work, but in a separate cover, are ten plates. Of these, four are lithographs representing instruments used in operations on the eye, the tissues of the eye in their natural state, and the microscopic results of disease. Plates V. to X. are very clear and excellent chromolithographs of the ophthalmoscopic appearances of the eye in health and disease. Those representing neuritis optica, chronic syphilitic inflammation, and advanced inflammation at the fundus (fig. 14) are particularly noteworthy as examples of the successful application of chromolithography for affording good representations of intra-ocular disease.

The second work on our list is an American translation of the third and last German edition of Professor Stellwag von Carion's "Lehrbuch der praktischen Augenheilkunde." The editors of this volume—Dr. Hackley and Dr. St. John Roosa, both of New York—regarding the recent active development of ophthalmology as due, in a great measure, to German labour and investigation, have thought it better to present to their countrymen an edition of one of the best text-books in the German language than "to prepare a compilation more especially adapted to the Professional habit of thought in England and the United States." This work forms a bulky volume of 774 pages, and is a good and conscientious translation of one of the most comprehensive treatises in ophthalmic literature. Professor Stellwag's aim has been to illustrate the influences exerted upon ophthalmology by modern advances in our knowledge of optics and of the physiology and normal and morbid anatomy of the eye. The great mass of literature on the subject of ophthalmology has been carefully studied, and all important material condensed and elucidated. It is almost needless to state that a work of this kind is very diffuse, and presents here and there long and wearisome sentences upon disputed points of minute anatomy and pathology which will tax to the utmost the patience of those trained in the habit of style and thought of English and also of French authors. As a work of reference to be consulted on points of treatment and for explanations of various and conflicting views on the nature of obscure ocular affections and anomalies, we recommend it heartily to the notice of the Profession.

Mr. Macnamara's manual is a welcome addition to the list of English educational works, and affords a gratifying proof that it is possible to lay before the student in a small and readable volume a complete account of the principles and practice of modern Ophthalmic Surgery. The author has worked for some time in India, and his manual contains, almost *verbatim*, the lectures delivered by him in the Calcutta Medical College during 1867. In the remarks on the various plans of treatment, those are described most fully which Mr. Macnamara's own experience has shown him to be most beneficial. This experience has been gathered in this country as well as abroad, and, as the perusal of his work has proved to us, the author is fully justified in feeling confident "that the treatment he has inculcated will be found equally well adapted to the inhabitants of Europe and of India." Mr. Macnamara was a pupil of the late Dr. Todd, and seems to be a devoted adherent to that Physician's views with regard to the inefficacy of the antiphlogistic plan of treatment. This manual is fully illustrated by coloured plates copied from those of Dalrymple, Sichel, and Liebreich, and by some excellent woodcuts.

We purpose to extend this review by analysing and comparing the views of these authors on some interesting points in Ophthalmic Surgery, and also to comment upon some contributions contained in the two last numbers of the valuable and well-known "Reports of the Royal London Ophthalmic Hospital."

Strabismus, ever a subject of interest both to pure ophthalmologists and General Practitioners, is freely dealt with in the works of Bader and Stellwag. Some difference of opinion exists between the two authors concerning the relative frequency of the internal or convergent and the external or divergent forms of the affection. According to Stellwag, the deviation is generally in the course of an internal rectus muscle, and an external rectus does not so often overbalance its partner. Mr. Bader, on the other hand, asserts that "divergent strabismus, including slight cases, is as frequent as convergent strabismus." The deviation of the usual line may be due to paralysis or inflammation of one of the recti muscles, or even to some intrauterine changes resulting in a congenital squint; but these causes, particularly the last, are now believed to be exceptional, as strabismus, both in its convergent and divergent forms, is generally the result of some anomaly in the shape of the globe and in the curvature of the tunics of the eye. Convergent strabismus, in 95 per cent. of cases, can be traced to hypermetropia, a condition frequently congenital, in which the eye is shortened from before backwards. Divergent squint, in 90 per cent. of cases, is associated with the condition of elongated and egg-shaped eye known as myopia. The mode of production of strabismus in hypermetropic and myopic subjects is well explained in the following extracts from Mr. Bader's work:—

"The origin of strabismus in hypermetropic persons is thus explained. To read or to look at near objects for a prolonged time requires a certain power of accommodation to keep up the necessary curvature of the crystalline lens, and a proportionate amount of power of the external muscles of the eyeball to maintain the requisite convergence. Accommodation and convergence go hand in hand. Strong accommodation is necessarily accompanied by strong convergence. Hypermetropic eyes, to be able to see distinctly, use more power of accommodation than emmetropic eyes, and simultaneously converge more. While reading type held at a distance of 12″, healthy eyes are directed to a point 12″ distant; but hypermetropic eyes, to read at the same distance, have to accommodate and converge strongly; and though the eyes are directed to a point which lies at 12″ distant, there is a great tendency to converge for a nearer point, as may be seen if one eye is excluded, but not closed, while the other looks at the object. The excluded eye, as a rule, at once converges too much. If vision of both eyes is accurate, *then the tendency to use both* (*to maintain binocular vision*) is so strong that both remain properly directed, and no strabismus arises—though even then we may find one of the eyes squinting for a few moments, first when commencing to read, and again when 'the eyes get tired.'

"The convergence of hypermetropic eyes is facilitated by the globular shape of the eyeball admitting of greater mobility, and particularly by the large angle which the visual line makes with the axis of the cornea. The greater this angle, the more readily does the eye follow the tendency to strabismus."—P. 126.

On divergent strabismus Mr. Bader writes that "the increase of the myopia—*i.e.*, the enlargement of the eyeball—gives rise to difficulty of convergence. The images of objects which are placed at equal distances from both eyes are less perfect on the retina of the more myopic eye. Vision of one eye being less perfect, the impulse given by binocular vision to maintain the convergence of the eyes is weakened, and the divergence of the weaker eye facilitated. The eyeball which resists the converging power most, soonest induces fatigue of that power; and the eye diverges the quicker the more convergence is required, as in reading or in other near work. The attempts of the 'converging' muscles to maintain binocular vision lead to fatigue, and the eye rests itself by diverging. The divergence is facilitated by the smaller angle which the visual line forms with the axis of the cornea."

The internal squint associated with hypermetropia generally comes on in early age as soon as the child commences to regard near objects. Stellwag states as a fact confirmed by experience that "convergent strabismus occurs in a much larger proportion of cases in city children than in those of small hamlets, or in those of places where no great stress is laid upon school education, although hypermetropia is scarcely rarer with these than in cities."

A correct knowledge of the causes of squint, and of the dependence of the deviation on anomalies in the shape of the eyeball, has led to the early application of a non-operative plan of treatment, the results of which have frequently been successful. In periodic squint and in slight forms of permanent duration, a cure may often be obtained by neutralising the errors of refraction with proper spectacles, and by thoroughly paralysing the accommodation of the opposite eye by the application of atropine.

With regard to the much-disputed point as to the amount of benefit likely to be derived from division of the contracted tendon, it is stated by Mr. Bader that a great increase in the acuteness of vision is often observed immediately after the operation, and that the diplopia generally disappears or becomes so slight as to be readily removed by prisms; the mobility of the eye in most cases is restricted, and parallelism of the visual lines for extreme convergence and divergence is rarely restored. Binocular vision, Mr. Bader states, is obtained in about half the number of patients operated on for convergent strabismus, while Stellwag asserts that Gräfe's statement concerning the appearance of binocular vision after a successful operation in a considerable number of cases, is made upon completely untrustworthy grounds. Stellwag states with complete assurance that in permanent squint "a reproduction of binocular vision is only exceptionally attained, if at all."

The methods of strabotomy described by Mr. Bader are the subconjunctival operation generally performed in this country, and the Continental plan of exposing the whole insertion of the muscle, the conjunctival wound being afterwards closed by a suture. Professor Stellwag makes a free conjunctival incision, draws the muscle out of the wound by means of forceps, and divides its insertion close to the sclerotica.

(To be continued.)

Versuche mit der Chloressigsäure als Aetzmittel. Von Dr. med. Friedr. Alb. Urner. Mit einem Vorworte versehen von Dr. L. C. Marquart, Inhaber einer chemischen Fabrik in Bonn.

Experiments with the Chloro-acetic Acid as a Cauterising Agent. By Dr. F. A. Urner. With a Preface by Dr. L. C. Marquart, proprietor of a manufactory of chemicals at Bonn. Pp. 28.

Dr. F. A. Urner published a dissertation on the use of this acid, which is now reprinted by Dr. Marquart. He recommends Surgeons to carry it in their pockets in a suitable tube and case. He compares the effects of various fluid cauterising agents upon thin leather stretched on a board. The fluids were dropped in single drops on the leather. It is stated that a concentrated solution of nitrate of silver and of caustic potass had no very destructive effect, as also mono-chloro-acetic acid, but the nitric acid and di-chloro-acetic acid destroyed the surface of the leather. However, there was this difference—that when nitric acid was used there was, beyond the rapidly destroyed spot, a zone of irregular extent of more or less injured aspect, whilst the chloro-acetic acid did not transgress the original limits of its operation, and the effect was less extensive, but more exact. In another series of experiments the strong nitric and strong chloro-acetic acid were both applied with a *glass stick*. The nitric acid caused intense corrosion at the point which was touched, but there was in addition a less marked and irregular zone; the di-chloro-acetic acid caused an equal destruction confined to one spot. Experiments with the soles of boots gave the same results. Again, coagulated albumen was used, and it was found that the nitric acid spread to a far greater extent through this substance. Hard-boiled eggs gave no different result. Solution of chloride of zinc was found less effective than di-chloro-acetic acid. Next the ears of live rabbits became the objects of a series of experiments, and again the limitation of the effect of chloro-acetic acid to one spot was noticed. Fuming nitric acid caused diffused inflammation spreading beyond the original place of application. The author concluded from all these experiments that strong nitric acid and chloro-acetic acid are equally active caustics, but the latter has the advantage of causing less inflammation in the circumference, being confined to the spot where it is applied. Dr. Urner next describes experiments on warts and corns. Hospital patients, who had tried other remedies in vain, were cured by the chloro-acetic acid. Lupus and condylomata were also treated with it, with the caution of using less concentrated solutions in the beginning. The author confidently asserts that the acid will prove a very energetic and safe caustic for all kinds of neoplasmata, being less dangerous because less diffusible to the circumference. The pain is also less than with other caustics, the cicatrisation more favourable, and the Surgeon has it in his power to limit the effects as he pleases. In conclusion, he enumerates warts, corns, telangiectases, vascular tumours and nævi, condylomata, papillomata, and lupus as the diseases for which the new remedy is applicable.

GENERAL CORRESPONDENCE.

ON CRANIOTOMY.

Letter from Dr. Thomas Radford.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Barnes's very courteous reply to my remarks has not changed my opinion that Dr. Hull had clearly stated, and most indisputably proved, that it was quite impossible to bring the base of the head of a full-grown infant, turned edgeways, as Dr. Osborn states, through a pelvis in which the brim was shaped like, and contracted to the extent said to exist in, that of Elizabeth Sherwood.

The notorious controversy between Dr. Hull and Mr. Simmons was not conducted so calmly and professionally as it should have been; but I am quite sure, if Dr. Barnes had known the kind of attack which Mr. Simmons made on Dr. Hull, he would have pardoned his style of argument against Dr. Osborn's opinions which were adversely brought against him.

Dr. Barnes asks—"Where are such statistics (of the comparative mortality between the Cæsarian section and craniotomy cases) to be found?" It was not my intention, in the statement I made, to indicate that a comparison could be made from data now existing; on the contrary, I am so fully satisfied that those of the results of Cæsarian section are alone now before the Profession, whilst those of craniotomy are hidden in oblivion. The grave tells no tales.

I have for years laboured to obtain a better record of the result of craniotomy than that which exists at the present time, and for this purpose I addressed letters which were kindly inserted in the *Medical Times and Gazette*, in the *Lancet*, and in the *Association Journal*, requesting to be furnished with the results of cases after this operation, but I am sorry to state my attempts were unsuccessful. I am, &c.

Manchester, December 1. Thomas Radford.

SUN-STROKE *v.* CONCUSSION OF THE BRAIN.

Letter from Mr. William Sedgwick.

[To the Editor of the Medical Times and Gazette.]

Sir,—As the late charges of manslaughter and assault against a schoolmaster for hitting a boy on the head with the hand have attracted much notice, will you permit me to state, with reference to what has been published on the subject in the last number of your journal, that the alleged blow or slap on the head occurred on August 31, and that the sun-stroke did not occur till five days later (September 4)? It was fully proved at the Central Criminal Court that the slap on the head had not been attended with any bad consequences, for it had simply caused the lad to cry or sulk for a short time, and he was ready as well as able, within half an hour afterwards, to join in a game of touch. A second and more serious exposure to the sun occurred on September 7, when the boy, having to some extent recovered from the first attack, went with his mother a journey of a mile and a half to call on the parish Surgeon, who subsequently took charge of the case. The patient was ordered a warm bath; delirium of an acute kind supervened, and he died on September 20, death having been preceded for some days by symptoms indicating serous effusion on the brain. The most remarkable circumstance connected with the first trial (for manslaughter) was the success with which the witnesses for the prosecution concealed the evidence respecting the trifling nature of the blow. I had from the first been fully aware, from the statements of the deceased boy himself, that the blow had caused no harm; but other evidence to this effect could not be produced till after the schoolmaster had been acquitted on the charge of manslaughter, and had been locked up in Newgate, at the instigation of the Marquis Townshend, to await his trial on the charge of common assault. Late on the night preceding the second trial, I succeeded, in company with a friend, in discovering a boy who had sat on the same form with the deceased, and whose evidence had already been privately elicited and suppressed. It was from information supplied by this evidence that the counsel for the defence was able to expose the whole affair at the trial next day; and the schoolmaster was for the second time acquitted, without any witnesses being called to qualify or disprove the assault. I am, &c. William Sedgwick.

12, Park-place, Upper Baker-street.

NEUROTOMY AS A REMEDY IN OPHTHALMIC DISEASES.

LETTER FROM MR J. VOSE SOLOMON.

[To the Editor of the Medical Times and Gazette.]

SIR,—A reference to the literature of ophthalmic Surgery will show that, until very recently, the idea of applying neurotomy as such to the relief of eye diseases was limited to cases of amblyopia, which were presumed to have their origin in an injury of the frontal nerve. In regard to its efficacy in such cases, there has been considerable contrariety of opinion. Cases in testimony of its value were recorded by Beer, while the great military Surgeons, Hennen and Guthrie, avowed that in no instance had they witnessed relief from the operation. I suspect an explanation of this want of unanimity is to be found in the fact that the examples which fell under the notice of Beer were the result of injuries received in peaceful occupations, while the military Surgeons had to deal with injuries which resulted from great violence to the head in the strife of battle, and which were consequently complicated by other pathological changes than mere laceration or contusion of the nerve—as, for instance, intraocular or intracranial hæmorrhage, etc.

At an early period of my ophthalmic studies I was attracted by the writings of Dr. Radcliffe Hall on the functions of the ciliary ganglion, and a case of neuralgia of the ophthalmic division of the fifth pair, to the consideration of the relationship of certain diseases of the eye to disorder of that ganglion and the nerves connected with it. Consequently, when the nature of glaucoma and the *rationale* of iridectomy became leading topics in Medical circles and the pages of our periodicals, I naturally reverted to my old theme. The slight and temporary aberration from a state of health, and the apparently perfect recovery of good vision in the intervals, which were described as characteristic of the early stage of some cases of glaucoma, struck me as indicative of disturbed action in the ciliary ganglion; while the large excision of a membrane rich in ciliary nerves, which was required to restore the eye affected with glaucoma to a state of health, and the evident insufficiency of theories put forward by Surgeons of great eminence to explain the *methodus medendi*, led me to the opinion—now accepted, I believe, as the correct one—that glaucoma is a disease of the ganglionic nerves of the eye, especially the nerves of secretion; and that iridectomy and my operation of intraocular myotomy afford relief by bringing about a more healthy action in the ophthalmic ganglion.

In Mr. Power's able and elegant work on eye diseases, the theory that glaucoma has its origin in disorder of the nerves of intraocular secretion is incorrectly attributed to Dr. Donders. On a recent visit to Utrecht, that eminent physiologist most courteously showed me the volume in which his opinions on the subject were first promulgated, and he translated *vivâ voce* the Dutch into English for my information. The article is the last of a volume of papers bearing date 1861. I regret to be unable to give its title, but this it will not be difficult to supply without much delay. I have since sent to Dr. Donders my work "On Glaucoma," wherein it is shown that the theory in question was anticipated by me more than a year (*Brit. Med. Jour.*, 1860, p. 762; *Med. Times and Gaz.*, 1861, Jan. 19).

The application of neurotomy as a substitute for excision of the eye in cases of sympathetic disorder has been attributed in a recent number of one of your contemporaries to Drs. Gräfe and Meyer. The pages of your valuable journal will prove that this operation was performed by me with success on May 1, 1860 (*vide* vol. i. 1861, p. 327), and in my work "On Glaucoma," at p. 53, is related an instance wherein neurotomy proved curative in an eye suffering from sympathetic internal ophthalmia, which was nearly blind.

I trust I may be pardoned for drawing the attention of the Profession to the preceding facts. I have felt it incumbent upon me to do so in vindication of work honestly done and of the reputation of the English school of ophthalmic thought.

I am, &c. JAS. VOSE SOLOMON.

Queen's College, Birmingham, Nov. 23.

EFFICACY OF ICE TO THE SPINE AGAINST SEA-SICKNESS.

*** We print the following letters, which we know to be *bonâ fide* expressions of Medical opinion as to the value of the ice-bag to the spine against sea-sickness. Considering the number of passengers who leave our ports daily, and the agonies many often endure, it is one of the oddest things that the question of the efficacy of the ice-bag has not yet been solved. The fact is that most people, much as they hate the sickness, hate the idea of an ice-bag to the back still more. Still, making every allowance for the enthusiasm of the inventor, and for the possible mistakes of zealous experimentalists, there is a mass of well-attested fact which ought for health's sake to be well sifted, and either accepted as true or banished to the limbo.

Quinta Andrado, Funchal, Madeira, October 26.

Dear Sir,—Allow me to apologise that the exigencies of packing, leave-taking, and winding up my affairs prevented my acknowledging your kind present of the spinal ice-bag. I took a brass basin and a blanket with some ice from Liverpool. The sea was very calm, and I was not sick for three days. My wife was sick the first day, and I applied the spinal ice-bag. She experienced considerable relief, but did not feel inclined to come on deck with the bag on her back, and soon fell asleep. In three hours she sent the bag to be refilled. She was able to eat some dinner, and felt the sensation of cold to the back agreeable. As my ice was now done, I did not again apply it.

On the fourth day the ship commenced to pitch, and this made me sick, though I had become accustomed to the rolling. I applied for ice to the steward, but as the quantity on board was small and much needed for the African voyage, it was with some difficulty that I got enough partially to fill a bag long enough for me. The ice, too, melted very rapidly, and I had to break it in large pieces; it was not, therefore, applied to every portion of the spinal tract until a portion of the ice melted. For about half an hour I noticed no difference in the feeling of nausea. I then began to feel the desire to sleep, but resisted it, as I wished to note my sensations. It soon, however, overpowered me. I lay down on my cloak on deck, and slept for an hour. I awoke quite well, and did justice to my dinner, but I was rather disappointed to note that the pitching of the ship was considerably abated.

From my small experience I should be disposed to recommend your bags in severe cases of sickness, on *long* voyages. I should expect them, where they did not cause complete recovery, to afford marked relief, induce sleep, and cause food to be borne. On short voyages they must be very useful and save much suffering. I remain, Sir, yours faithfully,

John Chapman, Esq., M.D., London. W. W. IRELAND.

(*Letter 2.—From Mr. Shore.*)

"Allow me to say, in reply to your note to my son Dr. Shore, received this week, that he has been abroad many months, and, I fear, cannot return till next spring. He made use of the ice in crossing, and found the greatest benefit, having always suffered extremely from sickness. I have also seen much comfort and relief derived from the application of your ice-bag to the spine, under Dr. Shore's direction, once in a case of epilepsy; the effect of warming the whole system, by placing the bag on the spine, was wonderful."

DEATH OF DR. RICHARD HOBSON, OF LEEDS.—Our obituary of to-day (says the *Leeds Mercury* of Tuesday) contains an announcement of the death of one of the oldest and most respected Medical men in Leeds, Dr. R. Hobson. Some seven or eight months ago Dr. Hobson sustained a severe injury to his thigh by falling over a roll of carpet in one of his own rooms, but the results were not such as to lead himself or his friends to fear any serious consequences. It prevented him from taking his usual walking exercises, and obliged him to give up the more active duties of his Profession, but his usually good health did not seem in the least impaired. He saw patients at his house, took a carriage drive every day, and frequently assured his Medical adviser, Mr. Scattergood, that he never felt better in his life than lately. On Monday morning, however, he was found dead in bed. The deceased attained his 73rd year a few months ago.

THE EPIDEMIOLOGICAL SOCIETY.—The Epidemiological Society has changed its place of meeting from Soho-square to the rooms of the Medical Society of London, 32A, George-street, Hanover-square. The Society has also changed its evening of meeting from the first Monday to the *second Wednesday* in the month. The Society will open its session on the 9th instant, when Dr. Seaton, the President, will deliver an address.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 24, 1868.

MR. SAMUEL SOLLY, F.R.S., President, in the Chair.

DR. JULIUS ALTHAUS read a paper

ON CERTAIN POINTS IN THE PHYSIOLOGY AND PATHOLOGY OF THE FIFTH PAIR OF CEREBRAL NERVES.

The author introduced his subject by some remarks on the physiology of cerebral nerves generally, saying that the only two pairs of nerves the function of which was not yet accurately determined were the pneumogastric and the fifth, both of which were endowed with far more complex functions than the rest of their fellows, and also less subject to disease, without simultaneous lesions of important neighbouring organs. We had therefore, until now, been obliged, with respect to them, to trust almost exclusively to one of the two sources of our knowledge as regards nervous function—namely, the results of vivisections in animals—while the corrective influence of pathological observations had been wanting. Dr. Althaus then gave his reasons for considering the evidence derived from pathological cases, occurring in otherwise healthy adults, superior to that merely deduced from vivisections; and proceeded to give the details of a very curious and, as it appears, unique case of total loss of function of the whole fifth pair, unaccompanied by any other affection of cerebral or nervous matter, and which could be looked upon, in a certain sense, as a complete physiological dissection of the fifth nerve. The case occurred in an otherwise healthy Australian sheep-farmer, and was due to exposure to cold. There were, at first, symptoms of inflammation, and afterwards compression and atrophy of the nerve. The case came under the author's care about two years after the commencement of the affection. There was then total loss of muscular sensibility about the face, and a peculiar expression of the features in consequence of it. Vision was obstructed by leucoma of both corneæ; yet the patient suffered much from photophobia, although very little light could penetrate to the retina. An ophthalmoscopic examination of the fundus oculi showed the optic disc, as far as it could be seen, quite normal. The common sensation of the face and scalp was entirely lost in both sides. The sense of temperature was completely absent, and the senses of touch and locality were also lost. The conjunctiva was anæsthetic, the secretion of tears arrested, but there was pathological hypersecretion of conjunctival mucus. The mucous membrane of the nose was quite insensible, and its secretion much augmented. The sense of smell was in no way impaired. The mucous membrane of the mouth, including the tongue, was also anæsthetic. The secretion of saliva was arrested, but the flow of buccal mucus increased. The tongue had been severely bitten, as the patient was not at all aware of biting it whenever he did so. The sense of taste was preserved. The muscles of mastication were paralysed, and the patient complained of a rushing noise in the head, which was probably due to paralysis of the tensor tympani muscle, which is animated by the minor portion of the fifth nerve. The sense of hearing was normal, and there were no other morbid symptoms. The author therefore concluded that the pathological lesion was confined to the course of the fifth nerve between the pons Varolii and the Gasserian ganglion. It could not be more peripheral, because not a single fibre of the trifacial nerve had escaped the injury; and it could not be more central, because there was no symptom of disease of the pons. The treatment consisted in the systematic application of the continuous galvanic current. No medicine was given. After three months' treatment the patient was considerably improved in every respect, and his sight so much better that he could again guide himself in the streets and follow a light occupation. Dr. Althaus concluded his paper with some remarks on various points in the physiology and pathology of the nervous system which were suggested by the phenomena observed in this case. 1st. Alluding to the researches of Magendie and Claude Bernard, who had endeavoured to prove that the olfactory was not the only nerve of smell, but that the fifth had a great deal, if not everything, to do with it, the author considered his case to prove the contrary. 2nd. Photophobia in this case had evidently little or nothing to do with the condition of the optic nerve or the retina, but was a neurosis of the corneal branches of the fifth nerve, and cured by galvanisation. 3rd. The question whether the sense of taste was dependent upon the glosso-pharyngeal nerve, or upon the lingual branch of the fifth, was one about which the greatest discrepancy existed amongst the best observers. The author thought his case proved that, although the special sensation of taste was due to the glosso-pharyngeal, yet the quickness of its perception was, in the anterior part of the tongue, materially enhanced by a normal condition of the fifth pair. 4th. The special kind of nervous influence by which the secretion of the mucous membranes of the eye, nose, and mouth was excited, and by which it was regulated, had hitherto not been investigated. Ludwig had shown, with regard to salivary secretion, that branches of the fifth were the exciting, and sympathetic fibres the inhibitory, nerves. The author thought his case proved that just the reverse obtained as far as the secretion of conjunctival, nasal, and buccal mucus was concerned; and that for this latter function the sympathetic was exciting, and the trifacial inhibitory. 5th. The pathology of tinnitus aurium was obscure. The author believed it to be, if not always, at least frequently, a symptom of neurosis of the fifth nerve. 6th. The present case seemed to settle the question as to the precise way in which the continuous galvanic current acted on the nervous centres. Dr. Althaus had always thought that the galvanic impression was reflected from the peripheral branches of the fifth to the base of the brain. This was now proved to be correct; for it appeared that when the reflex function of the fifth pair was in abeyance, no cerebral symptoms could be produced by the application of a powerful current to the head or face, although the physical relations of the skull, brain, and blood-vessels had not been altered. The transmission of the continuous galvanic current to the brain was therefore effected, not physically, but physiologically, by nervous influence.

The PRESIDENT thought the case unique. The fact that pathology was more useful than physiology in determining function added to its value.

Mr. CARTER would be obliged if Dr. Althaus would give some information as to the patient so often referred to by Duchenne, and whose face had been so often photographed for the purpose of explaining the anatomy of expression. Photophobia was frequent, even in the blind, and might be cured by faradisation; so, also, might the defects of nutrition in such-like cases.

Dr. ANSTIE thought the alterations in nutrition were very instructive, and closely parallel to those brought about by an opposite condition of nerve, as in neuralgia of the fifth pair of nerves. Several instances of neuralgia were recorded in which ulceration of the cornea, photophobia, etc., had occurred. Dr. Althaus said that the condition of the nerve had no direct influence on the hair; this was contrary to his experience. In his own case, and in that of some others, the hair over the affected parts became grey, but the colour afterwards returned in the same hair.

Mr. SOELBERG WELLS said that up to a late date ulceration of the cornea was held to be due to irritation without sensitive reaction. Meissner, however, found that in rabbits, after division of the sensitive nerve, the cornea remained clear; it was, however, found that the inner branch of the nerve had not been divided. In another where this branch was divided, sensation remained, yet ulceration of the cornea followed. Snellen showed that darkness improved the ulcerated eye.

Mr. SAVORY remarked on the value of the paper. He pointed out that the buccal mucus was increased; this was against modern ideas as to the effects of cerebro-spinal and ganglionic nerves, and it required thought to explain the matter. As to smell, again, the olfactory nerve was one of special sensation; yet, that odours should be fully appreciated, a healthy condition of the fifth nerve was necessary. In taste probably both fifth and seventh were necessary; but taste was not such a special sense as the others. The case gave countenance to the idea that the special properties of nerves were due rather to organs at the peripheries than at the nerve centres.

Dr. BROADBENT said that this case showed photophobia to depend on the fifth nerve rather than on the retina. The secretion of the mucous membrane was too thick to be healthy.

Dr. RUSSELL REYNOLDS said the case resembled one under his care, in which only one side was affected. There was not perfect anæsthesia in his case. He noticed the loss of power in the muscles of expression; still the patient could perform voluntary movements with perfect symmetry. The sense of smell was perfect; common sensibility of the nose was diminished, so also of taste. Much secretion accumulated

in the mouth. He wanted to know more about the transmission of continuous currents to the great nerve centres—why, if the two poles were placed close together, the effect was less than when widely separated, even with a weaker current in the latter instance.

Dr. W. Ogle pointed out certain erroneous notions, as he thought. One was the effect of the fifth nerve on the salivary glands. Dr. Althaus said their secretion was stopped. This appears impossible, as the seventh pair sent many branches to the parotid glands. Schiff's experiments also contradicted the assertion. There was said to be perpetual dribbling of fluid. What proof had they that this was not saliva? Dr. Althaus pointed out that this constant secretion of an alkaline fluid was a beneficial interposition. Saliva, however, acted rather when acid than when powerfully alkaline, and no mucus will make up for its deficiency. Again, as to the nerve of taste, Dr. Althaus says that several seconds elapse before any taste can be felt. After putting a sapid body on the point of the tongue, it is quite plain that some nerve must perceive this taste. The lapse of time mentioned was really occupied in diffusion on the tongue so that the seventh nerve should be affected. The substances employed, bitters, salts, and sweets, were exactly those most readily appreciated by the glosso-pharyngeal; acids were the proper stimulants of the lingual.

After some remarks from Dr. Ogle and Mr. Savory,

Mr. Moore said that in cases where he had divided the gustatory for painful cancerous diseases of the tongue, loss of sensation, common and special, was absolute.

Dr. Althaus, in reply, said that Dr. Duchenne's case was not so complete as his. He thought hyperæsthesia and anæsthesia closely allied, and that the effect on the brain by the continuous current was greatest when the poles were far asunder, because then much of the cerebral substance was included in the circuit.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, November 21.

Mr. Liddle in the Chair.

The Chairman alluded in feeling terms to the sudden death of the late Dr. Hillier, who had had a principal hand in the organisation of this Association, and who was its first secretary. He dwelt upon the genial kindness of Dr. Hillier's character, and was sure the Association would express their sympathy and condolence with the deceased gentleman's family.

Dr. Ballard read a paper entitled

AN ATTEMPT TO EXPLAIN THE EPIDEMIC WAVES OF SCARLATINA.

He had kept a record of scarlatina as it had occurred in the public practice of his district for eleven years, and it amounted to 3412 cases. The least prevalence of the disease was observed in March, and the greatest in September, October, and November, at which season there was every year an attempt, as it were, at an epidemic extension. In epidemic years such as 1859, 1863, or 1868, the epidemic dated its origin from the preceding autumn. He inferred from his records, and his inference was illustrated by some diagrams exhibited, that in any year scarlatina may be expected to spread when, the mean temperature having risen above 60° in the course of the summer, it has begun to fall below that temperature, if, at the same time, the humidity of the atmosphere increases to 75° or upwards. As the temperature becomes lower in the progress of the epidemic, the cases will be more numerous the higher the atmospheric humidity. As the cold of winter comes on the epidemic dies away.

Dr. Iliff raised the question as to whether scarlatina was a disease of the poor. His experience in South London led him to believe it was not so.

Dr. Aldis thought the disease mostly originated with the poor, and spread to the rich; but he acknowledged it to be more difficult to get information as to cases among the rich. He called attention to the influence which the elevation or depression of the locality might have.

Dr. Gibbon, from his experience of the Holborn district, agreed rather with Dr. Iliff. He mentioned a case of scarlatina in his own family, in which he failed to detect the conditions laid down by Dr. Ballard.

Dr. Letheby said the facts adduced by Dr. Ballard were very important. The elevation of a place ought also to be taken into account, as high places might fulfil the conditions laid down when low-lying places did not, and *vice versâ*. He believed that contagion might be entirely prevented by perfect isolation and disinfection. The latter he maintained to be ineffective, even at a temperature of 500° of dry heat. By infusing steam, disinfection was effected at 220°.

Dr. Tilley remarked that in his district (Rotherhithe), which is a low-lying one, adjoining Bermondsey, very few cases of scarlatina had occurred during the present year.

Dr. Hardwicke said that, considering the large population of his district of Paddington, they had had very little scarlatina. He had known some of the worst cases in high houses.

Dr. Liddle's experience bore out what was advanced by Dr. Iliff.

Mr. Hawksley, who was introduced by Dr. Letheby, and admitted as an honorary member, agreed almost entirely with Dr. Ballard's observations. He believed the same conditions were to be found in the case of jungle fever and other fevers in the Indies.

Dr. Ballard remarked, as to a case under the Workshops' Regulation Act in Islington, the Act had not failed. The magistrate allowed the case to be a bad one. It was only thrown out on a point of technicality, no date having been assigned to the breach of the Act. A new summons was being taken out.

NEW INVENTIONS.

CARACCATINA.

(*Manufactured by Dunn and Hewett, 186, Pentonville-road, London.*)

This preparation of cacao has a good aromatic smell, a dry subastringent and slightly bitter clean taste, and a very agreeable cocoa flavour, without fat. In lightness and wholesomeness, it seems all that can be desired. Preparations of cacao are evidently coming into great vogue, and deservedly if we may judge by the preparations that have lately been submitted to us. There is plenty of choice, too, in the dry, sweet, and fat varieties, to suit the needs and capacities of every stomach.

MESSRS. SOUTHALL AND CO.'S COLLECTION OF MATERIA MEDICA.

Our attention has been drawn to a series of articles belonging to the Materia Medica now being sold by Messrs. Southall, Son, and Dymond, manufacturing pharmaceutical chemists, Birmingham. Such a collection is of immense value to the student, as it enables him to prepare for his examinations in his own room; for preparation in Materia Medica is utterly useless except the student have the actual substance as well as his book before him. Nor do we conceive the value of this little collection will be less appreciated by the teacher, who too frequently has to lament emptied bottles; for men must have specimens somehow, and not unfrequently take the opportunity of providing themselves at the expense of their teachers. The number of substances included in Messrs. Southall and Co.'s list is 138. Ten specimens ordered in their recent state are not included, and those ordered both dry and recent are given in the dried condition only. Of the former, we regret that aconite leaves should not have been enclosed, for, even although dried, they would have enabled the student to describe more readily the recent substance—one of very great importance. Six costly substances are also omitted; these are, castor, saffron, musk, opium, scammony, and sumbul; their omission, except in the case of opium and scammony — substances of prime importance — is really a matter of little consequence. Messrs. Southall and Co. include these if desired, charging for them at the ordinary rates. Each specimen is enclosed in a little bag, on which is pasted a label bearing the characters of the specimen enclosed, its test, dose, and officinal preparations. The same labels may be had as cards for a little extra money. The whole collection is wonderfully cheap, being sold, along with the neat wooden box in which the specimens are enclosed, for 30s. Of course, each morsel is not a large one; still each carries its distinctive characters, and is wonderfully superior to those we remember in our student days. Messrs. Southall's collection deserves to be popular; we cordially trust it will be so.

Dr. Evan Pierce, the maligned coroner of the Abergele inquest, has been elected Mayor of Denbigh for the third year in succession.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—The following are lists of Candidates who passed the Examinations indicated :—

M.D. EXAMINATION.

Cole, Thomas, St. Bartholomew's Hospital.
Edis, Arthur Wellesley, Westminster Hospital.
Legg, John Wickham, University College.
Michell, Thomas, London Hospital.
Philpot, Charles William, B.Sc., King's College.
Smith, Robert Shingleton, B.Sc. (Gold Medal), King's College.
Spender, John Kent, King's College.

SECOND B.A. AND SECOND B.Sc. EXAMINATIONS.

EXAMINATIONS FOR HONOURS.

(B.A. only.)

CLASSICS.

First Class.

Hooper, John (Scholarship), University College.
*Croskell, Thomas, St. Cuthbert's College, Ushaw.

ANIMAL PHYSIOLOGY.

First Class.

De Watteville, the Baron Armand, University and Regent's Park Colls.

Second Class.

Chapman, Sidney, Private study.
Dillon, Edward, University College.
Harding, Thomas Olver, University College.

(B.Sc. only.)

CHEMISTRY.

First Class.

†Tilden, William Augustus, private study.

(B.A. and B.Sc. conjointly.)

MATHEMATICS AND NATURAL PHILOSOPHY.

First Class.

Hopkinson, John, B.Sc. (scholarship), Trinity Coll. Cambr. and Owens.

Second Class.

Jennings, Gilbert Delahoy, B.A., University College.
Charter, James, B.A., private study.
Serrell, George, B.A., University College.

LOGIC AND MORAL PHILOSOPHY.

First Class.

Serrell, George, B.A. (scholarship), University College.
Skerritt, Edward Markham, B.A., University College.

Second Class.

Watkins, Henry William, B.A., King's and University Colleges.
Portrey, Richard Watson, B.A., Wesley College, Sheffield.
McLean, Charles Stuart, B.A., Wesleyan Collegiate Institution, Taunton.
{Adeney, Walter Frederic, B.A., private study.
{Sheldon, Charles, B.Sc., Owens College.

Third Class.

Garbutt, John Gilliott, B.A., private study.
{Jennings, Gilbert Delahoy, B.A., University College.
{Nicholas, Walter James, B.A., Wesleyan Collegiate Inst., Taunton.
Solly, Henry Shaen, B.A., University College.
Gordon, Thomas Hodgetts, B.A., University College.
Dyson, William, B.A., Wesley College, Sheffield.

* Worthy of Scholarship. † Disqualified by age for Scholarship.

B.S. EXAMINATION.

PASS EXAMINATION.

Anderson, Tempest, B.Sc., University College.
Langmore, John Wreford, University College.
Poore, George Vivian, University College.
Ridge, John James, B.A., B.Sc., St. Thomas's Hospital.

M.S. EXAMINATION.

Beck, Marcus (gold medal), Unlversity College.
‡Fox, Edward Lloyd Harries, M.D., University College.
‡Howse, Henry Greenway, Guy's Hospital.

‡ Worthy of medal.

The following candidates passed their first examination in the Hebrew text of the Old Testament, in the Greek text of the New Testament, in the evidences of the Christian religion, and in Scripture history :—

First Class.

Cecil, Charles Richard, private study.

Second Class.

Blackall, Thomas, private study.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen completed their primary or anatomical and physiological examinations for the Fellowship on the 25th ult. :—

Arnott, Henry.
Best, Alexander Evans.
Brookhouse, Joseph Orpe.
Bullock, James Lawrence.
Bush, John Dearden
Coleman, Alfred.
Eastes, George.
Edis, Frederic Pooley.
Hoar, Charles Edward.
Keeling, James Hurd.
Leet, Charles Henry.
Raynor, Arthur.
Savage, Thomas.
Thornton, William Henry.

It is stated that one candidate withdrew, and four failed to acquit themselves to the satisfaction of the Court of Examiners, and were consequently referred to their studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 26, 1868 :—

Chapman, George, Brierley-hill, Staffordshire.
Hill, Joseph Higham, Royton, Lancashire.
Hurlstone, Adam Payton, Cheltenham.
Thomas, John Lewis, Llynon, Anglesea.
Ticehurst, Augustus Rowland, Hastings.
Wilkinson, William Henry Whiteway, Holloway.

The following gentleman also, on the same day, passed his First Examination :—

Betts, John, Westminster Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DOWSE, THOMAS STRETCH, M.D., L.R.C.P., M.R.C.S.—Registrar to Charing-cross Hospital.

MANLEY, SIMS F.—Surgeon to St. George's (Hanover-square) Dispensary and Assistant-Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

WERRY, AUGUSTUS, M.D. Edin.—Medical Officer to the Works of the Smyrna Quay Company.

NAVAL AND MILITARY APPOINTMENTS.

ENRIGHT, CORNELIUS R.—Acting Assistant-Surgeon to the *Asia*.

GRIFFITHS, R. S. P.—Assistant-Surgeon to the *Ariadne*.

HADLOW, HENRY—Assistant-Surgeon to the *Ariadne*.

HOLMAN, Dr. JOHN R.—Staff Surgeon to the *Ariadne*.

ROYAL ARTILLERY.—Staff Assistant-Surgeon William Edward Riordan to be Assistant-Surgeon, *vice* Howison Young Howison, M.D, appointed to the Staff.

109th FOOT.—Staff Assistant-Surgeon James Henry Ussher, M.B., to be Assistant-Surgeon, *vice* Daniel Charles Grosse, appointed to the Staff.

BREVET.—The Secretary of State for War has appointed Edward Waylen, M.R.C.S., to be Visiting Surgeon at Colchester, under the Contagious Diseases Act, from December 1.

BIRTHS.

ADAMS.—On November 24, at Queen Camel, Somerset, the wife of Dr. Adams, of a son.

DUKES.—On November 29, at High House, Enfield (Highway), the wife of M. Charles Dukes, M.D., of a son.

IRELAND.—On November 25, at the Limes, Linton, Cambs, the wife of E. Ireland, M.R.C.S.E., etc., prematurely of a son, stillborn.

SEALY.—On September 13, at Nelson, New Zealand, the wife of W. B. Sealy, M.D., of a son.

SLYMAN.—On November 28, at 26, Caversham-road, N.W., the wife of William D. Slyman, Surgeon, of a son.

MARRIAGES.

DAWSON—WHYTE.—On November 17, at St. Andrews, Scotland, John Dawson, M.D., M.R.C.S. Eng., of Rangoon, British Burmah, to Mary, eldest daughter of the late James Whyte, Esq., of St. Andrews, Fifeshire.

EDGCOMBE—O'KEEFFE.—On November 28, at Gurtroe Church, Youghal, Thomas Leonard Barber Edgcombe, second son of James Edgcombe, M.D., of Brunswick-square, London, to Anna, second daughter of David O'Keeffe, Esq., of Youghal, county Cork. No cards.

PRENTIS—KNIGHT.—On December 1, at Rainham Church, Kent, Charles Prentis, F.L.S., Bengal Service, to Fanny Fortescue, only daughter of J. Sladen Knight, M.D., M.R.C.P., of Rochester, and of the Parsonage, Rainham.

THOMAS—MORTIMER.—On November 25, at Fishguard, Staff-Surgeon J. R. Thomas, to Ann, only daughter of J. M. Mortimer, Esq. No cards.

WEBB—ALLARDICE.—On December 1, at St. John's Church, Notting-hill, Randolph Webb, Staff-Surgeon to the Forces, third son of the late J. H. Webb, Esq., J.P., of Trowbridge, Wiltshire, to Maria Georgiana Eliza, youngest daughter of W. P. Allardice, Esq., Writer to the Signet, Edinburgh.

WOOD—DUDLEY.—On September 30, at Kaiapoi, New Zealand, Horatio James Wood, second son of the late G. E. W. Wood, M.D., of East Sheen, to Agnes Margaret, only daughter of Charles Dudley, M.B., of Kaiapoi, New Zealand.

DEATHS.

BARRETT, THOMAS, M.D., Justice of the Peace for the City of Bath, at his residence, St. James's-square, Bath, on November 29, aged 53.

COWAN, CHARLES, M.D., at Reading, on November 29.

FRASER, JAMES, M.D., formerly of Demerara, at Inverleithan, on Nov. 27.

HOBSON, RICHARD, M.D., at his residence, Park-place, Leeds, suddenly, on November 29, in the 74th year of his age.

JONES, LIONEL MEREDITH, youngest son of Frederick Charles Jones, M.D., at 174, Blackfriars-road, on November 28, aged 2 years.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Louth Union.—Mr. F. S. Tate has resigned the Yarborough District; area 15,984; population 2767; salary £40 per annum.

Martley Union.—Mr. Thomas M. Warden has resigned the Astley District; area 6100; population 1977; salary £40 per annum.

West Derby Union.—Mr. William J. Irvine has resigned the Walton District; area 8940; population 5717; salary £50 per annum.

APPOINTMENTS.

Thirckley Union.—Charles E. Ludlow, L.R.C.P. Edin., L.F.P. and S. Glasg., to the Burbage District.

Tynemouth Union.—Peter Alexander, L.R.C.P. Edin., M.R.C.S. Edin., to the Earsdon District.

UNIVERSITY OF CAMBRIDGE.—Dr. P. W. Latham, F.R.C.P. Lond., Fellow of Downing College, has been appointed Assistant to and Deputy for the Downing Professor of Medicine. Dr. Latham has also recently been appointed Assessor to the Regius Professor of Physic.

ON Tuesday last the Crown Princess of Prussia (the Princess Royal) visited the Hospital for Sick Children in Great Ormond-street. The visit was intentionally private, and none of the senior members of the staff were in attendance, the Princess being accompanied by Sir William Jenner, Dr. Legg, and the House-Surgeon.

DEATH OF DR. COWAN, OF READING.—We regret to record the death of this distinguished provincial Physician, which took place on November 29. We shall furnish our readers with some account of his life and work in our next number.

A CHAIR of Palæontology is to be established at the Sorbonne, and it is said that Dr. Gandry, a gentleman well known on account of his missions to Cyprus and Greece, is to be nominated to it.

AT the meeting of the Royal Medical Society of Edinburgh, on Friday evening, November 27, the following gentlemen were elected the annual Presidents for the year 1868-69—viz., F. Pritchard Davies (senior); A. Rabagliati, M.A. and L.R.C.S.E.; C. Holden, M.B. and C.M.; J. S. Cameron, M.B., C.M., and B.Sc.

HOSPITAL STATISTICS.—The number of patients treated in the Paris Hospitals annually is about 100,000, one-fourth of whom are Surgical cases. In 1859 the exact number of patients admitted to the Hospitals and Hospices was 96,082—viz., to the Hospitals 90,996, the Hospices 5086.—*Statistique Médicale des Hôpitaux de Paris*, 1867.

PATHOLOGICAL SOCIETY OF DUBLIN.—The first meeting of the thirty-first annual session of this Society was held on Saturday, the 28th ult., in the Anatomical Theatre of Trinity College, Dr. Gordon, President, in the chair. Interesting communications having been made by Mr. Hamilton, Dr. Lyons, and Dr. Hayden, the President announced that the subject for competition for the Society's gold medal, to be awarded at the close of the session, would be the "Diagnosis and Pathology of Diseases of the Tongue." The Society having adjourned for the transaction of business, the following were elected officers for the year 1868-69:—*President:* Alfred H. M'Clintock. *Vice-Presidents:* Joseph M. O'Ferrall; Robert Adams; James Duncan; George H. Porter; Maurice Collis; Sir Dominic J. Corrigan, Bart. *Council:* John T. Banks; Thomas Beatty; John Denham; Christopher Fleming; Samuel Gordon; Edward Hamilton; James S. Hughes; Henry Kennedy; George Kidd; Robert Law; Robert M'Donnell; Benjamin G. M'Dowel. *Honorary Secretary:* William Stokes. *Secretary and Treasurer:* Robert W. Smith. *Secretary for Foreign Correspondence:* Robert D. Lyons.

SCARLATINA AND DRAINAGE.—It was reported recently that scarlet and low fever were making great ravages at Barking, where the outlet of the main drainage works is situated, and the opinion was expressed that these works were proving injurious to the health of the inhabitants. The following appear to be the facts of the case as far as they can be obtained from public documents. The drainage works at Barking were opened in the spring of 1865. The Registrar-General's returns show that in 1863 the deaths in the sub-district of Barking town were 125, which, taking the population as given in the census tables for 1861 at 5591, is at the rate of about 22·03 per thousand. During the next four years the deaths were as follows:—

1864 . .	104	or about	18·6	per 1000.
1865 . .	128	,,	22·8	,,
1866 . .	145	,,	25·9	,,
1867 . .	127	,,	22·7	,,
1868—				
1st quarter	17	,,	10·3	,, per annum.
2nd quarter	21	,,	17·0	,, ,,
3rd quarter	69	,,	49·3	,, ,,

This latter return includes thirty-two cases of deaths from fever, and the death-rate in London about that time was 23 per 1000. The inhabitants of the district generally believe the sewage works to have had a very prejudicial effect on the health of the neighbourhood, and Medical men are said to be of the same opinion. The registrar of the district states that, during the last five months, there has certainly been a great increase in the number of deaths from scarlatina, typhoid and typhus fevers, but remarks that probably the excessive heat of last summer has had something to do with this mortality. Scarlatina has lately been very prevalent within the metropolitan district, and it is, perhaps, a matter for consideration whether the disease has spread from the district in which these sewage works are situated.—*Pall-mall Gazette.*

POOR-LAW MEDICAL SERVICE.—*Bermondsey.*—The Poor law Board, having deferred sanctioning the increase of the Medical officers' salaries until the subject of a dispensary had been decided upon, the guardians took the matter into consideration. The three Medical officers, Dr. Dixon, Dr. Richmond, and Dr. Cuolahan attended, and showed that, while their salaries had not been revised for seventeen or eighteen years, their work and the population of their districts had greatly increased. Even the proposed increase of £50 would be only a small return for what they had to do. In addition they were only allowed some £12 for medicines which would cost the guardians at least £50. They believed that the poor were as well attended to as was possible under the circumstances, and that they got their medicine as early as private patients. The guardians generally considered that the Poor-law Board had made use of the question of the Medical officers' salaries as a peg on which to hang other things, and a resolution was unanimously agreed to that they saw no necessity at present for establishing a dispensary, the poor having every attention paid to them already, and that they approved of the increase of salaries of their Medical officers. *St. Pancras.*—The Medical officers are ordered to report cases of death in the Workhouse to the guardians' clerk instead of directly to the coroner's officer, on the ground that the existing arrangement made it easy to get up coroners' inquests and post-mortem examinations in order to add to their income.

THE ROYAL SOCIETY.—The annual election of officers of this institution took place as usual on St. Andrew's-day (Monday last) with the following result:—*President:* Lieutenant-General Edward Sabine. *Treasurer:* Dr. W. A. Miller. *Secretaries:* Dr. W. Sharpey and Professor G. G. Stokes. *Foreign Secretary:* W. H. Miller. *Other Members of the Council:* Mr. F. A. Abel; Sir B. C. Brodie, Bart.; Dr. W. B. Carpenter; Mr. J. Lockhart Clarke; Mr. Frederick Currey; Mr. Warren De la Rue; Sir William Fergusson, Bart.; Mr. W. H. Flower; Captain Douglas Galton; Mr. J. P. Gassiot; Mr. John Hawkshaw; Mr. John Marshall; Mr. Joseph Prestwich; Captain G. H. Richards; Mr. Archibald Smith; and Lieut.-Col. Alexander Strange. On this occasion the Copley medal was awarded to Sir Charles Wheatstone, D.C.L. Oxon., Professor of Experimental Philosophy, King's College, London; the Romford medal to Dr. Balfour Stewart, M.A., Superintendent of the Kew Observatory of the British Association. The Royal medals were awarded to the Rev. Dr. Salmon, Regius Professor of Divinity in the University of Dublin; and to Mr. Alfred Russell Wallace, well known by his researches in the zoology of the Eastern Archipelago. The annual dinner took place the same evening, and was largely attended. The President occupied the chair. Amongst those present were Lord Justice W. Page Wood, the Dean of Chichester, Sir Bartle Frere, Sir William Fergusson, Sir Ranald Martin, Professors Owen, Sharpey, Miller, Stokes, Bowman, Messrs. W. H. Flower, Prestwich, Gassiot, etc., etc.

DUBLIN UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of the present session of the above Society, the inauguration of which was reported in our number of February 15 last, p. 193, was held on Friday evening, the 27th ult., in the Dining-hall of Trinity College. The chair was taken by Dr. Robert Adams, Regius Professor of Surgery, President of the Society. The opening address, on the subject of "Medical Education," was read by the Auditor, Mr. W. E. Battersby, B.A., Medical Scholar. It presented a very able review of the question in its several details, as seen from the standpoint of one who was himself still a student. The advantage of testing the student's progress by periodical examinations, and of depending less on the compulsory attendance on lectures, was pointed out, as was the paramount importance of practical study in the laboratory, the dissecting-room, and the Hospital. Thanks for his very able address

were voted to the Auditor on the motion of Dr. Stokes, D.C.L., F.R.S., seconded by Dr. Banks. Among the other speakers were Dr. Webb, LL.D., Regius Professor of Civil Law; Dr. Barton, Dr. Bennett, Dr. F. E. Little, etc. On the platform were also Sir Dominic Corrigan, Bart.; Dr. Porter, President of the Royal College of Surgeons; Professor R. W. Smith, several of the Fellows of Trinity College, etc. At the close of the meeting the Regius Professor of Surgery distributed the following prizes:—The Society's Prize for the best essay read during the past session, Francis C. Crosslé. The Society's special prize, presented by one of the demonstrators in the School of Physic, W. H. Gregg, B.A., Medical Scholar.

Royal College of Surgeons.—The half-yearly examination of candidates for the Fellowship of this institution was commenced on Saturday, November 21, when nineteen candidates presented themselves, of which number twelve were seniors—that is, Members of the College of eight years' standing and upwards—four were juniors, and three had only passed the primary examination for Membership. All the candidates had the following questions in anatomy and physiology submitted to them on their written examination, and were allowed from 1 until 5 o'clock to answer them. Replies to less than four questions were not received:—"1. Name, in the order in which they are placed, the parts in the space corresponding to the outline of the masseter muscle, beginning immediately under the skin and ending at the pharynx. 2. State the course of the root-fibres of the spinal nerves within the substance of the spinal cord; and mention the effects of partial transverse and longitudinal divisions of the cord—the latter division separating it into two equal lateral parts. 3. State the sources from which the heart is furnished with nerves. Mention the position and connexions of the cardiac plexuses, and the manner of the distribution of their branches to the heart. 4. Describe the structure of the capillaries, and the circulation through them, including its rapidity as compared with that in the arteries, as well as the reasons for the difference between the flow through the two classes of vessels. Explain the forces to which, independently of the heart's action, the circulation through the capillaries has been assigned. 5. Describe the mode of the development of bone in cartilage and in membrane, and mention which of the cranial bones are developed from the one, and which from the other of those tissues. State the centres of ossification, and their respective positions in the occipital bone and in a dorsal vertebra. 6. State the means by which animal heat is generated and maintained; and explain the influence of the nervous system with respect to it." The candidates again assembled on the 25th ultimo, and underwent an oral examination, of half an hour's duration, on the recently dissected subject, and on some of the admirable preparations made by Messrs. Pettigrew and Moseley; their knowledge of the microscope was tested by several of the objects from the large histological collection of the College. At the close of this day the reports from the different sections on the written and *viva voce* examination were taken by the President (Mr. Quain), when it appeared that of the seniors five were rejected, including one candidate who withdrew at an early period of the examination. On the following Saturday, November 28, those gentlemen who had passed the anatomical and physiological examination on the present and former occasions, again attended for a written examination, when the following questions on pathology, therapeutics, and Surgery were submitted to them, viz.:—"1. Describe the different forms of mortification affecting an external part—the causes, the condition of the structures involved, and the treatment. 2. Wound of the Lung.—Mention the more and less frequent causes, the symptoms local and general, and the treatment. Refer, in illustration of your statements, to any case or cases which have been under your observation. If the treatment includes the use of drugs, let the prescriptions for their employment be written in full. 3. Name the diseases to which the antrum maxillare is liable; point out the characters by which they are severally distinguished, and the treatment. Indicate any disease which would render the removal of the upper maxillary bone advisable; and describe the operation for effecting the removal of that bone. 4. Glaucoma.—Describe the distinguishing characters of that disease, including those observed within the eye with the help of the ophthalmoscope; also the morbid changes in the structures of the eyeball, and the effects on vision. Give a description in detail of any operation undertaken with a view to arrest the progress of the disease, and state under what circumstances the most favourable result of the operation may be looked for. 5. Describe the early indications of the presence of an ovarian cyst. Give an account of the structure of the cyst, of the progress of its growth, and of the evil effects it produces. State the diagnostic signs of the disease at an advanced period of its development, and the circumstances which would render the operation of ovariotomy expedient. 6. Write a prescription containing strychnia for a case in which you might consider that drug advisable. State the precautions to be observed in its administration, and the symptoms indicative of its action on the system, as well as the symptoms presented in cases where an overdose has been taken." On Wednesday, December 2, the final examination took place, consisting of operations on the dead bodies provided for that subject, an oral examination in Surgery, and one in Medicine for those not possessing any Medical licence. This was conducted by Drs. Peacock and Wilks, who had previously submitted the following questions in the principles and practice of Medicine, viz.:—"1. You are called to a person lying insensible. What would be your reasons for deciding that the case was one of injury to the head causing effusion of blood, laceration of the brain, or concussion, sanguineous apoplexy, uræmia, poisoning by opium, epilepsy, hysteria, feigned disease? 2. What are the symptoms and physical signs of pleuritic effusion? Give the treatment by medicines, and explain the method of performing paracentesis thoracis. 3. What are the principal diuretics in use? State which of them you prefer in the treatment of particular diseases. Give the composition of opium and the preparations of the British Pharmacopœia into which its constituents enter; also the proportion of these. How do you use the drug hypodermically?" At the close of this examination the reports of the various sections were taken, when it appeared that out of the sixteen candidates only one was rejected. The names of the remaining fifteen will be submitted to the Council for approval on Thursday, the 10th inst.

Something like a Stomach.—M. Decroix, Veterinary Surgeon to the *Garde de Paris*, writing to the Académie de Médecine, states that for the last eight years he has been in the habit of eating the flesh of all the horses that have died in his service, no matter what their disease, whether farcy, glanders, typhoid, *charbon*, or what not! In his opinion, the flesh of phthisical cows and oxen may be sold without the least detriment to the public health.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

An obituary notice of the late Dr. Joseph Brown, of Sunderland, is unavoidably postponed until next week.

Medical Club.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I hope you will allow me through the medium of your columns to state, in reply to numerous correspondents, that it was decided at the general meeting *not* to increase the subscriptions of the original members.

The formation of the guarantee fund will prevent the necessity of any increase of subscription; and if every member could, during the ensuing year, introduce one new subscriber, the guarantors would not require to be called upon for any portion of the sums they have kindly promised to subscribe in addition to their annual subscription, should such be found necessary.

I am, &c.

December 1. Lory Marsh, Hon. Sec.

Diseased Conditions of Joints from Friction.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reference to the discussion at the Pathological Society, as reported in your issue of the 28th inst., on Mr. Bruce's specimens of a diseased condition in joints, and especially of the patella, I would wish to call your attention to a list of somewhat similar changes observed in the tarso-metatarsal articulation of the great toe, and recorded in Dr. Garrod's work on "Gout." From the position of these cartilages, pressure or friction is very considerable, and they were found to be altered in persons of advanced years, confirming Mr. Bruce's explanation—viz., from friction—which, at all events, has the merit of giving some explanation, as compared with one gentleman's remark that it was due to "a chronic ulcerative condition," which is no explanation at all.

November 30. I am, &c. Militaris Medicus.

Coroners' Inquests.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As a subscriber to your valuable journal, may I request the insertion of the following?—Last Sunday morning my assistant was called out of bed to visit a patient (who proved to be a child four months old) in which life was, at his arrival, extinct. The child doubtless died from suffocation.

On Monday morning last I was called to a person who likewise had died (before my arrival) without having called in Medical aid. I did not hesitate in giving a certificate of the cause of death—(1) hypertrophy of heart, (2) effusion on the brain. The deputy-coroner held an inquest over both bodies—over the former without Medical evidence.

Now, Sir, of what use or power is a Medical certificate? Does a certificate of death, signed by a duly qualified man, protect the subject from an inquiry touching the cause of that death? If it does, why hold the inquest? If it does not, surely a post-mortem examination is called for; but this, in my case, was not considered requisite. In the case of suffocation the intelligent jury returned a verdict of "died from natural causes."

I am anxious for the above to be inserted in the *Medical Times and Gazette*, as I think that not only the form of certificate of death is requiring revision, but also the *modus operandi* of "coroners' inquests."

I am, &c H. William Jackson.

Mottram-in-Longendale, November 28.

*** The use of the Medical certificate is to show the opinion of the Medical attendant as to the nature of the disease which has caused death. No certificate can protect from further inquiry; but if further inquiry be considered necessary in the face of a Medical certificate, certainly it should include a post-mortem examination.

Cure for Ascarides.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Medicus, in your last, inquires after a "cure for ascarides." I know of no "worm powder" productive of any permanent benefit, and I have known much harm resulting from the administration of such, so called, by the prescribing chemists and herbalists of the day. I do not know that I have ever failed in destroying these entozoa by a steady persistence in the use of iron and quassia by the mouth, and the same in two to three ounces enema on alternate days, keeping the bowels, if requisite, in a state of gentle aperiency by drachm doses of castor oil, with ten to fifteen minims of turpentine. In sluggish bowels I use the tinct. ferri sesquichloridi; but in those cases where there is some looseness, or even diarrhœa, after clearing out by a dose of oil, I prescribe the solutio calcis, saccharatus ferri, amm. citr., and infus. of quass. Entozoa of all kinds have a great horror of quassia and iron. The ascarides, passed with a dejection some few hours after an enema of that composition, are always dead, and such is generally the case with the lumbrici. After the expulsion of tænia by any anthelmintic (of which I prefer the oil of male fern), it is judicious to put the patient for some time under a course of the chalybeate bitter. I am, &c. M.D.

December 1, 1868.

COMMUNICATIONS have been received from—

Mr. G. Cutcliffe; Mr. James Spence; Dr. Ralph Richardson; Dr. R. D. Powell; Mr. F. Pritchard Davies; Mr. W. Johnson Smith; Mr. Henry Woolcott; Mr. C. L. Godfray; Dr. Charles Kidd; Militaris Medicus; Dr. H. W. Jackson; Mr. W. H. Clough; Dr Lory Marsh; Mr. J. N. Radcliffe; Dr. Thomas Radford; Mr. Sedgwick; Dr. P. W. Latham; Mr. F. W. Griffin; Mr. Alexander Bruce; Mr. L S. Little; Dr. Wilks; Dr. Robert Barnes; Dr. Ballard; Dr. B. W. Richardson; Dr. J. Hughlings-Jackson; Dr. T. P. Heslop; Dr. Lionel S. Beale; Dr. D. Dyce Brown; Dr. Symes Thompson; Mr. J. Chatto; Mr. C. J. Fox; Mr. W. W Reeves; Mr. Henry Richard; M D.; Dr. Letheby.

BOOKS RECEIVED—

Peters on the Conveyance of Cholera—Fourth Annual Report of the Sanitary Commissioner with the Government of India, 1867—Report on the Antananarivo Dispensary—Wurtz's Histoire des Doctrines Chimiques—Bible Animals, No. 12—Pharmaceutical Journal, No. 114—Edinburgh Medical Journal, No. 162—Diggles, a Legend of the Victoria Docks—Glasgow University Calendar, 1868-69—Climatologie Médicale, par Dr. Carrière—Du Gonflement du Dos des Mains, par Dr. Necaise—Walter's Conservative Surgery—Smith's Visiting List, 1869.

NEWSPAPERS RECEIVED—

Brighton Times—Brighton Observer—Indian Medical Gazette—Liverpool Daily Post—Public Health, No. 12—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 28, 1868.

BIRTHS.

Births of Boys, 1117; Girls, 1035; Total, 2152.
Average of 10 corresponding weeks, 1858-67, 1902·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	749	812	1561
Average of the ten years 1858-67	754·1	742·6	1496·7
Average corrected to increased population..	..	..	1646
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	6	21	3	3	9	4	..
North ..	618,210	2	16	13	2	3	14	1	..
Central	378,058	..	11	19	2	5	7	1	..
East ..	571,158	..	4	24	2	6	12	3	..
South ..	773,175	1	11	22	4	13	17	3	..
Total ..	2,803,989	3	39	99	13	30	59	12	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·516 in.
Mean temperature	42·5
Highest point of thermometer	53·0
Lowest point of thermometer	32·0
Mean dew-point temperature	40·4
General direction of wind	Variable.
Whole amount of rain in the week	0·88

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 28, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Nov. 28.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Nov. 28.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2152	1441	1561	53·0	32·0	42·5	0·88	89
Bristol (City) .	167487	35·7	117	75	*73	..	..	..	..	..
Birmingham (Boro')	352296	45·0	211	171	160	55·1	34·5	43·0	1·03	104
Liverpool (Borough)	500676	98·0	371	290	298	52 0	31·6	41·2	0·88	89
Manchester (City) .	366835	81·8	275	208	*241	54·0	35·0	42·2	0·87	88
Salford (Borough) .	117162	22·7	91	59	71	54·6	37·3	42·8	0·94	95
Sheffield (Borough).	232362	10·2	179	122	129	54·4	36·0	42·5	0·44	44
Bradford (Borough)	108019	20 3	96	55	83	..	..	..	..	..
Leeds (Borough) .	236746	11·4	220	120	170	55·0	33·0	43·7	0·61	62
Hull (Borough) .	108269	34·4	88	50	73	52·0	33·0	41·5	0·72	73
Nwcstl-on-Tyne, do.	127701	23·9	106	68	67	50·0	34 0	41·0	0·96	97
Edinburgh (City) .	177039	40·0	141	85	116	50·7	35·0	41·1	0·30	30
Glasgow (City) .	449868	88·9	337	262	391	49·9	31·5	40·1	0·52	53
Dublin (City and some suburbs) .	319935	32·8	150	157	145	50·6	29·6	41·6	0·50	51
Total of 14 large Towns . . .	6391080	34·7	4534	3163	3488	55·1	29·6	41·9	0·72	73
					Week ending Nov. 21.	Week ending Nov. 21.				
Vienna (City) .	(1863) 560000	..	..	..	312	..	..	34·5	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·516 in. The barometrical reading increased from 28·94 in. on Sunday, Nov. 22, to 29·83 in. on Friday, Nov. 27.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

December 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

7. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p m. Subject for Special Discussion—Gallstone. Mr. Peter Marshall, Mr. Hainworth, Dr. Hutchinson, "Specimens and Cases of Gallstone." Dr. Le ared and Dr. Thorowgood, Papers on Gallstone.

Odontological Society, 8 p.m. Meeting.

Royal Institution, 2 p.m. General Monthly Meeting.

8. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society of London, 8 p.m. Meeting.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Dr. Pellew Bain, "On a New and Simple Method of inducing Artificial Respiration in Cases of Asphyxia."

9. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. An Address, by the President.

Hunterian Society, 8 p m. Mr. Bryant, "Some Points in the Treatment of Ovarian Tumour and on Ovariotomy." Dr. Sutton, "On the Difficulties in Diagnosis in some Cases between Pyæmia and Rheumatic Fever."

Microscopical Society, 8 p.m. Dr. Bastian, "On the Mounting and Tinting Sections of Animal Tissues."

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

11. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.



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ORIGINAL LECTURES.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.(a)

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON THE THERAPEUTICAL VALUES OF PEROXIDE OF HYDROGEN AND OZONIC ETHER.

Gentlemen,—In the year 1856 I commenced for the first time the study of the therapeutical action of the substance known by chemists as the peroxide of hydrogen. At the time I refer to this study had not been entered upon systematically by any one, and in our books of Physic the peroxide had barely been noticed as a remedy. The industrious Pareira did not lose sight of the substance, but in his references to it he simply confines his remarks to a brief description of its chemical and physical characters, and to a note of the fact that the Society of Sciences of Haarlem had offered a prize for an essay treating on the medicinal qualities of what promised to be a most useful addition to the list of remedies. A few years since a kind and enthusiastic Medical friend of mine, being at Haarlem, inquired about this prize, and claimed it for me; but he was told that the prize having been advertised for many years and the claimants having been none, it was withdrawn about the year 1850.

My own first researches cost some considerable labour, and, owing to the circumstance that the peroxide was not, at the time when they commenced, manufactured in England or elsewhere, considerable time and expense also. They were also published in too fragmentary a manner to claim definite attention. They were, however, like seeds loosely sown and coming up as live grain, not actually lost; and now, as if the first sowing had yielded a second and better return, they are attracting a revived and a much more general interest. At the request of many friends who attend these lectures, I therefore to-day approach the subject again, hoping this time to put into a lecture a fair *résumé* of what is known respecting peroxide of hydrogen and ozonic ether—their history, preparation, physical properties, physiological action, and therapeutical values.

The History of Peroxide of Hydrogen.

Peroxide of hydrogen was discovered in 1818 by the distinguished Baron Thénard, who gave to it the name of *Deutoxide of Hydrogen*. The most elaborate description of it is supplied by Thénard himself in his *Traité de Chimie*. The narrative is so simply given and so perfectly illustrated that every statement subjects itself at once to scrutiny, and every statement, I believe, may be proved by any one who will undertake the labour to the point of demonstration.

One element in the history is wanting to make it complete, and that is a detailed account of the mode of thought and reasoning by which the great chemist discovered the peroxide. As Thénard is long dead, we shall probably never have the steps of this interesting and curious discovery made known to us. Since the time of the discovery of the peroxide, its nature and properties have been investigated by various chemists. I may name amongst the most prominent Pelouze, Mitscherlich, Vogel, and Berzelius; but it cannot be said that these have added much to Thénard.

Of late days the speculations of Schönbein relative to ozone, have caused the peroxide to be discussed more than formerly, in the way of speculative chemical philosophy.

The Preparation of the Peroxide of Hydrogen.

The chemical proposition for the formation of the peroxide of hydrogen was given by Thénard, and it stands unaltered. Gmelin thus condenses it:—

When peroxide of potassium, sodium, barium, strontium, or calcium is digested in any hydrated acid which forms a soluble salt with the salifiable base resulting from the decomposition of the peroxide, the excess of hydrogen does not escape as gas, but passes over to a portion of the water, and converts it into *peroxide of hydrogen*.

To carry out the manufacture, it is therefore necessary to obtain one of the above-named peroxides in the pure state. It has been up to this time most practicable to select out of the list the peroxide of barium, a specimen of which I hand round. This peroxide is made either by placing pure anhydrous baryta—obtained from the decomposition of the nitrate by heat—in a glass or porcelain tube, heating to redness, and passing through the tube a current of dry oxygen; or by heating together in a platinum crucible anhydrous baryta and chlorate of potassa. The first of these processes is the readiest and, I think, best. The baryta used must be freed, as far as possible, from foreign matter, particularly from manganese, and the oxygen gas must be entirely freed of admixture with carbonic acid. If either of these substances be present in making the peroxide, the result will be altogether a failure, inasmuch as both these substances have the property of evolving the oxygen with which the hydrogen is to be afterwards charged as fast as the oxygen itself is produced. The proofs that peroxide of barium is pure are these:—It should present a greyish-white surface, free from green specks. Powdered and slaked with water, it should form a paste without evolution of heat. It should be entirely soluble in diluted hydrochloric acid.

In making the peroxide of hydrogen, the further processes are carried out as follows:—We take, say, twenty fluid ounces of distilled water, and add two fluid drachms and twenty minims of pure hydrochloric acid. We make the acid mix thoroughly with the water. Then we take two drachms and ten grains of the peroxide of barium, reduce it to powder, place it in a porcelain or glass basin, and pour on it a little water, until it is made into a soft paste. With a glass or boxwood knife (an iron spatula must not be used), we gently add the paste to the acid solution, stirring until all is dissolved; if a precipitate occurs, a minim or two of hydrochloric acid must be added to take up such precipitate. In this step of the process we transform the baryta into the soluble chloride of barium, and at the same time charge the water with one volume of peroxide of hydrogen. The salt of barium, which is soluble, and is in the solution, must next be removed. This is done by adding very cautiously one drachm and a half of dilute sulphuric acid. (The acid must be diluted to one part in three of water.) The sulphuric acid must be added slowly, so that heat be not evolved. The baryta will in this way be all precipitated in the form of insoluble sulphate. The solution at this stage must be set aside for a while to allow the whole of the sulphate of baryta to subside. The clear solution must be poured off as a succeeding step, and filtered through Swedish filter-paper. We have now a solution containing its own volume of peroxide of hydrogen, as before, and again the portion of freed hydrochloric acid in lieu of chloride of barium. To this solution we re-add peroxide of barium, afterwards sulphuric acid, and so on by repetition until the water is charged with oxygen to the amount required by the operator. By care and in time water may thus be charged with thirty volumes of oxygen.

If it be required to obtain the peroxide of hydrogen in a free state by the removal of the hydrochloric acid, we pursue the steps of the process thus:—

To the solution charged with the peroxide of hydrogen and the hydrochloric acid we add carefully sulphate of silver. Chloride of silver is thrown down, and the sulphate is added until precipitation ceases. The chloride of silver is then separated by filtration. The solution obtained consists of peroxide of hydrogen, water, and free sulphuric acid. The last step is to add baryta to the solution until all the sulphuric acid is fixed as a sulphate of baryta; this is removed by deposition and filtration, and pure peroxide of hydrogen remains in the water.

If it be the wish of the chemist to obtain the peroxide of hydrogen in a concentrate form, he charges a smaller portion of water, by the steps I have given above, with thirty volumes of oxygen. Then he places the solution he has made under the receiver of an air-pump with sulphuric acid around to absorb water. In this condition water uncharged with free oxygen first passes off, and at last a fluid is left which may be considered as absolute peroxide of hydrogen. It yields 475 volumes of oxygen, and evaporates under the air-pump altogether.

Simple methods of making peroxide of hydrogen have been proposed. Pelouze suggested the manufacture by adding the peroxide of barium to a solution of hydrated hydrofluoric acid. Fluoride of barium is thus thrown down, and peroxide of hydrogen is produced in solution. Taking it all in all, I consider Thénard's original process to be the best.

Physical and Chemical Properties of the Peroxide of Hydrogen.

Peroxide of hydrogen existing in solution in water does not impart any colour to the solution, but a distinct odour which resembles that of a weak solution of chlorine. When a little

(a) Lecture delivered on December 8.

of it is placed in the hands, this odour becomes more distinct. When it is tasted, it imparts to the tongue, even in weak solutions, a caustic taste, and when very strong, this causticity is painful. In the concentrate form it whitens the mucous membrane when applied to it, and produces a tingling sensation. In its highest concentration it has a specific gravity of 1·452. It mixes with water in all proportions, and may be kept in solution at all ordinary temperatures. Reduced in temperature to − 30°, it does not freeze. Light, as far as is yet known, does not influence the peroxide of hydrogen, but heat evolves it. When water containing peroxide is carefully boiled, the extra measure of oxygen does not go off until the boiling point is reached: then the gas, once beginning to be liberated, continues to pass off with effervescence for a long time—until it is gone, in fact, and even for a period after the water has become cold again. This circumstance gives rise to a simple experiment.

The electrical current passed through a solution of the peroxide of hydrogen produces decomposition. The hydrogen and oxygen appear at their respective poles, but the oxygen is in larger quantity in proportion to the amount in excess in the solution. I can show this decomposition now very completely by means of a powerful little electro-magnetic machine made by Mr. Browning. You will see with the first few turns of the handle the separation of the gases, slight at the commencement, but in time becoming very rapid.

Brought into contact with inorganic bodies, the effects of the peroxide are singularly various. *A priori*, it might be expected that it would oxidise all oxidisable substances; the facts, however, are not so, absolutely. Some inorganic bodies absorb oxygen from the peroxide, and become oxidised. I name two of these—arsenious acid and sulphurous acid; the first of these, in presence of solution of peroxide, is converted into arsenic acid, the second into sulphuric acid. Here is a specimen of sulphuric acid produced in this way from sulphurous acid. Advantage might be taken of this change, in the case of arsenic acid, for the chemical detection of arsenic in organic substances. Other inorganic substances, on coming into contact with the solution, evolve the oxygen, and, in some cases of oxides, a portion of their own oxygen is given up also. Carbonic acid, oxide of manganese, silver, mercury, charcoal, all liberate the oxygen.

For the purpose of experiment I take here a solution of the peroxide, and add to it a little binoxide of manganese in a small flask, without heat. Gas is at once evolved, and collected in the reservoir. You will see by the brilliant burning of the taper in the reservoir that the gas is oxygen. The protoxides of gold, silver, and mercury, in the presence of the peroxide of hydrogen, expel the oxygen with great violence, and become reduced by giving up their own oxygen.

A very pretty experiment, showing the reduction of a substance rich in oxygen by the addition of peroxide of hydrogen, is performed as follows:—We take a solution of permanganate of potassa, and add to it a little of the peroxide solution. At once observe there is evolution of gas, while the deep rich colour of the solution evanishes. As the liquid becomes colourless, see a black substance falls to the bottom; this is the reduced manganese. The permanganate is decomposed, the peroxide is decomposed; by the mutual contact both give up oxygen. The permanganate is left as oxide of manganese, the peroxide as water. The strength of a solution of peroxide of hydrogen may be determined by this experiment in a ready way.

A very easy and elegant, though rather expensive, mode of making oxygen is to put some solid permanganate of potassa, as I now do, into a flask, and then to pour over the substance some peroxide solution. The evolution is very rapid; we collect twenty or thirty cubic inches quickly, and find the oxygen very pure for inhalation.

Therapeutical Uses of Peroxide of Hydrogen.

My first object in introducing peroxide of hydrogen into Medicine was to test it as a remedy for diabetes. The theory that diabetes was a disease attended with a deficient oxidation was at one time extremely popular. I thought it, therefore, fair to ascertain whether a remedy rich in oxygen would be of service in marked cases of this disease. I soon afterwards began to test the medicine in other forms of disease, not on any particular theory of its action in every case, but, if I may so say, empirically, in cases where severe and long-continued symptoms were not amenable to ordinary plans of treatment; thus in time—extending now over ten years—I have got together a large collection of facts respecting the effects of the substance in different disorders, which I will epitomise under distinct heads.

Diabetes.

I have tried the remedy now fairly in eleven cases, and in three so rigorously that nothing, I think, remained undone to make the experience crucial.

In the first of these three cases the administration of the remedy was attended with such remarkable signs of improvement that the patient (a woman) came to the conclusion that she was cured. During the first eight days the renal secretion was reduced from five to two pints, and on the eighth day the specific gravity, which had been 1045, had come down to 1023. The medicine was now suspended for four days, with immediate increase of the amount of secretion to five pints. The medicine again resumed, there was immediately a cessation of the diuresis. This continued until the eleventh day, on which day only two pints of urine were passed in the twenty-four hours. At this point symptoms of hemiplegia, which had twice before appeared, recurred, attended, as they had also been previously, with epileptiform convulsions, in the course of one of which attacks she suddenly expired. The results of this case left me in doubt as to the influence which the medicine might have had in arresting the saccharine secretions; for it has been observed by Dr. Garrod and other Physicians that the elimination of sugar during diabetes is often temporarily arrested by the occurrence of new changes of disease in the system. I held the matter, therefore, open as subject to further inquiry. The quantity of solution taken by this patient averaged three fluid drachms a day; the strength of the solution was ten volumes.

The second case was that of a child 8 years of age. She had been suffering from diabetes for eight months at the time when she was presented to me. At this period the specific gravity of the urine was 1058, and the quantity passed fifty ounces per day. On October 22 she commenced to take the peroxide in drachm doses three times daily, which were to be increased to doses of three drachms; the quantity of urine passed was accurately measured, and the specific gravity taken twice daily. At the end of seven days the specific gravity stood at 1043, and the quantity passed was sixty ounces per day. The treatment was now continued for twenty-three days, the dose of peroxide being increased to half an ounce, when observations were taken for four days with the following results. On the first day the quantity of urine was seventy-seven ounces, specific gravity 1046; on the second sixty ounces, specific gravity 1041; on the third seventy-three ounces, specific gravity 1046; and on the fourth seventy-three ounces, specific gravity 1040.

For a period of four days the peroxide was withdrawn, during which time seventy-six ounces were passed daily, with a fluctuating specific gravity; the medicine was then resumed, five minims of the tincture of muriate of iron being added to each dose, and this was continued for seven days. During this period the quantity of urine varied from seventy-five to ninety-one ounces; and from this point until the time of her death, two months later, the results were in the main the same, the peroxide having been for several weeks withdrawn, and various other kinds of treatment, such as opium, gallic acid, and cod-liver oil having been instituted in the place of it. Throughout, the greatest attention was paid to the dietary. The ultimate and fatal ending of the case was somewhat sudden, and probably arose from cerebral complication. If any inference is derivable from this case, it is to the effect that, during the time the peroxide was being administered, there was a decrease in the specific gravity, with increase in quantity. I have known the same to occur under other forms of treatment.

The third case of diabetes occurred in a man, by trade a plasterer. It was obviously connected with cerebral disturbance, as the patient suffered from frequent attacks of vertigo. The quantity of urine passed often exceeded eighty ounces per day, and the specific gravity averaged 1040. He took peroxide of hydrogen for five weeks, in doses of three drachms, three times daily. The symptoms for the first few days were materially relieved; after a time they returned to their original intensity, and at the end of the fifth week the man was in the same condition as at the beginning. This man being an infirmary patient left the institution with which I was connected, and I have been unable to follow out the history of his case further.

In two cases of diabetes with phthisis which came to me very late in the progress of the disorders, and were, in truth, fatally disabled by the pulmonary disorganisation, I treated one for three, the other for four weeks, with the solution in

doses of three drachms three times daily. In both it seemed that the medicine increased the quantity of urine, while it decreased the quantity of sugar. They both ended fatally, the phthisical symptoms being the cause of death. From these experiences, and six others similar, I am obliged with regret candidly to state that at this moment there is no proof that peroxide of hydrogen is of specific value in the treatment of diabetes.

RHEUMATISM.

I treated a case of chronic rheumatism of a troublesome kind, in which both quinine and sudorifics seemed only to increase the pain and anxiety. The affection was located principally in the shoulders and the hips, but it showed its usual migratory character. The patient was a female, 70 years of age, and the dose of the peroxide given was two drachms three times daily. The symptoms were certainly quickly and effectually removed, and, as far as one could judge, such removal was effected by the medicine.

I treated a case of subacute rheumatism of that kind in which, after an acute attack, relapsing symptoms, modified in character, occurred, attended with pain in the joints, quickened cardiac pulsation, pulmonary congestion, and profuse perspiration. The effect produced, or rather what followed, was satisfactory. During the course of the acute symptoms the patients had been freely treated with alkalies, but for these relapsing congestive attacks the alkaline method unquestionably depressed, and a congested condition of lung which bordered on pneumonia, and produced intense embarrassment in respiration, remained. The peroxide was given in full doses, and from the first the man expressed himself as relieved in his breathing; the profuse action of the skin was controlled, the inflammatory swelling subsided, and the case went on to speedy and sound recovery.

CARDIAC DISEASE.

Four cases of valvular disease of the heart were treated with the oxygen solution at that stage of the malady when pulmonary congestion was the symptom immediately present and oppressive. The object of the administration was to assist the circulation by expediting the oxidation of the blood. I am bound to say in reference to these administrations that they seemed to give more relief than anything I have ever before prescribed; the breathing became tranquillised, the countenance clearer, and the oppression lighter. In every case the patients themselves expressed a decided sensation of great relief, and one patient for many months had the solution always at hand, of which he would take a full dose when the indications of difficult breathing were coming on, and always, he assured me, with infinite benefit.

In three cases of cardiac disease in which the muscular structure was diseased, in which there was constant irregularity in the action of the heart, and at intervals paroxysms of severe cardiac apnœa, I put the peroxide to fair test.

These cases were all under steady treatment for many weeks, and one for three months, but I cannot say that they showed any marked improvement, or that the acute paroxysms were at all deferred as a consequence of the treatment.

STRUMA.

Two cases of struma were treated. They were well-marked instances of the disorder: one in a child, the other in an adult. In both there was great enlargement of the cervical glands without suppuration. In one case iodine had been applied externally for many months without any improvement. I did not withdraw the iodine, but ordered the peroxide solution in addition. The case rapidly recovered; but as iodine was a conjoint remedy, it would be unfair to give the credit to the oxygen.

The second case had the advantage of being free from the above objection. In it no previous treatment had been pursued, and the peroxide was alone administered. To my surprise, the glandular swellings gradually disappeared, precisely as under the influence of iodine itself.

I had another case of struma with purulent deposit. A boy intensely anæmic was brought to me in the summer of 1863 with suppurating glands in the neck, and purulent discharge from chronic abscesses in six other parts of the body. He was placed on the peroxide solution, with five-minim doses of tincture of the muriate of iron. He bore the solution well, and continued it for many months. He so far recovered that his friends thought it unnecessary to continue their visits, and during the autumn he enjoyed very good health. In the beginning of the following year the symptoms returned, despite the most careful attention to diet and regimen, and he was brought to me again with three enormous abscesses, one of which I was compelled to lay open. He took the peroxide this time without iron, and made a slow but good recovery.

(To be continued.)

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

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Lecture XIX.—Part II.

THE CÆSARIAN SECTION CONTINUED — THE CONDITIONS THAT RENDER THE OPERATION NECESSARY—QUESTION BETWEEN CÆSARIAN SECTION AND TURNING IN MORIBUND AND DEAD WOMEN TO SAVE THE CHILD—THE TIME TO SELECT FOR THE OPERATION—PREPARATION FOR OPERATING.

The Conditions that render the Cæsarian Section necessary.

The most frequent condition is *deformity with contraction of the pelvis*. The operation is justified whenever the contraction is such as to render it impossible to extract a dead child through the natural passages. This may be stated at 1·75″ conjugate diameter and below, at the higher limit of 1·75″ coming into competition with craniotomy. Cases may also occur in which a conjugate diameter of 2·00″ may call for Cæsarian section if the pelvis is much distorted, so that the diagonal and transverse diameters offer insufficient compensation for the narrow conjugate.

The most frequent form of distortion calling for the Cæsarian section is that which arises from osteomalacia. In malacosteon the sides of the triangle forming the brim of the pelvis are all pressed inwards, and are more or less convex. The result is that the brim is practically divided into two parts, neither of which is available for the passage of the head. Rickets, also, will sometimes produce a pelvis that will leave no alternative. The slipping down of the lumbar vertebræ—spondylolisthesis—into the pelvic cavity, if to any great extent, leaves no other resource. (See a memoir on this subject, *Obstetrical Transactions*, 1865, by Robert Barnes.)

The next most frequent causes are tumours of various kinds growing into the pelvis, such as bony or malignant tumours springing from the wall of the pelvis; tumours of the ovary descending into the pelvic cavity, and getting fixed there. Dr. Sadler, of Barnsley, has recorded a case (*Medical Times and Gazette*, 1864) in which the operation became necessary from the pelvis being filled up with an enormous *hydatid cyst* springing from the liver. Other exceptional causes, chiefly remarkable on account of their extreme rarity, have been observed. Atresia of the cervix uteri and vagina may be so extensive and unyielding that the Cæsarian section may be less hazardous than the attempt to open up a canal through the cicatricial tissues.

We are sometimes driven to the operation after having exhausted other modes of proceeding—for example, when craniotomy may have failed to deliver. It is a remark of Dr. Radford that most of these cases are progressive in their character.

The Cæsarian section, or rather gastrotomy simple, is indicated in certain cases of rupture of the uterus, when the child cannot be extracted with advantage through the pelvis.

It is resorted to when the mother has died undelivered, in the hope of rescuing the child. In this way several children have been saved. The success, of course, will depend greatly upon opening the uterus very soon after the mother's death. How soon? It is difficult to assign a precise limit beyond which the child's life may be regarded as lost. Harvey said, "Children have been frequently taken out of the womb alive hours after the death of the mother." I am not aware of instances to justify this statement. But Burns says, "The uterus may live longer than the body, and after the mother has been quite dead the child still continues its functions." The fœtus in lower animals will live some time if the ovum is not opened. It seems not improbable that a modified degree of placental circulation may continue for some little time after the mother's general circulation has stopped; and it is further even more probable that the child may survive for

some little time in a state of asphyxia capable of restoration on being brought into the air. Certainly children have been extracted alive ten minutes after the mother's death. On the other hand, children have been extracted dead when the operation has been delayed fifteen minutes. This has occurred twice in my own experience. In Lecture IV. (*Medical Times and Gazette*, 1867) I have adduced further evidence bearing on this question. The chance of preserving the child by the Cæsarian section post mortem will be much influenced by the circumstances of the mother's death. If she dies by sudden injury, the child may survive a little longer. If she dies from hæmorrhage or rupture of the uterus, the child's death is likely to have preceded that of the mother. If she dies from phthisis or other gradually exhausting disease, the child may survive some minutes.

The Cæsarian section after death comes into competition with forced delivery *per vias naturales*. Sometimes, if the cervix is dilated, the child may be extracted by turning as quickly as by Cæsarian section, and it has this advantage—that, being less likely to shock the friends, it may be practised when the Cæsarian section would be rejected, or resisted until too late.

This view has recently found favour in the Italian schools. Professor Rizzoli proposed to deliver in this manner as soon as the woman was dead. The late Professor Esterle(a) related a case occurring in 1858, in which he successfully executed this proceeding in a woman dying of cerebral apoplexy. One argument he adduced in support was the fact that in similar cases the child survives its mother's death so short a time that to save it delivery must be effected whilst the mother is still living. He says that, in his judgment, this is the proper course to adopt—of course requiring that all possible gentleness shall be practised, and that, if necessary, the plug and vaginal douche be used beforehand.

Cases in support of this practice are recorded by Belluzzi,(b) Ferratini, and others. Out of three cases Belluzzi saved two children. Ferratini(c) saved the child of a woman dying of phthisis. The following conclusions are submitted by Ferratini:—

1. The Cæsarian section must be absolutely excluded from common practice, reserving it for cases of organic defect not admitting of operations through the natural passages.

2. Whenever the obstetrist is called to dead pregnant women, he should resort to forced delivery, cases of apparent death being not rare.

3. This operation is absolutely necessary whenever pregnancy has gone to 180 days.

4. It does not aggravate the condition of the mother (?), and gives the best chances to the child.

5. It leaves no trace upon the corpse, requires no instrument, and is less likely to excite objection on the part of the friends.(d)

A condition which has several times led to the Cæsarian section has been *disease, mostly malignant, of the lower segment of the uterus*, preventing its due dilatation. In this case, the opportunity is commonly presented of inducing labour or abortion. The conditions of choice are often perplexing. If labour be induced before seven months, the prospect of a viable child is small, but the uterus may be able to dilate sufficiently without injury. On the other hand, the life of the mother is probably doomed to be of short duration from the progress of her disease. Any injury to the diseased structures, as even by premature labour, is liable to accelerate her death. Is it not then better, both in her interest and in that of the infant, to let things go on to the natural term of gestation? She may live two or three months longer, and the child will undoubtedly have a better chance.

What is the best time to select for the operation?

1. Sometimes, of course, all choice is denied us, or the range of time offered is extremely limited. If called to a woman in labour at term, and under the conditions assumed to require the operation, it ought to be performed without delay. There is, if possible, greater reason than in conditions requiring other less formidable proceedings, to anticipate the exhaustion and local injury that follow upon protracted labour. It is a misfortune, tending fatally to compromise success, to be obliged to operate when the system is prostrated; when the structures that have to be wounded are so worn and injured that the power of reaction and repair is seriously reduced; and when the blood is deteriorated by the products of nervous and muscular overwork. It is, then, a clear indication to operate early in labour.

2. If the patient come under observation early in pregnancy, we have the double opportunity of considering the propriety of inducing labour, with the object of avoiding the operation, and of selecting the time for its performance should it be unavoidable. Is it an advantage to operate during labour?—that is, does the process of labour conduce to the success of the Cæsarian section? Amongst Continental Practitioners, and indeed generally here, the Cæsarian section being regarded as a mode of delivery, it is held to be a primary indication to respect the laws of parturition, and to enlist the natural powers in our aid as much as possible. It has been, therefore, almost universally considered proper, in cases where the ultimate necessity of resorting to the Cæsarian section is recognised, to postpone the operation until the advent of labour. It is presumed that the epoch which nature fixes for labour is that when the most favourable conditions for the process and for the recovery are present. The whole organisation is better prepared, and the uterine muscles having acquired their highest stage of development, and contraction having actually set in, it seems reasonable to anticipate that the wound made in the uterus will close better, and that the necessary changes attending delivery will be more safely carried out.

Dr. Ludwig Winckel (*Monatsschrift für Geburtskunde*, 1863), whose experience in this operation is the greatest, says the most favourable time is the end of the second stage of labour, when the membranes are ready to burst. He advises not to rupture the membranes. The escape of liquor amnii into the abdomen does no harm, and the extraction of the child is more easy if the membranes are kept entire until the moment of seizing the child.

But admitting spontaneous labour at term to be a favouring condition, may not labour induced artificially before term be an equally favourable condition? The arguments in support of the affirmative deserve attention. Dr. Braxton Hicks brought on labour a fortnight before term as a preparation for the Cæsarian section, influenced by the opinion that by so doing the uterus, taken at a period prior to the highest degree of degeneration of its muscular fibres, would heal better. I am not disposed to think that the degree of fatty change observed in the mature uterus is any impediment to reparation. There are, at any rate, too many examples of complete repair after section by the knife, and even after rupture, to admit of a doubt that the mature uterus is in a condition not unfavourable for the operation. On the other hand, it cannot be doubted that the uterus at seven or eight months is also capable of complete repair after injury. We may, then, very properly consider whether, assuming things to be equal, *quoad* the uterus, there may not be other circumstances that may rightly turn the scale in favour of premature delivery. Such, I think, do exist. For example, if we wait for the advent of natural labour, we may be called upon to operate in the middle of the night, and surrounded by many difficulties, all concurring to lessen the prospect of success. By selecting our own time we may have daylight, the assistance of colleagues, and every appliance that may be thought useful.

The best time to select, then, would be as near the natural term of gestation as possible, and this may be determined approximately by taking some day in the estimated last fortnight of gestation.

Then comes the question, shall we start labour before operating, or proceed to the operation at once without exciting any preparatory action of the uterus? I think the preponderance of reason is in favour of operating upon a uterus already in the act of labour. The *first step* will be to pass up an elastic bougie into the uterus overnight. This will excite some degree of uterine action. Next day, the hour of operating being fixed, say for 1 p.m., we may in the morning ascertain to what extent labour has proceeded. If the os uteri is not open more than enough to allow a finger to pass, it will be useful to dilate it a little more with the caoutchouc bag No. 2. This will of course induce further contraction of the uterus, and secure one most desirable object—namely, a free outlet for liquor amnii and other discharges by the natural passages.

The labour then being started thus far, we are ready for the operation. The question between general and local anæsthesia arises. In all abdominal operations the vomiting so liable

(a) "Annali Universali di Medicina," 1861.
(b) "Nuovi fatti in appoggio dell' estrazione del feto col parto forzato durante l' agonia delle donne incinte, onde salvare più facilmente il feto stesso in sostituzione a tale operazione, o al taglio cesareo post mortem." Bologna. 1867.
(c) "Un nuovo fatto in appoggio," etc. Genova. 1868.
(d) This subject is also referred to by Dr. Hyernaux, of Brussels, in the second edition of his treatise on Obstetrics.

to attend or follow chloroform is a serious drawback. The violent straining is apt to open the uterine wound, to stretch the abdominal wound, to destroy the "rest" which is such an important condition of repair, and thus to compromise the success of the operation. The ether spray is at least free from this objection; and possibly further experience will show that it ought to be preferred.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
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LECTURE II.

OF THE GERMINAL MATTER OF THE TISSUES—DIFFERENT CHARACTERS OF LIVING BEINGS DUE TO INHERENT POWERS OF GERMINAL MATTER—CHARACTERS AND PROPERTIES OF FORMED MATERIAL DEPENDENT ON VITAL POWERS OF TISSUE—GERMINAL MATTER OF CUTICLE, HAIR, HORN, NAIL, ENAMEL, DENTINE—OF SECRETING CELLS, SECRETIONS, SECONDARY DEPOSITS, FAT, STARCH, ETC.—OF CILIATED CELLS—OF PIGMENT CELLS—SALIVARY CORPUSCLES.

(*Concluded from page* 637.)

Secreting Cells.

Contrasting in most important particulars with the epithelial cells of the mouth, already referred to in the early part of this lecture, are the cells which are concerned in the formation of secretions, of which the liver cell may be taken as an example. This consists of a spherical mass of germinal matter, often containing new centres of growth (nuclei), surrounded by a considerable extent of soft formed material, giving to the whole an irregularly oval or somewhat angular appearance. This formed material is undergoing change upon its outer surface, and, although resulting from one kind of germinal matter, becomes gradually resolved into amyloid, fatty matter, the resinous salts of the bile, and colouring matters.

Another type of secreting cell is that in which the secretion is poured into the interior, and after accumulation, discharged from a free opening at its extremity, the cell remaining for some time a fixture, and continuing to discharge its active office. In the mouth of the boa these cells attain a very high degree of development, and are of large size. They also exist in great number, and may be found in every stage of development; for, although one may perform its work for a certain period of time, some are being continually removed and replaced by new ones which grow up from below.

Like other cells, these flask-like cells exist first as oval masses of germinal matter, which then become altered upon the surface, and the formed material constituting the cell wall is produced. In this cavity products resulting from the change of the germinal matter at its distal extremity accumulate, and it becomes dilated. The accumulation of contents and enlargement of the cavity proceed till at last the summit of the cell approaches the surface; an opening is formed at its free extremity, and its contents are discharged. These cells remain for some time in position, constantly discharging secretion which is formed in their interior. The germinal matter remains near the lower attached extremity of the open-mouthed cylindrical cell, and takes up nutrient matter at its lower surface, while at its upper part, which forms the floor of the cell cavity, the germinal matter is changed into the *secretion* of the cell which occupies its cavity, and escapes from the open orifice. A large quantity of pabulum may pass into the state of germinal matter, and a corresponding quantity of the latter undergo conversion into the formed material or secretion of the cell, while the entire apparatus neither changes in volume nor alters in form or weight.

This is an interesting example of a mass of germinal matter giving rise successively to two different products. It first produces the cell wall, and then gives rise to "products of secretion," the composition and properties of which are entirely different from it.

Let us now consider one or two other cases in which substances differing in composition and properties from the "cell wall" are formed from the germinal matter within the cell.

Fat Cell.—The fatty matter of the fat cell is formed by the germinal matter after the vesicle or wall of the cell has been produced on its surface. The changes may be studied in the adipose tissue of the white mouse, frog, or other small animal. In the chameleon and many other animals, instead of one globule of oil being formed, and then increasing gradually in size, several minute oil globules result and accumulate in the cell. A beautiful specimen of fat cells at every stage of development will be seen in No. 58.

Starch Cells.—Closely resembling the process of formation of fat in the fat cell is the deposition of starch in the starch cells of many vegetable tissues—as, for example, the common potato. If the gradual changes which take place as the germinal matter becomes developed into the mature starch-holding cells be studied, the following observations will be confirmed.

Little insoluble particles of starch are found amongst the germinal matter of the very young cells. These increase in size by the deposition of more insoluble starchy matter layer after layer, as in the formation of a calculus, until the starch-grains assume the perfect form. (Specimens 59 and 60.)

In some of the cells of the potato the cell wall is thickened by the deposition of secondary deposits, in which case starch granules are usually produced. This thickening occurs only at certain points, leaving slight intervals, through which currents of fluid continue to flow to and from the germinal matter. The process may continue until the secondary deposit reaches near to the centre of the cell. The channels for access of nutrient fluid to the germinal matter in the centre remaining open give to the mature cell the stellate appearance familiar to every one who has examined such vegetable cells.

Just as the "secretion" in the peculiar flask-like epithelial cells in the mouths of many reptiles results from changes in the germinal matter, so the peculiar "contents" or "secondary deposits" of other cells may be regarded as "products of secretion," or said to correspond to "tissue" in other cases. They are all non-living substances, resulting from change in germinal matter, and constitute different kinds of "formed material." The numerous pigment granules in the large stellate freely communicating pigment cells of the frog afford another example of a peculiar material resulting from change in the germinal matter of a cell. The formation of pigment commences at a very early period of development, and its abundance seriously interferes with the investigation of the structure and growth of the tissues of these animals, in other respects so well adapted for the purpose.

Ciliated Cells.

The cilia of ciliated cells are, like the outer part of the cell, the so-called cell wall, composed of formed material; but the movements of these hair-like processes are due to changes taking place in the germinal or living matter. The vibration of the cilia ceases when the germinal matter dies, and is generally influenced by any alteration in external circumstances which exert an effect, favourable or unfavourable, upon germinal matter. The proportion of germinal or living matter in ciliated cells is considerable, and its relation to the cilia is such as to favour the view that it is intimately concerned in the movements. Nutrient matter is taken up by the mass of germinal matter upon the side opposite to that nearest to the cilia, and it seems probable that the production of formed material, and a consequent alteration in the tension of the texture of which the cilium is composed, accompany each movement. I think that the rate of vibration depends upon the rapidity of nutrition, and that the to-and-fro movement marks the change of pabulum into germinal matter, and the latter into formed material. This change, which is ordinarily continuous, becomes converted into an interrupted movement, because the elastic porous tissue or formed material of the cilium suddenly expresses from its meshes the fluid which had been just previously forced into them from the germinal matter.

Pigment Cells.

In various parts of the frog, newt, and other Batrachia are numerous very large and branched cells containing fluid, in which are suspended multitudes of very minute particles of pigment formed from the germinal matter of the cell which is situated in the central part, and is usually obscured by the quantity of pigment present. As in other cases, currents of fluid set *to* and *from* this mass of living forming germinal matter. The radiating tubular prolongations of the cells communicate with one another, and are sometimes filled with

fluid and pigment, while at others the latter beomes concentrated round the germinal matter in the centre of the cell, and the radii are destitute of them. The movement of the visible particles of pigment results from the movements of the invisible fluid, which at one time fills the cavities and tubular prolongations of the cells, and at another permeates the delicate walls and diffuses into the surrounding textures. When the tissues are saturated with fluid, the pigment spreads into the tubular network, but in the opposite condition the particles become aggregated in the centre of the cell. The opposite conditions of saturation of the tissues with fluid and its removal are determined by the altered states of capillary circulation, which are themselves dependent upon the degree of contraction of the small arteries which carry the blood to them; and this is determined by the changes in nerve centres from which the arterial nerves are derived. In this way, I think, may be explained the concentration and diffusion of the pigment in these cells which formed the subject of an interesting memoir by Professor Lister, who, however, concluded that the nerves exert some *direct action* upon the diffusion of pigment, but was obliged to assume the presence of an "apparatus, probably ganglionic in structure, co-ordinating the action of the pigment cells,"(a) which neither he nor any one else has been able to discover, and the existence of which is for many reasons most doubtful. The fact is easily explained by the alteration in the amount of fluid traversing the tissues at different times. When the circulation is diminished or arrested, the fluid in the cells passes into the tissues, the tubes become nearly emptied, and the walls in apposition and the solid particles become concentrated in the large central cavity of the cell, which is the last part to lose its fluid; but when the circulation is free, and the tissues are abundantly irrigated, the particles spread into the radiating tubes now filled with fluid. Mr. Lister himself remarks that *post-mortem* secondary diffusion occurs in a piece of web "cut out and placed in a drop of water on a plate of glass." Instead of accounting for this fact by the changes resulting from the imbibition of water, he invents an explanation which I must venture to say appears to me to be justified neither by observation nor experiment, and attributes it to the action of nerve cells "disseminated among the tissues of the web itself." But even if we do assume the existence of such a system of nerve cells and fibres, we shall be unable to account for the change unless Mr. Lister or some one else can explain how such an apparatus would cause little particles to move to and fro in fluid contained in the interior of a cell; but we should have to add hypothesis to hypothesis before we should arrive at a plausible solution of the fact, while, on the other hand, a much simpler explanation is afforded without supposing direct nervous action at all. The currents setting towards the mass of germinal matter in the centre of the cell, and the varying quantity of fluid diffusing through the tissues under varying degrees of vascular distension, which we know to occur, fully account for the phenomenon.

These pigment particles which we see actually moving prove to us the existence of currents of fluid through tissues to and from the masses of living germinal matter. We may be sure that similar changes occur in other tissues, and that in the perfectly transparent anastomosing stellate cells of the cornea, for example, corresponding alterations are continually occurring during life.

Salivary Corpuscles.

Another striking instance of movement resulting from changes in the germinal or living matter is seen in the rapid movement of little particles in the fluid or semifluid matter of which the salivary corpuscle is in great part composed. Owing to the constant disturbance of the fluid caused by the currents flowing to and from the actively growing living matter, the little particles suspended are kept in a state of constant agitation, now forced towards the surface, and then as rapidly whirled towards the centre, perhaps suddenly stopped and driven again in an opposite direction.

List of Microscopical Specimens illustrating Lecture II.

No. of Specimen.		No. of diameters magnified.
19.	Germinal matter taking part in the formation of epithelium and skin, with its vessels, nerve fibres, and other structures	215
20.	Epithelium of tongue and subjacent textures at birth	215
21.	Epithelium of tongue, old man aged 74	215
22.	Papillæ of tongue, vessels injected, covered and uncovered with epithelium, adult	130
23.	Epithelium, mouth of kitten one day old, showing germinal matter and formed material	215
24.	Epithelium, mouth of chameleon, showing large mass of germinal matter (nucleus) with new centre (nucleolus)	215
25.	Hairs from surface of tongue, human subject	130
26.	Hairs and hair bulbs from skin of the kitten. Observe the great quantity of the germinal matter at base of the bulb where the new growth takes place	40
*26.	Hair bulbs, vessels, nerves, and adipose tissue; ear of mouse	215
27.	Dentine and enamel, human tooth	130
28.	Germinal matter and prolongation torn from the calcified dentine, with "dentinal tubes"	700
29.	Enamel cells, pig at birth	215
30.	Germinal matter of periodontal membrane, showing beautiful stellate masses, freely anastomosing	215
31.	Liver cells, toad; in tubes of basement membrane	215
32.	Epithelium from mouth of snake, showing large flask-like cells, from the orifice of which the secretion escapes	400
33.	Ciliated cells from branchiæ; oyster	215
34.	Pigment cells, frog; showing pigment granules	130

(a) "On the Cutaneous Pigmentary System of the Frog," *Phil. Trans.*, 1857.

ORIGINAL COMMUNICATIONS.

CONGESTION OF THE LIVER.

By EDWARD L. FENN, M.B.,
Formerly House-Physician to King's College Hospital.

The phrase I have chosen to place at the head of this paper is one quite familiar to our ears, and, according to the vulgar notion, the condition is often present in our bodies; yet I am by no means sure that it is not one of those many instances of faulty nomenclature handed down from generation to generation, where, as was the case with apoplexy, one term is made to do duty for several distinct affections. Thus there is a so-called bilious or sick-headache very common among the female out-patients of our London Hospitals, which is usually ascribed to a congested condition of the liver, the disease in question being purely a nervous affection.

At the same time, when we consider the anatomical peculiarities of the circulation through the liver—how easily it is influenced, not only by the nervous system, but even by the processes of digestion and respiration—we may well expect to meet with great variations in the quantity of blood contained in the organ under different circumstances; but this very liability of the liver to great variations in the quantity of its blood-contents should warn us to be careful how we ascribe to their single agency any serious bodily disorder. Often the hyperæmic condition of the liver constitutes only a single link in a long series of pathological processes which find their origin either in the heart, the lungs, or some other distant organ.

If it be fair to judge by the limited amount of literature on the subject, simple hyperæmia of the liver, however frequently it is said to be met with in India, is, to say the least, by no means a widely diffused complaint in this country. In this neighbourhood, however, so-called cases of congested liver are of very frequent occurrence, and my object now is to sketch, as well as I am able, the general pathology and treatment of the disease as daily met with here.

Preparatory to inquiring into its pathology, let us briefly enumerate the symptoms which characterise the disorder.

For one, two, or three days before the attack, the patient complains of slight headache, drowsiness, a disinclination for much exertion, mental or physical, and wandering pains in the limbs and back. These symptoms may all disappear, or in a short time be greatly aggravated and joined with others; so that we shall now find the patient suffering with severe headache, soreness, and tenderness of the eyeballs, a hot flushed face, and cold hands and feet (for though it may be in the height of summer, yet the hands often resemble the cold red hands of a person suffering with chilblains); pains, often of

a most acute nature, in the wrists, shoulders, etc.; pain in the epigastric and right hypochondriac regions, increased by the least pressure or jolt; a feeling of constriction across the chest, a flatulent distended abdomen, bowels often confined, scanty high-coloured urine, with copious deposit of pink lithates (this is the most usual condition, but occasionally at the commencement of the attack the patient passes large quantities of pale limpid water, but in twenty-four or forty-eight hours this is followed by the copious discharge of lithates); the tongue is slightly covered with a white fur; the patient complains of giddiness and nausea, and sometimes vomits a greenish bilious fluid. In severe cases he cannot raise his head from the pillow without greatly aggravating the giddiness and sickness. The size of the liver is rarely appreciably altered. I should add that in severe cases there is occasionally slight jaundice.

Here, then, we possess a catalogue of most of the symptoms met with in the disease under consideration. Of course, they will probably not all be present in every individual case: here, one will be more prominent; there, another. Perhaps the most constant of all the symptoms is the contrast between the temperature of the head and trunk and that of the extremities. The disease is, as far as I know, never directly fatal.

Causes.—Under this heading we are as yet able to state little that is satisfactory. The disorder occurs in persons of all ages and temperaments, and at all times of the year, though of less frequent occurrence in the cold weather. Persons liable to the attacks are, as a rule, unable to drink much alcoholic liquor, and some are obliged to abstain altogether, half a glass of beer being sufficient to cause, in some persons of this habit, a headache attended with pain in the side and loaded urine. Fatigue and exposure to wet and cold will sometimes appear to be the exciting causes of an attack. The disease is certainly endemic in this neighbourhood, which comprises part of the Stour Valley and adjacent high ground. At the same time, it is noticeable that it is not more common in the valley than on the higher ground adjoining. The soil is mostly gravel, and the water generally good. The fact of a disease being endemic in and about a valley with a river running through it, suggests at once the idea of malaria as a possible cause, and this may have some foundation in fact. At the same time another fact is noteworthy—viz., that ague or intermittent fever is of rare occurrence here. Also, if there is anything in the saying, "Naturam morborum remedia ostendunt," we may state that no quinine is necessary to effect or complete a cure.

Pathology.—We have assumed, as the title of our paper shows, that the liver is the organ at fault, for it is in a deranged action of this organ that many of the symptoms find their easiest solution. It may, perhaps, be of some assistance to us to compare the description given above with what has been written on hyperæmia of the liver as it occurs in tropical countries. Frerichs, speaking of this condition when dependent upon the influence of a high temperature and miasmatic effluvia, says:—"The acute form of hyperæmia is characterised by more or less painful distension of the right hypochondrium, accompanied by dyspnœa, and often also by tension of the splenic region, and pains stretching towards the right shoulder and lumbar region. Along with these symptoms the tongue is either clean or sometimes coated grey, and there is headache, nausea, and vomiting of mucous or green bilious matter; the bowels are irregular: in some cases they are constipated, but more frequently there is diarrhœa, with yellow, bilious, or sometimes even bloody stools; at the same time, there is great depression of spirits, and rapid loss of strength. . . . After some days or weeks the symptoms quite disappear, or slight derangements remain, obvious only to an attentive observer." ("Diseases of the Liver," New Syd. Soc., vol. i. p. 379.) Again, further on he states:—"In temperate climates, the affection usually runs a milder course, the symptoms are less prominently marked, and the modes of termination are different. . . . What we most frequently observe is an increase in the volume of the liver, caused by fatty deposit, or by an infiltration of the parenchyma with an albuminous substance, which gradually passes into colloid degeneration; in rare cases the liver becomes cirrhosed." (P. 380.) It is evident at once that the disorder which I have described by no means accords with this latter description; for the liver undergoes, as far as we can trace, no organic change. The question now forces itself upon us whether, as I stated in the beginning of this inquiry, the hyperæmic condition of the liver may not be merely a single link in a series of pathological processes; and it will be only by going a step further back that we shall be able to find an adequate explanation for the condition of the liver itself.

That the nervous system suffers to a considerable extent in these attacks cannot be doubted. We have proof of its paretic condition in the general languor, the occasional copious discharge of pale limpid urine, the flatulent distension of the abdomen, the flushed face, and the sluggish bowels. In some cases, not only do repeated doses of aperient medicine fail to move them, but they do not even cause the slightest uneasiness in the body, the nerves of the intestinal tract failing to answer to the call made upon them. The same condition of perverted innervation probably applies to the nerves supplied to the liver, and the history of the cases rather tends to the idea that the want of power is felt most in the biliary passages. These, with the gall-bladder and larger ducts, being unable to drive out the bile which is distending them, the circulation throughout the whole organ becomes more or less obstructed, and the liver is, as it is termed, in a state of congestion; for if the means of ingress remain the same, while those of egress are diminished, the organ lying between must after a time become surcharged. That the nervous paresis is most felt by the bile-ducts is confirmed—negatively only, it is true—by the doubt which at present exists whether the blood-vessels of the liver are indeed much under the control of the nerves. "Kölliker and Virchow observed in the body of an executed criminal that no contraction resulted from galvanic irritation of the trunk of the portal vein, and only a slight contraction in the superior mesenteric vein. In experiments made by myself and Reichert on living dogs, a distinct, although slight, contraction was observed to take place in the splenic and mesenteric veins. In the trunk of the portal vein this was indistinct. No contraction could be observed in the hepatic veins and vena cava inferior, in which, from their very muscular character, the effects might have been expected to have been more remarkable." (Frerichs, *op. cit.*, vol. i. p. 361.)

With regard to the condition of the urine, in the absence of any exact chemical analysis of the amount of solid matter excreted, the increase may to a certain extent be more apparent than real, being due to a supersaturated condition of the water, which is often so scantily secreted; but at the same time this will not answer for those cases where the water is abundant, and the probability is that some of this copious lithate deposit represents an effort made by the kidneys to relieve the system of a certain amount of tissue *debris* which ought to have been "worked up" in the liver.

Lastly, a few words in explanation of the contrast existing between the temperature of the head and trunk, and that of the hands and feet. We are in the habit of attributing a cold condition of the extremities to a general sluggishness of the circulation; but will this account for the ears being hot and flushed whilst the hands are cold and clammy? The former are nearly as much extremities as the latter. An appeal to our anatomy and physiology will, I think, throw some light on the question. We know from the observations of Schiff, Bernard, and others, that the temperature of the various parts of the body is very much under the control of the nerves which supply them. Now, without entering into any particulars, it will suffice here to recall the fact that the vaso-motor nerves supplying one portion of the extremities have been shown to have a different origin in the central nervous system to that which belongs to the nerves supplying the head, trunk, and upper part of the extremities; whilst the former find theirs in the medulla oblongata, the latter ascend much higher, reaching as far as the optic thalami.(a) So we can understand that an agent which partially paralyses one set may leave the other intact. In this case, the visceral vaso-motor nerves are in a paretic state, whilst those of the extremities are either intact or even in a condition of increased activity, so that the hands and feet, and lower parts of the forearm and leg, are starved, as it were, out of even their natural supply of blood. This confirmation by clinical observation of physiological data previously obtained is well worthy of our notice; for just as patients, when asked to point out how high the cold feeling extends up the legs, state that it does not extend above the lower fourth of the leg, so did Schiff show that, by a division of the anterior roots of the nerves which give origin to the trunk of the sciatic nerve, a marked and continuous elevation of the temperature of the foot and lower fourth of the leg on the same side took place, the upper part of the leg and thigh, though paralysed, maintaining its normal heat and vascularity.

(a) Schiff, *Gaz. Hebdom.*, 1862, vol. ix. p. 616.

Treatment.—Sometimes, when an attack is imminent, and the patient comes in complaining of slight headache and chilly hands and feet, it may be warded off by his drinking a cup of tea, and warming his feet and back before a fire, where he probably falls asleep, and wakes up free from all his bad symptoms. Generally, however, the aid of medicine is called for. In the majority of cases all that is necessary is to administer daily a gentle aperient dose, to act especially on the liver; a pill containing some combination of colocynth, rhubarb, scammony, and the like, usually answers our purpose best; and at the same time every four or six hours a diuretic saline draught may be given: in severe cases, a more energetic purgation is sometimes called for. When administered at the commencement of an attack, an emetic of mustard and hot water often gives speedy relief. Milk, tea, arrowroot, and articles of this nature will be all that is necessary at first in the way of diet, there being usually almost complete anorexia; often an egg beaten up with a cup of tea can be taken when nothing else is borne. The patient may drink as freely as he pleases to quench his thirst. Alcohol in all forms must, of course, be avoided. Under such treatment, the symptoms rapidly yield; the face and extremities recover their natural temperature; the hepatic pain and tenderness disappear; the urine returns in proper quantity and colour; and the only complaint left to the patient is his debility; ammonia and bark, or quinine and acids, now complete the recovery. One word here as to the use of mercury in these cases. Not only does its administration appear to be unnecessary, but in many instances even hurtful, from the depressing effect it exerts on the whole system; we may even go further than this, and say that the habitual use of the blue pill, to relieve the liver derangement, predisposes the patient to a more speedy return of the attack—in a word, apart from all theory as to the action of mercury, under the vegetable-aperient plan patients make speedier recoveries from the acute symptoms, have a shorter convalescence, and enjoy longer intervals of freedom from the disorder than they did when mercury was thought to be the first essential in the treatment of such complaints.

Nayland, Colchester.

FEMORAL ANEURISM AT THE BEND OF THE THIGH;

LIGATURE OF THE EXTERNAL ILIAC ARTERY CLOSE TO THE SAC — RECOVERY.

By ALFRED POLAND, F.R.C.S.

Philip D., aged 38, an ostler, living at Ashford, in Kent, was admitted into Guy's Hospital, under the care of Mr. Poland, on October 27, 1866. Of moderate-sized stature, healthy, but very stout, having abundance of adipose tissue. About fifteen years ago he was struck in the right groin by a large crate full of bottles. This caused a swelling of the part, which subsided after being poulticed. Until three weeks ago he never felt anything the matter in the groin, but for a year past his right leg has been œdematous. The veins of his leg have been in a varicose condition, and he has had a varicose ulcer on the leg for some time. Three weeks ago he first noticed a little hard place, about the size of a nut, and also a throbbing in the groin. This has continued to increase ever since, and the hardness is now about two inches and a half in diameter. The throbbing is less than it was at first. He is unable to stand, because extension of the hip causes severe pain; he is in tolerable ease as long as the thigh is flexed on the pelvis. An ice-bag was applied over the tumour, and a grain of morphia to be given at night if necessary.

November 15.—The ice-bag has been applied since he came into the Hospital. He has been kept in the recumbent position continuously. The right leg now is not swollen, but the veins are varicose. The tumour in the groin is perhaps somewhat smaller, but no harder than it was a fortnight since. It is rather oval in shape, is five inches long and three inches broad, its upper border being situated at, and extending somewhat above, Poupart's ligament. It stretches across the upper and front part of the thigh, having the greatest diameter of the oval running upwards and outwards towards the iliac spines, thus taking an oblique direction. The tumour is rather hard, and projects forwards about an inch. It receives vigorous pulsations with each beat of the pulse, and pulsates laterally on both sides, as well as forwards. With the stethoscope a loud rasping bruit, synchronous with the impulse forwards, is heard. The sounds of the heart are natural. No pulsation can be felt in either of the tibial arteries of the same limb, and those of the left leg beat feebly. The pain at the side of the tumour is sometimes excessive. Otherwise he feels in good health. Pulse 108. He sleeps and eats well.

In consequence of the great development of fat in the abdominal parietes, and the position of the aneurism, compression could not very well be applied; at all events the man expressed a desire to have the artery tied, as he was recommended to submit to before admission.

On November 15 Mr. Poland tied the external iliac artery (the patient being under chloroform) in the usual situation and manner. The external incision was made larger than generally, on account of the depth required to reach the vessel. After dividing the several structures to the necessary extent, the knife was laid aside, and the director used to tear the loose tissues and fascia over the vessel. The depth was so great that, notwithstanding the use of retractors, the vessel could not be brought into view, and therefore Mr. Poland, in passing the aneurismal needle round the artery, was obliged to be guided by the pulsation of the tube. After some little careful manipulation he succeeded. Great caution was necessary, inasmuch as the aneurismal sac was exposed at the lower part of the incision. The artery was tied midway between the bifurcation of the artery and the sac, leaving barely an inch of artery on either side. The edges of the wound were brought together by four sutures. In the evening he had one grain of opium. The leg was wrapped up in flannel.

On the following day he was very comfortable, having passed a good night. He complained of coldness in the limb, but, after being enveloped in cotton-wool, warmth was restored. He was ordered beef-tea, milk, eggs, and eight ounces of sherry. His pulse was 105; breathing short and quick, about 31 to the minute. Feels rather sleepy, and has no desire to eat.

17th.—Perspired a great deal during the night. Pulse 106; feet very warm; bowels not open since the operation. He complains of occasional shooting pains through the abdomen. He coughs slightly, and brings up mucus. Respirations 27; passes water readily.

21st.—The cough has subsided, and the breathing easier; the wound is healing, and sutures removed; appetite good; bowels opened yesterday for the first time since the operation.

From this point he went on very well up to the time of his departure from the Hospital. The wound closed over quickly at each end, leaving only the aperture in the centre, through which the ligature passed. On December 10 there was no pulsation in the right anterior tibial or posterior tibial arteries to be distinguished. The ligature did not separate until January 2, 1867, although Mr. Poland made several slight attempts to effect its removal by gentle traction, and twisting the thread round.

On January 2 the ligature was found lying loose on the surface of his abdomen, altogether out of the wound. Not a single drop of blood followed its removal.

January 9.—The tumour in the thigh is nearly all gone; what remains is hard, and small in size. The wound is healed, with the exception of two small sinuses, very superficial, and at the spot where the ligature came away. He can walk tolerably well, but ordinarily keeps the right thigh a little flexed on the pelvis. He left the Hospital on this day.

On March 10, 1867, he was seen at Ashford walking very well, with the thigh fully extended. The wound where the artery was tied had just healed. The aneurismal sac was still perceptible to the finger as a firm fibrous cord only, apparently no larger than the natural-sized femoral artery. The anterior and posterior tibial arteries could both be felt. He had been standing about a great deal, and the ulcer in the leg was again troubling him, and increasing in size.

Remarks.—The case is interesting in that the ligature was applied close to the aneurismal sac, and yet no untoward event happened in the coagulation of the contents and subsequent obliteration of the tube.

St. Andrews Medical Graduates' Association.—Presentation to Dr. Sedgwick.—After the delivery of Dr. Richardson's address, a testimonial, consisting of an illuminated address, a carved oak writing-table, and a silver inkstand, was presented to Dr. Sedgwick, the Honorary Secretary of the Association. The anniversary dinner was held in the evening.

A PROPOSED REVIVAL OF THE OPERATION OF LITHOTOMY PER ANUM.(a)

By JOSEPH B. BOND.

Some of the old writers speak of this mode of cutting for the stone, and Liston not many years ago performed it in a case where the calculus seemed fixed in the posterior coats of the bladder, bulging into the rectum. He succeeded in the operation, but it is said that his patient had not so speedy a recovery as usually takes place after the lateral operation. I have headed my paper "a proposed revival of an old operation" because, with the exception of Liston's case, I cannot find that it has been performed in our day; and I propose a revival of it because I think it must be a more simple and safe one than that now in use, from the fact that fewer important parts are implicated in its performance.

Although the lateral operation is spoken of by its advocates as being very simple, and one from which the patients quickly recover, we know that a very large percentage of those thus operated on die; and we know, too, that many patients prefer to undergo a repetition of the painful operations of lithotrity and lithontripsy rather than submit to it. That the recto-vesical operation may be performed with safety the following case will, I think, go far to prove.

It is now some years ago that I was called, in the month of December, to see J. B. Le B., aged 21, then residing twelve miles from town. In wrestling with another young man, he had fallen backward upon the stump of a small tree that had been cut down by one blow of the axe, leaving a sharp point. The stump had been forced through his pants and into his anus. Immediately on being lifted up, a very large gush of water from the anus had taken place. (He recollected that just before the accident he had had a desire to make water.)

On examination per anum, I found the rectum just above the prostate very tender and ragged. The whole pelvis was very painful, particularly in front, just above the symphysis pubis. The pain and soreness being somewhat relieved by bleeding and an opiate, I introduced a large silver catheter per urethram, and found, as I expected, no water in the bladder. I placed my patient partly turned on his face, so that any urine that might be secreted would flow through the catheter, which was not removed until the sixth day. On examining the stump, I found that it was more than five inches in circumference, and that it had entered the anus a little more than four inches.

After the removal of the catheter, the urine continued to flow for eight weeks by both passages; after that it flowed naturally. The only hindrance to his rapid recovery was the formation of an abscess, which discharged partly through the anus and partly through the urethra. Within the next year he got married, and became the father of a healthy child.

Now, if a rough stump more than five inches in circumference could be thus rudely thrust into the bladder through the anus, necessarily lacerating its coats, and producing an opening that would permit the passage of a calculus more than one inch and a half in diameter, it seems to me that there would not be the least difficulty or danger in the operation if carefully performed; for we should have no prostate to cut through, no vasa deferentia, no vesiculæ seminales, no muscles, and no large blood-vessels to divide. And when it is borne in mind that the lateral operation is seldom performed, even by experts, without at least wounding the rectum, we must admit that the revival of this almost obsolete operation deserves at least a respectful consideration; and it is with this feeling that I propose it for discussion this evening.

Poor-law Medical Service.—*Clerkenwell.*—The resolution of September 15, adjourning the consideration of the appointment of vaccinators for three months, was rescinded. *Croydon.*—Dr. Seaton considered £60 a sufficient sum for the guardians to pay for the carrying out of the Vaccination Act. Notice of motion in accordance was given. *Woolwich.*—The Poor-law Board sanction the appointment of an assistant to the Medical officer for East Woolwich, at a salary of £80. *Bethnal Green.*—Mr. Burrows was re-appointed Vaccination Inspector for another three months, at a salary of £15 for the period.

(a) A paper read at the quarterly meeting of the Yarmouth (Nova Scotia) Medical Society, October 10, 1868.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF ENCHONDROMATOUS TUMOUR OVER THE PAROTID.

(Under the care of Mr. CHRISTOPHER HEATH.)

The two following cases of enchondromatous tumour over the parotid are worthy of record, since that form of disease is much more rare than the fibrous or fibro-cellular tumour in the region of the gland. In both cases the tumours had existed for many years, and their great hardness led to the diagnosis of cartilaginous formation prior to their removal, which was readily effected, and with perfectly good results.

Case 1.—Ann N., aged 30, from Macclesfield, was sent to Mr. Heath in August last with a tumour of the size of an orange in the neighbourhood of the left parotid. This had been growing sixteen years, first appearing after an attack of scarlet fever. The tumour was hard and movable on the subjacent tissues, but the most superficial nodule slightly involved the skin. Mr. Heath removed the tumour on August 5 by a vertical incision immediately below the pinna, and the tumour was dissected out without any important structure being involved. Two or three small vessels were twisted, and the wound was then sponged out with Richardson's "styptic colloid;" two wire sutures were introduced, and the colloid painted over all. In the evening some little hæmorrhage occurred, and the next day the wound was distended with coagulum. This Mr. Heath evacuated with a probe at the lower end of the wound on two occasions. The upper part of the wound healed by first intention, and the lower part granulated by the end of a fortnight.

Case 2.—Harriet B., aged 38, of Woburn, sent to Mr. Heath by Dr. Kempster, of Battersea. There was a tumour in the parotid region of the right side of about the size of a chestnut, which had been present about seven years, and was very hard to the touch. Mr. Heath removed the tumour by a single vertical incision on October 14, and, as there was free hæmorrhage from the cavity, it was stuffed with dry lint, which was allowed to become loosened by suppuration. The patient made a perfectly good recovery, and left at the end of a fortnight. The tumour was distinctly cartilaginous in structure.

WESTMINSTER HOSPITAL.

CASE OF AMPUTATION AT THE KNEE-JOINT FOR DEFORMITY PRODUCED BY ULCERATED LEG OF FOUR YEARS' STANDING—DEATH—AUTOPSY.

(Under the care of Mr. FRANCIS MASON.)

This was a case of a woman, a widow aged 36, who was admitted into the Percy Ward of the Westminster Hospital, under the care of Mr. Mason, in July last. She had enjoyed good health until four years before admission, when an ulcer appeared about the middle of the calf of her left leg. This ulcer spread rapidly in all directions, involving the whole of the calf from the knee to the ankle. It had made attempts at healing in different parts at different times, and in the process of cicatrisation the ankle-joint had become firmly fixed by bony anchylosis, the foot being flexed upon the leg, and nearly in a straight line with it. The leg itself was flexed upon the thigh at an angle of 45°, and there was but slight movement in the knee-joint. The woman had been under observation at the Westminster from time to time for a space of three years; but the ulceration was not amenable to any of the various and skilful methods of treatment which had been adopted. She had often expressed a wish that the limb should be removed, but it was not without much consideration that her wish was at length complied with, for the reasons stated by Mr. Mason in the remarks hereto appended. The patient having been examined and pronounced sound as to lungs, kidneys, and general health, Mr. Mason, on August 4, with the concurrence of his colleagues, performed the following operation. Chloroform having been administered in a most admirable manner, an incision was made commencing at the inner condyle of the left femur and extending downwards for

about five inches on the inner side of the leg; another incision of the same length was then made on the outer side of the limb; these were united by a cross cut at their lower extremities anteriorly. The flap thus formed, which consisted chiefly of skin, was reflected upwards, and the knee-joint then opened just below the patella. The ligaments and tendons surrounding the articulation were next divided from before backwards, and the posterior flap made by carrying the knife about two inches below the joint straight across the muscles, severing these, with the vessels, nerves, etc., down to the bone. Thus both flaps were rectangular. The patella was then removed, after which the flaps were brought together by judiciously applied sutures over the condyles of the femur, which were left intact. The patient rallied well after this severe operation, but the next day was seized with violent and constant sickness. This continued for three days, when by the administration of effervescing draughts, henbane, and a free supply of stimulants, she seemed much improved, though still remaining excessively weak, and with a pulse going 140 in the minute.

On the fifth day the stump was dressed, but no sign of healing or healthy suppurative action had shown itself in the wound.

On the following (sixth) day her thirst was insatiable; she complained of great pain in the chest, and could not draw a deep breath; her countenance assumed a dusky hue, and she refused food of every kind. From this time she gradually sank, the above-mentioned state being more and more defined till she died, just one week after the operation.

Autopsy Thirty-six Hours after Death (from Notes by Mr. Haines, House-Surgeon).—The body was found fairly nourished. About five ounces of semi-purulent fluid was discovered deposited in the cavity of the right pleura, and rather less than this quantity of similar matter in the left; the right lung was profusely studded with deposits of pus, but in the left lung there was no deposit of this nature; the heart, liver, and kidneys were found somewhat fatty, but otherwise perfectly healthy.

Mr. Mason, after the woman had been removed from the operating-table, made some remarks, showing for what reasons he had amputated in this case, which may be of great service to our readers. He said his inducements for operating were that the patient had been under treatment for several years, and had received no permanent benefit. Supposing a cure could have been effected without operative measures, it would, in all probability, have taken months, or perhaps years, to accomplish; and even then there would have been little hope of the patient's having a useful limb, as the ankle and knee-joints were so fixed and distorted. Again, the woman herself, feeling that in the existing state of things life was a burden, was willing to run any risk to be rid of so constant a source of suffering and annoyance.

Mr. Mason subsequently stated that, under the above-mentioned circumstances, he considered he had done the best for the poor woman, although he had purposely delayed operating as long as possible; and for this reason, that in amputation for long-standing ulcers of the leg death not infrequently resulted. He attributed these fatal results to a peculiar constitutional condition of the patient, where reparative power was extremely feeble, and where vital strength was unable to grapple with the severe shock involved in so serious an operation.

CASE OF STRANGULATED INGUINAL HERNIA—PATIENT OPERATED UPON TWICE — SAC OPENED—RECOVERY.

(Under the care of Mr. FRANCIS MASON.)

This patient was a man, aged 61, who was admitted into the Westminster Hospital in September, 1868, with marked symptoms of strangulated hernia on the right side, to all appearance inguinal, which had existed for about ten hours. He had suffered from rupture for eleven years, and latterly had neglected altogether to wear a truss. Six years previously he had been admitted into this Hospital, when he was operated upon for strangulated hernia, also of the right side. The hernia was large. When seen by Mr. Mason, on admission, the parts were exceedingly tense and extremely painful when manipulated, so that it was not deemed prudent to make any undue efforts to return the gut. Consequently chloroform was administered, and an abortive attempt having been made to return the intestine, Mr. Mason proceeded to operate. He made a vertical incision on the inner side of the tumour of about two inches or two inches and a half long. On reaching the sac, a further attempt was made to reduce the hernia, but this failed, and the sac was opened. This was done most cautiously, as the sac was very tense, and the stricture was then divided; it was situated at the internal abdominal ring. Eight or ten inches of small intestine were then with some little difficulty returned into the peritoneal cavity.

The patient never had a bad symptom, and made an excellent recovery. He was sufficiently well to leave the Hospital at the end of a week, but was detained a few days longer on account of having a rather troublesome cough.

Now, no doubt cases of hernia, even strangulated ones, are sufficiently common, and scarcely need comment, but in this case the rupture has occurred twice on the same side, while there is no indication of a tendency to weakness of the abdominal walls on the other side; further, this patient made a most rapid recovery.

SEAMEN'S HOSPITAL SHIP DREADNOUGHT.

POPLITEAL ANEURISM TREATED UNSUCCESSFULLY BY FLEXION OF THE LIMB AND PRESSURE—AMPUTATION AT MIDDLE OF THIGH—REPEATED SECONDARY HÆMORRHAGE—RECOVERY.

(Under the care of Mr. ROOKE.)

RICHARD P., aged 28, was admitted on the Surgical deck on August 10, 1868, with pain and swelling behind the left knee.

History.—The general health of the patient has never been disturbed. Both parents are still living, and in good health. The man has been a great beer-drinker, and about six years ago contracted the venereal disease. Has been a sailor the last twelve years. About seven weeks before admission he felt a severe burning pain behind the left knee; one week after this the leg and foot became puffy, and a large swelling was noticed for the first time in the popliteal space. There is no recollection of any injury or straining of the affected knee.

State on Admission.—The patient is a strong, muscular man of middle size, and apparently well nourished. Face somewhat pale, and expression anxious. In the left popliteal space is a pulsating tumour five inches from above downwards, and three inches from side to side. This can be emptied by compressing the femoral artery at the os pubis. Left foot slightly œdematous.

Treatment.—On August 11 the left lower extremity was flexed at the knee, and retained in this position by means of straps and bandages. A draught containing half a drachm of liquor opii sedativus was ordered to be given every night. The flexed position was well tolerated by the patient, and the size of the tumour, after the first few days, seemed to be reduced, and its consistence to become firmer.

On August 26 this plan of treatment had to be discontinued in consequence of the patient complaining of a severe, and at times almost intolerable, scalding pain in the foot. The tumour, however, became smaller, firmer, and almost free from pulsations. The limb was then kept at perfect rest and released from the confining apparatus. The foot was wrapped in cotton wool. Ordered tinct. ferri sesquichloridi ♏xv. ex aquâ three times a day. On the following day the femoral artery was compressed in the upper third of the thigh by Carte's instrument. Steady pressure was kept up for some days, and was attended with beneficial results as regards the aneurismal tumour, which became harder and diminished in size. On September 2 the left foot was again suddenly attacked with acute burning pain, and became swollen, œdematous, and cold. The man became faint from the excessive pain; his countenance became pallid, and the expression anxious. Pulse 120. Draughts containing acetate of morphia were given to relieve suffering, and six ounces of wine were added to his diet. Compression of the femoral artery discontinued.

September 6.—Countenance worn and anxious. There is constant burning pain in the upper two thirds of the leg, but all sensation in the lower third and in the foot has been lost. Integument of limb below the aneurism tense. The aneurismal tumour somewhat increased in size, and again pulsating. Front of knee painful and swollen. Pulse 118. The foot and leg were wrapped in thick layers of cotton wool, and warm fomentations were applied over the knee.

From the last date up to the end of the month there was gradual but decided improvement. The general health was restored, and the man regained his appetite, and was able to sleep at night. His countenance also became expressive of

composure. The swelling of the leg slowly disappeared, and sensation by September 8 had returned to the ends of the toes, and afterwards to the foot and lower part of the leg. The aneurism seemed to be slowly contracting, and undergoing spontaneous cure, when on October 1 it suddenly increased in size, and became very tense. Pulsation returned; the lower limb became much distended, the toes cold and senseless, and the man suffered acutely from sharp darting pains extending from the popliteal space to the dorsum of the foot and the toes. His general system was much disturbed, as if by shock, and he became restless and much depressed in spirits.

October 2.—In consequence of the great swelling about the knee and the rapid increase in the size of the tumour, the extreme distension of the integument at the lower part of the limb, the icy coldness and loss of sensation in the toes, and also from the low state of the man's health, Mr. Rooke decided upon removing the limb without delay. Amputation was performed in the middle of the thigh by the circular method. Several arteries required the ligature, and all the signs were presented of a free collateral circulation. The patient, when carried back to his bed, remained tolerably easy until the evening, when he was disturbed by bleeding from the stump. This was found to be profuse and arterial in character. The flaps were opened up, and an open artery deeply seated at the bottom of the flap and close by the femur was tied. By this proceeding the hæmorrhage was arrested.

9th.—The patient had been going on remarkably well up to this date, when profuse arterial hæmorrhage again occurred in the evening. This, after considerable difficulty, was arrested by opening up the wound and applying a ligature to a large artery.

16th.—The ligature applied to the femoral artery at the time of the amputation still remained. Arterial pulsations could be traced to the extremity of this vessel, and no plug could be felt. The wound was healing rapidly, and the man's general state of health had been much improved since the operation. On the evening of this day Mr. Rooke was again called to the patient in consequence of a return of the hæmorrhage. The wound was again opened, and as the bleeding was profuse and the ligature from the femoral artery was found lying loose, it was at first feared that this vessel had given way. This, however, was not the case, and after a small collateral artery had been tied all bleeding ceased.

From the last date the man progressed favourably and without any interruption. On Saturday, November 14, he was in perfect health, and able with the use of crutches to move about his ward and also to go into the open air. The end of the stump is formed of thick and soft flaps. The cicatrix is linear, and is firm and sound except at the outer angle, where a small sinus exists in connexion with a minute fragment of exfoliating bone.

An examination of the amputated limb showed a thin-walled aneurism of the size of a pine apple, filled and rendered tense by extensive soft and dark-coloured coagula, mixed with masses of firm fibrine. The muscles of the calf were much engorged with dark-coloured and serous fluid.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN NOVEMBER, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·43	0·090	0·150	0·001	13·5	3·4
West Middlesex	19·63	0·055	0·090	0·001	13·0	3·3
Southwark & Vauxhall	20·10	0·069	0·095	0·002	13 7	3 8
Chelsea	19·97	0·070	0·150	0·003	13·5	3·5
Lambeth	20·10	0·076	0·150	0·002	13·6	3·4
Other Companies.						
Kent	28·43	0·014	0·450	0·001	18·3	5·7
New River	18·77	0·021	0·120	0·000	13·0	3·2
East London	18·27	0·026	0·075	0 001	13·0	3·2

All the samples were bright when drawn from the companies' mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

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Medical Times and Gazette.

SATURDAY, DECEMBER 12, 1868.

THE ART OF EXAMINING.

EXAMINERS, as such, are very exalted and mysterious persons. "There's such divinity doth hedge a king," says Shakspeare, "that treason can but peep to what it would." So, borrowing the metaphor, we would say "There's such *mystery* doth hedge *an examiner*" that no outsider can get the smallest insight into the method of his operations or the reason of his decisions. Apart from the exercise of their catechetical functions, examiners are much like other men. Not so when they enter on their mystical office: then they cannot be questioned or approached or reproached as other men are. The examiner is irresponsible, except to his own conscience. He may be compared to the judge of a supreme court, from whose decision there lies no appeal, and for whose blunders there is no manner of redress.

That there is an "art of examining" no one can doubt who has any knowledge or experience of teaching and teachers, of studies and students, of examinations and examiners; that it is an art by no means widely understood or practised is a conviction that a very small amount of such experience is certain to bring with it. It is an art, too, that must be self-acquired, for no one that we know of pretends to teach it, and it is on this account perhaps that some never learn it.

In all the discussions that have lately taken place on Medical education, scarcely a single allusion has been made to the very imperfect condition of the examining art as it is manifested even in our higher and better sort of examinations; and yet, as the crowning act of all authoritative Medical as well as general education, it certainly merits, and should receive its due share of, public attention.

Examiners are certainly not infallible—of that we have had many lamentable proofs. When, however, we reflect on the immense amount of mischief an error in judgment on their part may inflict, it seems to us that they are bound to make more decided efforts towards an approach to infallibility than they do at present.

An industrious and well-informed student is, perhaps, not a bad judge of what a good examination paper should be; but how constantly do we find such men complaining bitterly of the kind of test to which they have been submitted! We do not speak now of unsuccessful men, although it is just possible that they often complain with some reason. But we constantly hear examination papers spoken of by men who have passed as "ridiculously easy," or as "no test of a man's powers," or as "utterly incomprehensible" and "indefinite"—questions so framed and worded that they are mere puzzles to exercise

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the ingenuity, not test the capacity of candidates—while a "good paper," in student phraseology, generally means a fair, but searching, set of questions, clearly and definitely put, and admitting of clear and definite replies.

We have before us, at this moment, two examination papers recently set at one of the most severe and best of our Medical examinations. These papers show conclusively that a want of familiarity with the "art of examining" may be occasionally discovered even where we should be least disposed to look for it. One of the first principles in examining is, that every element of chance, all disturbing forces, so to say, should be eliminated. It is very difficult to do this, but chance need not be fostered and encouraged as it is in the papers we allude to.

A paper of inordinate length for the time allotted to it will, to a certainty, give a very unfair advantage to the merely rapid writer. Swift penmanship is an accomplishment which is of no manner of use to a Medical man; yet it is remarkable that Medical examiners seem never to have been struck with this fact, for they continue, in many cases, to set papers which, to answer fully, would require twice or three times the amount of time allotted to them. In such cases rapidity of writing gets an evident and most unjust advantage.

It is further obvious that such a paper favours the "crammed" man, who has whatever information he possesses at his finger's end. This he is able to reproduce rapidly, with little effort or reflection. Another man, superior to this one in every way—a sounder thinker, a man of far higher culture—will, in all probability, require a much longer time to think out and elaborate his answers. Such a man will, very probably, not produce half as much matter in the same time as his more superficial competitor, who will most certainly distance him in the race, as competitive examinations are at present conducted.

Then, again, we constantly meet with questions ambiguously worded, or of doubtful import, or having too much of a *special* character. Such questions will probably give an undue advantage to such of the candidates as may happen to be the pupils of the examiners, and who may therefore be familiar with their modes of thought and expression. A thoroughly *honest* examiner will strenuously endeavour to avoid this element of chance. Examination questions should present a most rigid definition and a plain obvious purpose. Questions not having these characters favour the shifty and quick-witted, though shallow, man, to the detriment of his more logical, accurate, and better-informed competitor, to whom such questions are an abomination.

One of the papers before us deals with the three large subjects of "Pathology, Therapeutics, and Hygiene"—a very wide subject truly, and one, therefore, that needed very skilful handling on the part of the examiners. We find here six questions, to be answered in three hours, most of them of the widest scope and lacking in the essential requirement of rigid definition. We doubt greatly if the examiners in this case had realised to themselves the precise form of the replies that should be returned to their questions, and we hold it as one of the canons of the examining art that the examiner should have in his own mind the literal answers to the questions he puts.

The first question requires an essay on the "influence of sex in the production, diagnosis, and treatment of disease." The second question, dealing with "tubercle," requires a description of "its different forms, the mode in which it is developed, and the changes it undergoes in the various organs." A very large subject! The third asks for a therapeutic account of "electricity," and a description of "the various modes of its application in different classes of disease." Here is material for a small volume. The fourth desires to know the "conditions under which heat, cold, moist or dry air, changes in posture, rest, and exercise," are employed therapeutically. This is a favourable specimen of the attempts which some examiners make to cram *six* questions into *one!* The fifth deals with the very wide, debatable, and indefinite subject of the "diseases of animals which are communicable to man," and "the modes of their communication"—inquiring also, "How would you endeavour to prevent *its* (*sic*) occurrence?" A sensitive candidate would most likely be a little doubtful, at first, as to the probable signification of the mysterious "its," and, when he had overcome this difficulty, but little time would be left to do justice to the voluminous matter of this question. The sixth and last question is the following:—"Mention the conditions conducive to the production and spread of the following diseases: Intermittent, remittent, yellow, and relapsing fevers; cholera and typhus!" Here are a few subjects to be disposed of in a November afternoon! We have no hesitation in asserting that any man, well informed on all these subjects, would find no difficulty in writing for *twelve* hours in answer to these questions, without introducing one word of irrelevant matter; and then his replies would be anything but exhaustive. What object can examiners have in asking for twelve hours' work to be done in three? What object can they have in putting questions so imperfectly limited and defined?

The result is a mere scramble. The rapid writers—the men whom the questions "suit best"—get over a certain amount of ground, fill a certain number of "books," and obtain, we presume, the highest number of marks. But the man of a reflective turn of mind is entirely driven from the field by such questions as these. To him they open unlimited scope for thought. He knows not on which side to attack them. It is not in his nature to deal flippantly in six consecutive half-hours with as many distinct subjects, each of which might well afford material for several hours' careful elaboration.

If examiners will set papers like this one, they must increase indefinitely their own difficulties in judging rightly of the relative merits of the men whose knowledge and ability they have to test.

If candidates were encouraged or permitted, as we think they should be, to select two or three questions from such a paper and do their best with them, the evil would not be so great, but we are informed that answers to *all* the questions are desired.

We turn to the second paper before us. This is on "Medicine," and, like the preceding, contains six questions to be answered in three hours. Without presenting the prodigious diffuseness of the preceding paper, this one goes over far too much ground for the time allotted to it.

The first question requires a description of "the cutaneous diseases of the head (including those of the face) and their treatment"—in fact, the description and treatment of at least *twenty* more or less distinct skin diseases! We would most respectfully suggest that, if this question were answered as it should be, no time would be left (out of three hours) to deal "fully," or indeed at all, with such subjects as "scarlet fever," "acute dysentery," "renal calculi," "facial paralysis," and finally to write an essay on "the pulse." Yet this is what the examiners in this particular instance require.

These papers show a very laudable and anxious desire to get as much as possible out of the candidates, but they fail signally in carrying out those first principles of the "art of examining" which we have already pointed out.

A fault of a very different kind, constantly seen in the papers set by certain examiners, is a tendency to the reproduction of the same questions again and again. This barrenness and absence of variety is evidently due to carelessness and want of painstaking. It is very injurious to students, many of whom are quick at discerning this tendency, and, knowing the weaknesses of their examiner, cram assiduously his pet subjects. The conscientious worker, with a far wider general knowledge, often finds himself in this case outstripped by antagonists much inferior to him in intellectual culture.

Great variation in the severity of papers, at different periodical examinations, is also a common occurrence. In this way we constantly hear of many having "great luck," while others meet with "hard lines"; so that men pass in one year who would most certainly be rejected in another, and *vice versa*.

Surely examiners might prevent this inequality of papers if they chose to take the pains. We would take this opportunity to complain especially of the tendency which examiners in natural and mechanical philosophy have to set questions that are really mere philosophical riddles. This practice is extremely unfair to young Medical students, who have many other subjects to study at the same time, and who can only be expected to possess a sound knowledge of *general principles*.

We have made these few remarks on the subject of the examining art because it appears to us to be one that is somewhat neglected; and we have ventured to criticise the method of certain examiners, while we trust we may be believed to entertain the greatest respect for them personally, and for the difficult calling which they practise.

DANGERS OF MEDDLING WITH LUNATICS.

The perils of taking any responsibility in the case of lunatics are decidedly on the increase. In the late case of Johnstone *versus* Cotham, in which one clergyman brought an action against another for falsely imprisoning him as a lunatic, it was Chief Justice Cockburn who protected the defendant from swingeing damages, by a summing up so lucid and fair that it was impossible to find a verdict in the teeth of it; yet even this able judge commented on the manner in which the removal to an asylum was conducted, and the jury "strongly disapproved it." So that a man who takes the responsibility of putting a lunatic into a place of safety may have the agony and expense of a lawsuit if he errs in the *manner* of his proceedings—just as if lunatics were to be always submitted to two Medical examiners, and then to be inveigled to an asylum easily and quietly. As things are now, lunatics are liable to go on from bad to worse, because no one cares to take the responsibility, and it is quite time that that should be put upon the shoulders of official persons, who would be protected in the discharge of their duties.

In the year 1867 the number of lunatics in various asylums in England and Wales was 31,917, of which one-third, or 10,488, were newly admitted. Of these 1125 were admitted into metropolitan licensed houses—that is, private establishments—and 853 into provincial houses. Now, we believe that the officials of all public lunatic establishments are quite above all suspicion of mismanagement and interested motives. If actions are brought, they are with reference to private asylums. The number admitted into private asylums was 1978 in the year, or between five and six daily over the country, or four a day in and about London. Now, what we propose is, that the question of the fact of lunacy, and the manner of removal to an asylum, shall not, as now, be decided by a friend (if one can be found to take the responsibility), aided by two legally qualified Practitioners, but by one of a staff of Medical Commissioners, who must be accessible at all hours, and visit any patients they may be called to before the final step is taken—in fact, that the visit of a Lunacy Commissioner should take place before committal to an asylum, instead of afterwards, as at present. At all events, this course ought to be left to the option of the friends. Otherwise, as things now are, the safest course is to declare the lunatic chargeable to the parish, and throw the onus on the parish authorities.

Paris Faculty of Medicine.—The Faculty has selected for recommendation M. Dolbeau for the chair of Surgical Pathology, and M. Gubler for the chair of Therapeutics. M. Bouchut, whose prolonged exclusion from the Faculty is inexplicable, stood next on the list to M. Gubler.

THE WEEK.

TOPICS OF THE DAY.

The Profession will be gratified by the appointment of Mr. Skey to be an Ordinary Member of the Civil Division of the Third Class, or Companion of the Most Honourable Order of the Bath, which was announced in Tuesday's *Gazette*. No doubt the immediate ground of Mr. Skey's being gazetted C.B. is to be found in the valuable services he rendered to the country as Chairman of the Royal Commission on Contagious Diseases. The honour is a thoroughly deserved one, and is the more conspicuous because it is one not often falling to the lot of Medical men out of the public services.

The Liberal candidates have been successful in both the Scottish University elections. In the Edinburgh and St. Andrews Universities Dr. Playfair polled 2322 votes, Mr. Swinton 2067. In the Glasgow and Aberdeen Universities Mr. Moncreiff obtained 2045 votes, Mr. Gordon 2009. Although the Liberal party, therefore, have a majority, it is evident that there has been a hard struggle, and that political opinions are much more evenly balanced in the Scottish Universities than in other Scottish constituencies. In fact, the Scottish graduates may be said fairly to represent the present phase of political feeling throughout the kingdom. It is calculated that of the present electoral body about 800,000 are Conservative, and about a million Liberal, a proportion not widely differing from that of the two parties in the Edinburgh and St. Andrews election. Whether the personal and professional claims of a Medical graduate of high standing coming forward at an early period in the election would have produced a different result remains, we hope, to be proved at some future election. In the meanwhile, the scientific reputation of Dr. Lyon Playfair, and the *prestige* he will derive from representing a University constituency, will give his opinion great weight in the House of Commons on all questions of a scientific complexion. He may fairly aspire to exert a real influence on the scientific progress of the country, and we sincerely hope that he will find opportunities for utilising his undoubted abilities and high acquirements.

The vestry of St. Pancras, besides having made it incumbent on the Medical man whom they appoint to the vacant Medical officership of health to reside in the parish, have reduced the salary to £300 per annum. Dr. Hillier received £250 and £80 as gas examiner, making a total of £330. The salary for both appointments is now to be £300. Why the St. Pancras vestry choose to indulge in this petty saving, unless it be for the pleasure of the thing, it is difficult to say. We have heard of people spending thousands a year on luxuries, but cultivating economy by saving bits of string. At the meeting at which the salary was discussed, Mr. North proposed £400, or at least £350, as a fitter salary to offer to an able man. A Mr. Chandler, however, took a different view of the value of Medical wares. He evidently considered £400 a fancy price. He said "they did not want a fashionable West-end Doctor. They wanted a man who had made sanitary laws the study of his life, and he considered for £300 they would have plenty of applicants." According to the Chandler theory, therefore, the value of a life's study of sanitary laws is to be regulated, like any other commodity, by the law of supply and demand. There is a glut in the market, and there are plenty of life students to be got at the price. This is encouraging for aspirants for the new diploma in State Medicine.

A discussion has lately been going on in the Court of the Common Council of the City of London on the appointment of a gas examiner and analyst in the room of Dr. Letheby, who has accepted a post of a similar nature under Government. Dr. Septimus Gibbon had been recommended for the office by the Special Gas Committee, and his salary was to have been £200 per annum. The Court, however, on the motion of Mr. Bontems, have referred the matter back to the Committee for

reconsideration. The Committee are desired to consider whether, as the number of testing-places has been increased from one to four, it be not expedient to increase the salary of the examiner. If they are of this opinion, they are to advertise the appointment, and to submit the names of two candidates to the Court, from which the latter body will select one.

Correspondence is going on in the *Times* and other papers on the subject of the conveyance of schoolboys convalescent from scarlet fever in railway carriages and other public conveyances. One writer draws attention to the fact that both the authorities of the school and the parents would be liable to punishment under the Sanitary Act of 1866 for sending a boy by a public carriage before the period of danger to others has passed. But we should be very glad to be informed at what time that period does pass. If the disease depend upon germs in the blood or in the tissues, when does the germinal matter cease to be given off by the breath or secretions?

At the meeting of the Medico-Chirurgical Society on Tuesday last there was an animated discussion upon the best mode of resuscitating the drowned. Dr. Bain, of the Poplar Hospital, brought before the Society his new "ready" method, and supported its claims by the details of various experiments he had made on the dead subject. As far as we understand Dr. Bain's method, it is a modification of a plan introduced last year by Pacini. He proposes to raise the ribs and thorax by means of a hand of the operator placed in each axilla, with the thumb on the clavicle. It will be remembered that Dr. Silvester directs traction to be made by the arms, which he uses as "handles to open the chest." Dr. Bain states that his experiments prove that more air can be introduced into the chest by his method than by any other. We hope that Dr. Peacock's proposition to refer the subject to a select committee of the Society will be adopted.

Dr. Christison, in his opening address at the Royal Society of Edinburgh on Monday last, stated, as the result of a number of observations made by himself, "that the first great Aurora Borealis after autumn is well advanced, and following a tract of fine weather, is a sign of a great storm of rain and wind in the forenoon of the second day afterwards." He has observed this for so many years that he confidently prognosticated a storm as long ago as on the occasion of the first meeting of the British Association in Edinburgh in 1834, when an unusually fine Aurora was seen. On one occasion his prediction saved the corn crop of a friend in Dumfriesshire. He asserts that, within his experience, the sequence is invariable.

We have received a Malvern newspaper containing an account of an address on animal magnetism delivered by Dr. Gully before the Working Men's and Literary Institute of that place. The chairman on the occasion, Sir H. Lambert, in the course of a preliminary speech, said that the number of ordinary members of the Institute is on the decline. We cannot think this a matter of great regret if the following quotation from Dr. Gully's address is to be taken as a specimen of the mental food provided by the Institute for the working men of Malvern—unless indeed, on the evening in question, the Institute only pretended to cater for the amusement of the audience; if so, the success seems to have been complete. The story of the amber beads is certainly a laughable parody of electrical science.

"The phenomena could not be ascribed to imagination. He could quote many instances in which it was impossible to suppose that imagination had anything to do with it. He remembered the case of a distinguished man who came under his care seventeen years ago. The man, who was an oddity, was dying when he came to him. He (the dying oddity) had a devoted wife, but he would not allow her to attend to him; and he said he would rather have died forty deaths than be mesmerised. (Laughter.) His wife mesmerised him one day, when he was asleep, and all his love returned—(laughter)—but he lived only three weeks afterwards. (Loud laughter.) That fact proved that the results were not to be ascribed to imagination; for there was a sleeping man whose affections had ceased towards his wife, and all his love returned by the effects of mesmerism. (Laughter.) There was a lady at one time under his care, who was suffering from paralysis of the loins. He (Dr. Gully) magnetised her, and under its influence she could walk when he held her hand, but if anybody else touched her it threw her into violent convulsions. (Laughter.) He magnetised her for some months, and she went home, but she could not sleep without his magnetism. (Renewed laughter.) He got some amber beads, an excellent conveyer of electricity, and sent them to her by post. She had only to put them into her hand, and she would go off to sleep. (General merriment.) One day he was in a hurry to go away somewhere, and he happened not to post them himself. He told an amanuensis, whom he had at the time, to put them in an envelope and post them—the beads having been previously placed in a silk bag and enclosed in a box. By return of post he (Dr. Gully) received a letter from the lady, stating that she knew that some hand besides his had touched the beads, for the moment she put them into her hand she went into convulsions. (Laughter.) He spoke to his amanuensis on the subject, and the *employé* said it was quite right; he had had the indiscretion to open the box. She had no knowledge of that. Thus it was proved that the result through the medium of the beads was just the same as when he himself was present. (Laughter.) They might laugh at these facts, but the most potent agencies in the animal world were the most subtle."

SCARLATINA.

Scarlatina is a subject which demands the fullest inquiry, and presents a large number of unsolved questions. In London alone, 1458 persons have died of it this year up to the end of September, and 1105 during the ten weeks from September up to December 5; or, to put it more clearly, the deaths have doubled themselves in each of the three last quarters, having been 352 in the June quarter, 738 in the September quarter, and, if things go on at the present rate, we may fully expect to reckon up 1400 in the Christmas quarter. The Paris mortality is very different; for in the three months April, May, and June, the deaths from scarlatina were only 25; from measles, 232; from small-pox, 145; and from typhoid, 192—this in a population of 1,799,980, or, with the garrison of Paris, 1,825,274, whilst London is estimated to contain 3,126,635. As for the distress occasioned by this malady, it is difficult to exaggerate it. We will not speak of the frightful cases of children cut off after a few hours' illness; for the direct mortality, dreadful as it is sometimes, fluctuates very much, and the disease, with apparent caprice, whilst it cuts off some in a few hours, is hardly severe enough to make others keep their bed. But the difficulties connected with infection, the interruption of school work, and the non-intercourse between families, prove no small item in the sum of misery and expense. A little cool common sense, however, applied to this question gives results that on the whole are comfortable. That the fever can be communicated by intercourse with the sick, and that it may be brought into a house by a sick person, is incontestable; but if we are to believe that it can be carried by a person who talks in the open air with a person who has called at the door of an infected house, or if a mother is to refuse to allow her son to go to a school because another boy comes there from a watering-place, where he may have mixed with convalescents—for so far do some infectionists go—then it is clear that no human precaution can insure reasonable safety. For our own parts, if a person is quite well, free from spot on skin, throat, and mucous membrane, sound in the kidneys, well bathed, and clean in his person and clothes, we cannot see how he can be a source of infection. It seems to be now more and more generally believed that cowardice as to infection is liable to be accompanied with carelessness as to other sources of danger. Whilst people selfishly guard themselves from what comes from without, they may be cherishing fever poison within their houses; in fact, we believe that scarlet fever is one product of sewer vapour. There are some inde-

pendent facts that render this probable. Severe sore throats with fever are a common result of inhaling a whiff of sewer vapour. The worst cases of scarlatina begin with vomiting and purging, which, as Mr. Simon has pointed out with regard to typhoid, renders it probable that the fever is one of the sewer group. But if this be true, not only may we dismiss half our alarms as to infection, but we may set to work to hunt out and extirpate the real cause. We may add that, above all things, warmth in all forms is the best remedy for scarlatina convalescents. The bracing *régime* does not answer.

THE DUBLIN MAYORALTY.

As was generally expected, Sir John Gray, M.D., M.P., has declined the office of Lord Mayor for 1869, to which he was, by a large majority, elected on the 1st inst. A meeting of the Corporation has been summoned, in compliance with a requisition to that effect signed by several members of the body, for Friday, December 11, to elect a successor to Sir William Carroll, L.K.Q.C.P.I., the present occupant of the civic chair.

THE CORONERSHIP FOR WEST MIDDLESEX. — DIPLOCK *v.* THE QUEEN.

This office is still the subject of litigation. A legal correspondent has favoured us with the following statement of the present position of the contest between Dr. Diplock and Dr. Hardwick :—

"Dr. Diplock pleaded to the information filed against him, and to that plea the relator (Dr. Hardwick) filed a *replication and demurrer*. Counsel were of opinion that the Crown had no prerogative to *reply and demur* at the same time, and a rule *nisi* was obtained to set aside such replication and demurrer on that ground. The court (consisting of Mr Justice Lush and Mr. Justice Hayes) decided that the Crown had such prerogative, and discharged the rule on the authority of a case of Tobin *v.* the Queen, which was a petition of rights, and in which the Court of Common Pleas decided that the Crown had the prerogative of *pleading and demurring*, but they cited no authority. The replication and demurrer consequently stand. Dr. Diplock has filed a rejoinder and joinder in demurrer, and it rests now with the relator either to proceed or to stay the proceedings, as he may be advised."

OCEANIC LIFE AT GREAT DEPTHS.

At the meeting of the Royal Microscopical Society on Wednesday night, the 9th inst., Dr. Carpenter anticipated his paper already presented to the Royal Society by offering some remarks on, and exhibiting specimens illustrative of, his recent deep-sea inquiries. It will be in the memory of our readers that in the autumn Dr. Carpenter and Professor Wyville Thompson, of Queen's College, Belfast, went out, under Government auspices, to conduct certain biological and physical investigations into the characters of the fauna and the temperature of the water at great depths. The expedition was carried out with the greatest success, and with the most remarkable results. The researches of Dr. Wallich and other able zoologists had determined that the dictum of Forbes respecting the depth at which animal life existed was unfounded, and that animals existed at a depth of several hundred fathoms in the ocean. Dr. Carpenter now confirms this fact, and extends it in many important directions. In the very interesting sketch of his excursion given by Dr. Carpenter it was shown that even at depths so great as 650 fathoms in a line south-west (?) of the Faroe Islands the dredge brought up not only Globigerinæ and similar low forms of animal life, but representatives of all the great invertebrate types. Many of the specimens of Protozoa captured at this depth were exhibited by Dr. Carpenter, and some of them were certainly extraordinary samples of classes whose members are generally extremely minute. Indeed, these discoveries of Dr. Carpenter open up to us quite a new phase of animal life, and reveal a vast field for physiological speculation and inquiry. Of the specimens exhibited under the microscope we noted the following:—*Cristelaria, Textularia, Cornuspira, Trochamina, Lituola, Rhabdammina,* and *Astrorhiza limicola.* The last especially is a most remarkable creature, and one likely, we should think, to afford zoologists many difficult problems for solution. In reference to the results of the physical discoveries, one of the most singular and noteworthy is that of temperature. Several carefully conducted soundings have convinced Dr. Carpenter and his colleague that whilst the surface water has an almost invariable temperature of 52°, the heat at great depths varies exceedingly. Thus at one point in their voyage they found, at a depth of 500 fathoms, that the temperature was 32°—a fact which is explained by the supposition of a cold Arctic stream flowing from the north-east, and apparently coming between the fork of the Gulf-stream. Another interesting fact established by these inquiries is that even at a temperature in the ocean almost that of our freezing-point there are an abundance and variety of animal forms which could not have been predicated. Dr. Carpenter's researches will soon be laid before the public *in extenso*, but in the meantime we could not resist bringing the above extraordinary and unexpected results under the notice of our readers.

THE ASYLUM FOR IDIOTIC AND IMBECILE CHILDREN IN IRELAND.

A few weeks ago we recorded the development and progress, under very considerable difficulties, of a proposed Asylum for Idiotic and Imbecile Children in Ireland. We are happy now to be able to add that all the necessary preliminary arrangements are proceeding towards completion. The Medical officer and secretary have been appointed. The former is Dr. Frederic Pim, L.K. and Q.C.P. Ireland, and M.R.C.S. Eng., 1860. Application has been made to the Committee of Earlswood for permission for Dr. Pim to go there for a time to study the mode of management, training, etc , previous to taking over charge of the Lucan Asylum, where it is hoped that the necessary preparations for the reception of patients will soon be completed. The secretary is Major Huddlestone, a retired officer of the 52nd Light Infantry. His appointment relieves Dr. George H. Kidd of the office of honorary secretary, the duties of which he has performed with great zeal and efficiency since he originally proposed the establishment of such an institution, now fully three years ago ; it is, indeed, we believe, mainly due to Dr. Kidd's exertions and publications that the benevolent scheme has advanced so far. His Royal Highness the Prince of Wales some time ago made a very handsome contribution to the funds of the institution, of which he is also, we believe, one of the vice-patrons, and we have no doubt that he will continue to evince a kindly and protective interest in its further progress.

FROM ABROAD.—BROMIDE OF POTASSIUM FOR THE SLEEPLESSNESS OF INFANTS—JULES SICHEL—GOITRE IN UPPER SAVOY—SCIENTIFIC INSTRUCTION IN FRANCE.

M. Moutard-Martin, a candidate in the Section of Therapeutics of the Académie de Médecine, communicates a memoir on "Some Applications of the Bromide of Potassium to the Medicine of Young Infants." Every one, he observes, admits the possession of sedative properties by the bromide, and in this direction it has become one of the most useful substances in the Materia Medica. Bearing in mind its hyposthenic action in erethism of the nervous system, and its innocuity, even in large doses, he believed that it might be employed with advantage in some of the pathological conditions of very young children. Among these sleeplessness, alike mischievous to the infant and wearying to the nurse, is one of very common occurrence. The child does not seem otherwise ill, but has a very great insufficiency of sleep both by day and night or only at night. Where a great variety of means has failed to remove this

sleeplessness, the bromide succeeds in a remarkable manner, and M. Moutard-Martin adduces in his paper several cases in proof. His conclusions are—1. The bromide of potassium given in small doses (from five to twenty centigrammes) is very well tolerated by young infants. 2. By its sedative action it cures *insomnia* in these cases. 3. Administered to infants suffering from the accidents of dentition, such as restlessness, *insomnia*, cough, etc., it frequently relieves these; and it is probable that its employment, regulated with prudence, would sometimes prevent the occurrence of convulsions. 4. It should not be administered to infants when suffering from diarrhœa. 5. In certain exceptional cases in which the nervous erethism is predominant, its action is prompt and decisive.

Jules Sichel has passed away from amidst the Medical Profession in France with far less notice than men of much less merit often meet with. In truth, a considerable amount of prejudice and jealousy would seem to have prevailed respecting him. It was he who first introduced into France the special study of diseases of the eye, and established an ophthalmic infirmary, and he steadily laboured at the improvement of the branch of our science and art to which he had attached himself. It became, however, the fashion among his *confrères* to regard him as a mere specialist, and almost as a charlatan, but with gross injustice; for, arriving in Paris from Frankfort with Berlin and Vienna diplomas in science and Medicine, he put the study of diseases of the eye on a scientific basis at the same time that he originated their clinical illustration by his public courses of lectures. His practice at one time was very large and lucrative, and how far he availed himself of his opportunities may be judged of by his *Iconographie Ophthalmologique*, the result of the labours of a quarter of a century, and which may be regarded as the most complete exhibition of our knowledge of diseases of the eye prior to the discovery of the ophthalmoscope. Notwithstanding his large practice, it is understood that Sichel died poor, for during his career he had expended much in charity, as also in learned and scientific investigations. Thus his works on the Roman oculists and their seals are well known to archæologists, and his collection of these objects was a valuable one. He was a great entomologist, and, we believe, President of the Paris Entomological Society when he died; while the collection of hymenoptera which he has bequeathed to the Muséum d'Histoire Naturelle is said to be unrivalled in completness. As a Hellenist he occupied no mean position, as his contribution to Littré's Hippocrates of the article on the "Treatise on Vision" testifies. Notwithstanding his large practice, successful teaching, scientific attainments, and estimable character, he never overcame prejudices, and neither obtained admission into any of the academies during his life nor suitable recognition of his services after his death.

M. Dumas, Secretary of the Académie des Sciences, read a communication, which he had received from the Préfet of Upper Savoy, on the measures which have been there taken in relation to goître. Of the 309 communes of which this department consists, there are not more than ten in which this affection prevails endemically. The measures taken by the local administration, on the recommendation of a commission of Medical Practitioners, have been primarily of a hygienic character. Trees which excluded all air and light from the dwellings in the villages have been cut down, the wet streets have been drained, and analyses have been made of all waters in use in order to determine which of these were potable. Cisterns have been constructed in localities where they did not already exist, and with the most decided benefit. The schools have all been placed under strict Medical *surveillance*, and all children the subjects of goître have had administered to them daily lozenges containing minute quantities of iodine, together with decoction of walnut leaves. Of 5000 children submitted to this regimen, 2000 have been cured, 2000 sensibly ameliorated, and 1000 in nowise benefited. The Préfet draws attention to the resistance which has been offered by parents to the carrying out of these measures, and especially to the preventive treatment pursued in the schools, and he attributes such resistance in great part to the fact that 7 per cent. of the conscripts of the locality are exempted on account of goître. He suggests that this ground of exemption should be abolished, for change of locality on the part of the young conscripts would favour the removal of their malady, while it would prevent the intermarriages between the subjects of goître which are at present constant, tending to perpetuate a disease that is hereditary.

The impulse which has been given to scientific instruction during the last year or two in France is very remarkable, and the rivalry between that country and Germany has led to the adoption of measures which her own men of science had long been calling for in vain. Laboratories and other appliances for scientific instruction of the severer kind are arising on every side. M. Duruy, in his recent report to the Emperor, is enabled to indicate as recent acquisitions the new laboratories established at the Sorbonne, the Collége de France, the Muséum, the Ecole Normale, and the Faculty of Medicine, a new horticultural garden, a physical and meteorological observatory, a chair of palæontology, and several bursaries. Laboratories are about to be attached also to the various Hospitals, and great development has been given to extra-academical teaching.

Professor Milne-Edwards, reporting to the Academic Council, also congratulates it on the realisation of ameliorations of which he had indicated the necessity twenty years since, and which at length, under M. Duruy's vigorous adminstration, have been introduced into the Faculty of Science at the Sorbonne. Those who aspire to the licence or the doctorate are now admitted to witness and personally engage in the experiments and investigations which the physicist, the chemist, the mineralogist, the botanist, and the physiologist should be competent to undertake. We have not space to follow the detail he enters into, exhibiting all the facilities for the thorough study of science that are now offered. We will merely subjoin a list of the laboratories to which students who have proved their aptitude will have access during the present session. Mineral Chemistry under Prof. Balard at the Collége de France and Sainte-Claire Deville at the Ecole Normale. Organic Chemistry under Prof. Berthelot at the Collége de France, General Chemistry under Prof. Frémy (who has done much in urging on the Government in its present course) at the Muséum d'Histoire Naturelle, Medical Chemistry under Prof. Wurtz at the Faculty of Medicine, Geology under Prof. Hébert at the Faculté des Sciences, Botany under Profs. Brongniart and Decaisne at the Muséum, Zoology under Prof. Milne Edwards at the Muséum, Comparative Anatomy under M. Gervais at the Muséum, Histology under Prof. Robin at the Faculté de Médecine, Experimental Medicine under M. Claude Bernard at the Collége de France, Experimental Physiology under M. Marey, Physics under Prof. Desains and Jamain at the Collége de France.

Royal Institution of Great Britain. — At the general monthly meeting held on Monday, December 7, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, Robert Douglas Hale, M.D., Frederick Gutteres Henriques, Esq., Edward Frankland, Esq., Ph.D., F.R.S., Corresponding Member of the Academy of Sciences, Paris, and Professor of Chemistry at the Royal School of Mines, George James Shaw, M.D., Captain the Hon. William Le Poer Trench, and John Peter Wilson, Esq., were elected Members of the Royal Institution.

The Printers' Strike at Paris.—In consequence of the great printers' strike now prevailing at Paris, the Messrs. Masson have forwarded a circular to their subscribers stating that the *Gazette Hebdomadaire* of last Friday was unable to appear.

ARMY MEDICAL DEPARTMENT REPORT FOR 1866.

[CONCLUDING NOTICE.]

THE results of the monthly vaccination returns, compared with those of 1865, on which we commented as being of an unsatisfactory character, show a considerable reduction in the proportion of perfect vaccine pustules, and a marked increase in the proportion of modified and of failures in both recruits and soldiers bearing marks of previous small-pox or vaccination, and so approach more closely to what we might expect where those protective influences have been in operation.

The total number of recruits primarily inspected was 20,410. Of these, 6811, or 333·7 per 1000, were rejected on primary inspection, and 950 on secondary inspection. The total proportion on primary and secondary inspection was 380·2 per 1000. The rejections at primary inspections by Army Medical Officers, compared with those by civil Practitioners, have been in the proportion of 373 to 260; but when those at the secondary inspections are added to each, the difference in the results amounts only to 26 per 1000. Of 8315 recruits passed at the primary inspections by Army Medical Officers, 208 were subsequently rejected, while of 5284 passed by civil Medical Practitioners, 742 were rejected, these numbers being respectively in the ratio of 25 and 140 per 1000 of the recruits found fit in the first instance. The corresponding ratios in 1865 were 38 and 149 per 1000, so that, although the results for 1866 show a lower ratio of rejections in both groups than in the preceding year, the excess of rejections on secondary inspection of recruits primarily inspected by private Practitioners over those of recruits primarily inspected by Army Medical Officers is slightly greater than in 1865. Varix, hernia, and varicocele were the defects for which the greatest number of rejections of recruits primarily passed by private Practitioners took place.

The rejections for syphilis and diseases of the heart, on secondary inspections, are in nearly the same proportions among the recruits primarily inspected by Army Medical Officers and by private Practitioners, for the former class of disease being 15·98 and 16·96, and for the latter 24·68 and 24·94 respectively per 1000.

The most frequent cause of rejections on first examination of both classes of recruits was disease of the eyes and eyelids, on account of which 43·22 per 1000 were rejected. Rejections from this cause have much increased since so much attention has been paid to musketry instruction.

The next most frequent cause of rejection was small or malformed chest or curvature of the spine, on account of which 35·43 per 1000 were rejected. Varicose veins caused 35·33 rejections per 1000; defects of lower extremities from fractures, contractions, luxations, etc., 29·60; varicocele, 26·55.

On looking through the causes of rejections of recruits from 1860 till 1866, we find an almost unvarying rate of rejections for venereal affections except for 1860, when it was about one-third lower than during any of the following years; and on placing together in a tabular form the mean daily sick of soldiers per 1000 of strength from venereal diseases, and the rejections per 1000 of recruits from the same causes, we find the following results:—

	Ratio per 1000 of mean daily sick soldiers from venereal diseases.	Ratio per 1000 of rejections of recruits for venereal diseases.
1860 . . .	23·69	11·19
1861 . . .	23·45	17·01
1862 . . .	22·24	16·50
1863 . . .	20·28	15·57
1864 . . .	19·10	16 86
1865 . . .	18·06	15·67
1866 . . .	16·19	16·56

Now, when it is taken into consideration that, as a rule, all cases of enthetic disease among soldiers come under Hospital treatment during some portion of their course, and that lads suffering from any of the more serious or immediately obvious forms of disease, such as large open buboes, sloughing sores, or suchlike, are never brought by the recruiting sergeant before the Surgeon, we may very fairly conclude that there is at the present time an amount of enthetic diseases among that class of the population from which recruits come fully equal to, if not greater than, that which prevails in the army. From the reduction which has been steadily advancing in the prevalence of such diseases in the army, independently, as has been shown, of any results of the Contagious Diseases Act, and even notwithstanding the abolition of the odious duty of personal inspection of soldiers by Medical officers—of the continued necessity of which, by the way, Surgeon-Major Wyatt, of the Coldstream Guards, stands almost alone among Army Surgeons as an advocate(a)—we may also argue that, if the Contagious Diseases Act is ever to exert a really beneficial influence on the health of our army and navy, it can only do so by its thorough and complete extension to the population at large, and we also consider that the necessity for such an extension is rendered more obviously undeniable by the facts which we have adduced.

The following table, which we have compiled from the statistical returns, presents in a more convenient form a summary of the most important details of the health of the troops at foreign stations for 1866, as compared with the average results of preceding periods for which returns are available, and with the returns of the infantry at home during 1866 taken as a standard:—

	Annual ratio per 1000 of strength.						Mean daily sick per 1000 of strength.	
	1866.		1859-65.		1866.	1859-65.		
	Admitted.	Died.	Admitted.	Died.*	Discharged as invalids.		1866.	1859-65.
Gibraltar	587·1	4·36	821·3	9·78	20·1	18·9	33·4	41·3
Malta	922·3	12·88	882·8	12 72	17·3	12·9	48·8	43·0
Canada	715·5	10·10	661·9	9 74			39·3	29 7
Nova Scotia and New Brunswick	493·6	7·70	573·6	7·49	12·6	16·9	23·1	2··0
Newfoundland	399·2	13·92	662·4	8·25			21·9	31·4
Bermuda	844 6	24·01	698·4	34·32	19 2	11·2	67·2	36·7
Windward and Leeward command	1619 4	29·29	1161·5	12·19	3·4	23·3	69·8	49·4
Jamaica	1371·1	24 74	1010·9	14·01	14·3	22·8	62·5	39·6
St. Helena	780·6	8 34	817·9	9·85	44·5	22·7	45·8	..
Cape of Good Hope	1019·3	10·62	913·5	10 87	17·4	22·6	52·5	†48 6
Mauritius	758·0	14·01	822·7	18·81	17·4	16·7	43·2	37·5
Ceylon	1328·5	21·44	1557·1	26·50	22·3	24·5	58·7	73·9
Australia	745 9	9·13	703·9	15·55	25·7	‡17·5	29·2	33·7
New Zealand	448 0	12·86	606·5	17·26			27·5	35·6
China	2385·5	43·72	2094·6	58 04	50·1	‡21·9	103·6	‡79·8
Japan	1532·1	21·41	1634·7	29·13			78·9	§76·2
Bengal	1443·0	23·19	†1785·0	†31·26			56·8	†67·3
Madras	1490 0	24·08	†1381·0	†21·75	21 98	18·4	69·2	†62·5
Bombay	1346·0	15·06	†1654·0	†25·21			53·2	†64·1
Infantry at home	756·2	7·16	..	..	26·40	30·6	37·0	44·4

* Deaths of invalids on the homeward voyage or at Netley are reckoned as at the stations from which the men had been invalided.
† From 1860 till 1865. ‡ From 1861 till 1865. § 1865 only.

At Malta the increased ratio of admissions into Hospital was caused chiefly by continued fevers. The excess of deaths was from tubercular diseases and those of the circulatory system.

Assistant-Surgeon Boileau, of the 29th Regiment, gives a paper of considerable interest on fever in Malta, with special reference to the use of the thermometer in diagnosis and prognosis, with diagrams illustrative of the variations of temperature in several cases which came under his care. The Mediterranean gastric remittent, or "long fever," is chiefly characterised by its monotonous nature. Week after week the patient may go on with a temperature always high, and slightly more so in the evening than in the morning; debility,

(a) See his evidence before the Select Committee of the House of Lords on the Contagious Diseases Act 1866, p. 79, quest. 711-716, also Appendix D.

emaciation, profuse prespirations, cough, diarrhœa, are all prominent symptoms, and frequently suggest a suspicion of phthisis, which, however, does not exist. Recovery is the rule; but in most instances it is very protracted, and does not occur until complete change of air has been procured. Rheumatism is a frequent result. This fever has not the character of any of the intermittents or remittents described as such. Quinine is useless in it. The most typical cases occurred in a fort entirely surrounded by the sea, in January and February, when the approximate mean temperature did not exceed 60·2° Fahr., and during an unusually dry season, when vegetation, always scarce in Malta, did not exist. Sewage contamination of the atmosphere appears to have had a considerable share in the causation of some of the cases. In one case only were rose spots observed; but other characteristic symptoms of typhoid were absent. The "short Maltese fever" is of the continued type; the average duration is seven days. There is no eruption; debility, anorexia, thirst, nausea, white tongue, quick pulse, frontal headache, and temperature from 101·5° to 103° Fahr., are the principal symptoms. The pharynx is often redder than natural, and sometimes there is tonsillitis. Jaundice and epistaxis are not uncommon; the latter is beneficial generally. The liver and spleen do not become enlarged, although functionally deranged; it is very rarely that hypochondriac tenderness is complained of. The defective hygienic arrangements of Malta are considered to be the most powerful efficient cause.

At Bermuda, typhoid fever, dysentery, and diarrhœa prevailed to a considerable extent. The sanitary arrangements of the island are very defective. Surgeon-Major Dr. Grant observes that "commissioners have been appointed after each epidemic visitation; they have all made much the same reports, and recommended much the same improvements." But there the matter ends, and by all accounts the process is likely soon to be repeated in connection with the epidemic of typhoid fever which has latterly prevailed in the 1st battalion of the 15th Regiment since its arrival in the island.

In the Windward and Leeward command, the increase in admissions was chiefly in miasmatic, venereal, and skin diseases. Yellow fever prevailed in Demerara, and produced a high mortality. The deaths amounted to ten times the average of the preceding seven years, being at the annual rate of 252·88 per 1000. The force exposed to this dreadful mortality was small, but in eight weeks, of 72 men, 29 were attacked and 16 died, being at the rate of 22 per cent.

Nothing less than the most urgent imperial considerations could justify the exposure of European troops to such deadly influences, and even then only for a limited period. The hardship is aggravated in the present instance by much unnecessary delay in the removal of the men, caused by a letter on the subject having been sent, through a mistake in the post-office, to England, instead of to head-quarters at Barbadoes.

In Jamaica the increase in sickness and mortality was chiefly caused by continued fevers, the result of the necessity of employing white troops at Up Park Camp and Port Antonio in the Plains instead of at Newcastle. At the two former stations, on the average of the twenty years 1817-36, the mortality by fevers alone amounted at the former to 121, and at the latter to 126 per 1000 annually. Both stations have maintained their evil reputation. At Up Park Camp in 1866 the admissions were at the annual rate of 2776, and the deaths of 78·95 per 1000. At Port Antonio, 3100 and 125 per 1000 were the annual admission and death rates. The men who had served at these stations continued to suffer even after their removal to Newcastle.

At the Cape of Good Hope the increase in admissions was chiefly from venereal diseases. At Mauritius the admissions and deaths were considerably below the average of the preceding seven years. Miasmatic diseases were not unusually frequent, and the number of fever cases of all types gives but little indication of that malarial form of fever which has since prevailed so extensively and with such disastrous results. Surgeon-Major Small and Assistant-Surgeon Power, of the 2nd Battalion 13th Light Infantry, give a full and very interesting description of the epidemic of fever which devastated the Mauritius in 1867. Their principal conclusions are, that the fever was entirely of malarious origin; that it only assumed the "bilious remittent form" in patients debilitated by prior attacks of fever or by long exposure to powerful malaria; that such low cases were not seen among the soldiers who had the advantage of treatment by quinine, stimulants, and nourishment; that it was not in the slightest degree contagious; that the whole and sole cause of the outbreak was excessive heat with drought acting on a soil which had, as it were, been accumulating the elements of malaria. In ordinary years, in Mauritius, the hot and rainy seasons are synonymous, but in 1866-67, owing to the absence of rain, a continuous hot season resulted. In other words, in Mauritius, hitherto the rain has acted as a preventive of malaria—this coinciding with the fact that during the epidemic those districts which were most rainy and coolest were free from fever.

In New Zealand Deputy Inspector-General Dr. Gibb remarks that "it is noticeable that the greatest mortality this year was from diseases of the heart and aneurism, amounting to seventeen, which is 26·5 per cent. of the deaths in the command. This often occurs after a harassing war of some duration, from severe exertions made during the hot weather and marches."

In China the excess of admissions over the average of the preceding seven years was caused chiefly by paroxysmal fevers, but the mortality was lower.

In Bengal the admissions by miasmatic and enthetic diseases and the deaths by miasmatic diseases were much below the average of the preceding six years.

Cholera can hardly be said to have prevailed as an epidemic except at Hazareebaugh, where in July and August the 27th Regiment lost eight, and the Royal Artillery five men by it. At Allahabad five deaths occurred in the 107th regiment, and at Agra seven occurred among the troops assembled for the Viceroy's Durbar.

Surgeon-Major A. D. Home, C.B., V.C., in the Sanitary Report of Bengal for 1866, attributes the comparatively good health which prevailed during the year to the regularity of the seasons, more than to sanitary precautions or improvements. The hot weather was neither excessive nor unduly prolonged, and the rains set in at the expected time. In 1865 the contrary was the case, and the difference between the mortality from heat apoplexy alone in the two years is considerable. In 1865 the deaths from this cause were 121, or 3·25 per 1000; in 1866 they were 61, or 1·72 per 1000. It is also observed that the increased attention paid by the Commissariat to the condition of animals before slaughter has worked advantageously.

In Madras the increase in admissions and deaths arose chiefly from the miasmatic diseases, except paroxysmal fever, spasmodic cholera, and rheumatism. Spasmodic cholera was epidemic only at Secunderabad, where it caused fourteen admissions and twelve deaths; but sporadic cases occurred at a large number of stations. Deputy-Inspector Dr. Inglis, C.B., remarks that "Secunderabad stands pre-eminent in respect of unhealthiness, furnishing with its tributary cantonment, Trimulgherry, nearly a third of the mortality of the whole command, and most materially augmenting the general average." Dr. Inglis considers the position of the barracks and other buildings to be radically bad.

In Bombay the reduction in the deaths has taken place chiefly in miasmatic diseases, and that in the admissions in miasmatic and venereal diseases. Spasmodic cholera did not occur in the epidemic form, except at Poonah, in a company of the 96th Regiment occupying an old condemned barrack. The company was moved into camp, and the disease ceased, having caused seven admissions and six deaths.

Increased attention appears to have been paid to the means of cooking throughout the three Presidencies. A suggestion was also made by a committee at Bangalore to place the cheap wines of France and South Africa in the canteens, so as to create a taste for them in preference to ardent spirits.

In some of the stations in Bombay the difficulty of obtaining a supply of vegetables continues to be experienced.

The report on cholera in Bengal in 1867 by Inspector-General Dr. Beatson, in the Sirhind Division by Deputy Inspector-General Dr. W. Munro, C.B., in the Oude and Rohilcund Districts by Deputy Inspector-General J. H. K. Innes, C.B., and in the North-Western and Central Provinces by Assistant-Surgeon Sutherland, though in many cases relating the same facts, are all of great value and interest. We regret that want of space forbids our doing more than recommending them to the perusal of all interested in the question of the propagation and extension of cholera.

Dr. Beatson mentions a curious fact—that, in the case of Meerut, where the disease struck heaviest of all, it did not appear till towards the end of August, four months after it had appeared at Umballa, and three months later than it did at Peshawur. These two stations are to the north-west of Hurdwar, whence the stream of cholera-bearing pilgrims had started in April, Peshawur being about five times more distant, while Meerut lies to the south-east, about the same distance as

Umballa is to the north-west. Dr. Beatson also observes that, while he fully admits the communicability of cholera, he is not satisfied that the disease may not develope itself independently of all direct and recent communication with infected centres—in fact, he believes it often does.

Inspector-General Lawson's paper "On the Influence of Pandemic Waves in the Production of Cholera" is really of great interest, but requires more earnest and close study than we have had time to devote to it. It certainly is not light reading, and its compilation must have entailed an extraordinary amount of research, perseverance, and zeal.

Dr. Lawson connects epidemics of cholera and fever with some supposed influence from terrestrial magnetism proceeding from south to north. He has observed and quoted numerous instances in support of his statement that when cholera has prevailed in an epidemic form in one locality, others in the same zone—that is, between the same isoclinals, or lines of equal dip of the magnetic needle, often at a great distance from the first—have shown an unusual amount of the disease, either sporadically or in one of its milder forms. Dr. Lawson accounts for outbreaks of cholera on shipboard—as in the *Mangles* in 1814, mentioned by Corbyn, who was on board, in which the disease burst forth with awful violence when the ship was two months at sea, in six weeks sixty-four deaths occurred, and four just as the ship anchored in Table Bay—by supposing that she had sailed within the influence of one of the pandemic waves. He accounts in the same way for the outbreaks on board the *Renown*, *England*, and other ships. He also states that in 1865, except isolated cases, as at Southampton and Theydon Bois, in Essex, in October, and some cases in St. Petersburg in December, the disease did not extend up to or beyond the isoclinal 70° N., though it continued in Southern Russia, Germany, and France during the whole winter, on which he remarks—"Were personal communication so efficient in propagating epidemic cholera as many recent writers believe, it is difficult to understand how, with the enormous traffic between the North of France and England, for instance, the disease was not introduced there frequently, and did not spread extensively at a much earlier period than the middle of the following summer." That it did so then, Dr. Lawson attributes to the pandemic wave having passed the isoclinal 70° N.

Dr. Parkes's reports on hygiene, and on the power of disinfectants in preventing the putrefaction of sewage, are, as usual with all his writings, full of most useful matter.

MACHINERY FOR OBSTETRIC INSTRUCTION AT ST. THOMAS'S HOSPITAL.

The Maternity Department in connexion with St. Thomas's Hospital is under the general supervision of Dr. Barnes and Dr. Gervis. Its more immediate superintendence is confided to a resident officer termed the Resident Accoucheur, who is selected from the most distinguished among those students who have obtained their professional diplomas, and who holds office for three or six months. With him rests the attention to such details as the consideration of applications for attendance, the apportionment of cases to the students, and the regulation of particulars with respect to the cases attended. He gives assistance also to students in the lesser difficulties of parturition. In all more serious cases requiring version or instrumental aid, it is his duty to seek the advice of Dr. Gervis. At the conclusion of his period of office he is expected to present to the obstetric Physicians a report of the work done under his supervision, giving a tabulated statement of every case attended, and full details of all cases of interest. Upwards of a thousand cases are annually attended by the charity. To give students every facility in attending cases, resident obstetric clerkships were instituted some two years ago. The obstetric clerk, like the Resident Accoucheur, has rooms and commons in the College house, but he holds office for a fortnight only, during which period he is expected to give his undivided attention to the Maternity Department. In this way each student in turn has the opportunity of attending a considerable number of cases, under the most advantageous circumstances to himself, and with the least possible interruption to his other studies. To those students who, whether as obstetric clerks or not, have attended fifty cases well and satisfactorily, certificates of honour are awarded. These certificates are much prized, and their effect in stimulating assiduity and attention has been highly satisfactory. The number of cases of difficult midwifery seen by individual students necessarily varies much, just indeed as it does in after-life practice—many a Medical man, from year's end to year's end, never meeting with an instrumental case. But every Resident-Accoucheur is certain, during his tenure of office, to see some cases of more or less severity, and every obstetric clerk is almost equally sure, during one or other of his periods of residence, to see something of complicated or instrumental midwifery, and there is no student but during his three years' pupilage has the opportunity of filling the office of obstetric clerk at least once, and often twice or thrice if he wishes it. Whenever cases of difficult labour occur, they are utilised as much as possible in the way of instruction, and not unfrequently cases of known deformity are admitted into the Hospital, and in a detached ward their delivery accomplished after the induction of labour has been brought about.

It may be interesting to add that in the matter of granting stimulants and medical comforts, such as beef-tea, arrow-root, etc., to the more necessitous among the out-patients, where the circumstances of the case render such aids advisable, the authorities of St. Thomas's are extremely liberal.

The systematic course on obstetrics given in the summer, required by the curriculum, is supplemented by a clinical course in the winter. This is more especially devoted to the diseases of women. The Obstetric Physician has the charge of beds in the Hospital for the treatment of the diseases of women; and on two days a week—Wednesday and Friday—out-patients are seen by Dr. Barnes and Dr. Gervis; on Saturdays also children are seen by Dr. Gervis.

REVIEWS.

The Physician's, Surgeon's, and General Practitioner's Visiting-List, Diary, Almanac, and Book of Engagements for 1869; upon a Plan furnished to the Publishers by Francis Seymour Haden, Esq. Twenty-third year. London: John Smith and Co., Medical stationers, 52, Long-acre.

This visiting-list is an old-established favourite with many of our elder readers, and may be safely recommended to every young one who is beginning practice. It will enable him, in limited space and convenient form, to keep an accurate memorandum of every Professional transaction.

A Practical Treatise on the Diseases of Children. By Dr. Francis Condie, M.D., etc. Sixth Edition, revised and enlarged. Philadelphia: Lea. London: Trübner. 1868. Pp. 782.

Dr. Condie's work on "Diseases of Children" has gone through five editions, and we are now presented with the sixth. This is a sufficient proof of the popularity of the work. It commences with the hygienic management of children, their peculiarity of organisation, and the pathology of infancy and childhood. There is a valuable chapter on the semeiology of the diseases of children. The peculiar expression of the countenance, their gestures, the phenomena during sleep, their peculiar cry and mode of respiration—all giving evidence of the nature of existing diseases. The author then proceeds with the diseases of the various organs. Diseases of the skin and cutaneous eruptions follow; and under the head of diseases of the nutritive function there is a chapter on scrofula.

If we may speak candidly of this work as a whole, we would say that it is almost too full of material, not always well amalgamated, and that it bears the signs of being an old book imperfectly juvenified, rather than of being fresh, new, and vigorous. When the author speaks *in propria persona*, his sentiments appear to be rather of the severe order. He prohibits all fermented liquors, even in scrofula and other diseases of imperfect nutrition. He is a strong anti-contagionist, even as respects such a disease as purulent ophthalmia. Tartar emetic, depletion, and calomel appear as remedies with a frequency almost unknown amongst us at present. In the treatment of purulent ophthalmia of newly born infants there are no adequate instructions for the early and efficient use of astringents; but there is, we think, a little too much said about "the condition of the bowels," whilst repeated leeching, calomel and ipecacuanha, calomel and antimonial powder, and turpentine by mouth and enema, are put in the foreground as remedies for this local inflammation in new-born babies. No two authors can be more diametrically

opposite as regards the pathology and treatment of this disease than Dr. Condie and Mr. Bader, the ophthalmologist, and to go back from Bader to Condie seems like losing thirty years' knowledge.

GENERAL CORRESPONDENCE.

THE HYPOPHOSPHITES OF LIME AND SODA IN CONSUMPTION.

LETTER FROM DR. R. P. COTTON.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg to assure Dr. Churchill, through your columns, that in writing my paper upon the use of the hypophosphites (*Medical Times and Gazette*, November 14, 1868) I had no personal feeling in the matter. I sought only to elicit the truth. I had neither a pet theory to prop up nor a specific remedy to advertise. If Dr. Churchill's statements in your journal of last week had been such as my paper to which he refers would have borne out, I should not have troubled you with this letter; but the errors into which he has fallen demand from me a brief reply.

In the first place he tells us that of my twelve cases treated by the hypophosphites (*Lancet*, April 25 and May 2, 1863) eight were improved, four of which number he even says were cured. If your readers will refer to the papers, they will find that six only improved, and that these six did just as well, and in at least two instances apparently better, under other treatment; and that, so far from the hypophosphites doing any good, they were perfectly innocent of any effect whatever.

Dr. Churchill boasts of having "demolished" my argument in the pages of his book. I need hardly remark that such a mode of demolition is very easy, but not very convincing. Dr. Churchill asks why I did not try carbonate of soda first, and afterwards the hypophosphites. He must have seen in the papers that he has criticised and so completely "demolished" that I had done so, and with the same result so far as the effects of the hypophosphites were concerned.

I would remind Dr. Churchill that others besides myself have tried the hypophosphites, and with similar results. My colleague Dr. Quain gave them in twenty-two cases at the Hospital for Consumption, and found that "no effect was produced; nothing more being felt by the patient or noticed by the Physician than if so many grains of carbonate of soda or prepared chalk had been taken" (*Lancet*, March 17, 1868). Dr. Risdon Bennett also tried them at the Victoria-park Hospital, and found "no specific nor anti-tubercular action, nor any special influence exerted by them on any one function of the body" (*Medical Times and Gazette*, April 27, 1861.)

Dr. Churchill tells us, in proof of their usefulness, that his alkaline salts "have spread over the whole civilised world,—from Russia to Australia, and from India to Peru." I would merely remark that if I, or any one else, were to advertise a "specific remedy for consumption" in several European languages, it would insure for it the like ubiquity. Dr. Churchill finally tells us two facts—(1) that the hypophosphites of soda and lime were introduced by him, as "the specific remedy for consumption," ten years ago; and (2) that within the last two years phthisis, according to the report of the Registrar-General, has greatly decreased in mortality. Admitting the facts, I confess that I am at a loss to see their connexion. If it be a logical one, I must leave its recognition to my Professional brethren, confessing that I am too obtuse to see it. I hope that my colleagues and myself have done something towards this happy result, but if so, it has been without the aid of the alkaline hypophosphites, since these have not been employed for some years, except in the experiments I have referred to, at the Hospital for Consumption at Brompton. I am, &c.

Clarges-street, London. R. P. COTTON.

LETTER FROM DR. JOHN C. THOROWGOOD.

[To the Editor of the Medical Times and Gazette.]

SIR,—As the recent discussion, in the columns of the *Medical Times and Gazette*, respecting the remedial powers of the hypophosphites of lime and soda in the treatment of consumption, may probably induce Medical Practitioners to make trial of these medicines, and so draw their conclusions from their own personal observations, I should like to say one word respecting the purity of these salts.

Having been in the habit of using the hypophosphites for some years in the treatment of pulmonary diseases, I have become increasingly convinced of the absolute necessity of insuring that the patient receive a carefully prepared and really genuine salt. I have known a patient, who had had a prescription for the hypophosphite of lime correctly dispensed, come to me afterwards bringing a bottle containing an insoluble sediment of phosphate of lime, with which worthless substitute the place of the hypophosphite had been supplied by an ignorant chemist.

This is just one instance; now they are not so frequent with me as they once were, for I have found that chemists are becoming better acquainted with the hypophosphite salts and their properties. Unless the hypophosphite of lime or soda will burn like phosphorus when warmed on a spatula over the flame of a spirit lamp, I hold the salt to be perfectly worthless. I am, &c.

London, Dec. 9. JOHN C. THOROWGOOD, M.D. Lond.

MILITARY GOVERNORS OF ARMY HOSPITALS.

[To the Editor of the Medical Times and Gazette.]

SIR,—All Army Surgeons, more especially those whose tour of duty has made them acquainted with the present general Hospital system as in force at Netley and Woolwich, will concur in thanking you for your powerful aid in bringing to public notice, in your article on "Army Hospitals" in last week's number, the incongruities and expense of administering these Hospitals by military governors. But many of our body will also, I am sure, agree with me that a strong case is not made any the stronger, but rather the contrary, by the application to military governors as a class of any epithets of local, and indeed personal origin, which convey their full force only to those who may be in a position to recognise the individual specially referred to. I am, &c.

December 8. ARMY SURGEON.

REMARKS ON THE TREATMENT OF DIABETES BY OZONIC ETHER.

LETTER FROM MR. A. E. WILMOT.

[To the Editor of the Medical Times and Gazette.]

SIR,—Since June last, having had the opportunity of testing, with Dr. Hutchinson, of Bridlington, the effects of ozonic ether in the treatment of three cases of diabetes, as recommended by Dr. Day, of Geelong, I beg to add my testimony as to its utility, and urge upon the Profession the desirability of giving it a more extended trial. Its administration in each case was attended with most satisfactory results, and the patients expressed themselves relieved from the most distressing symptoms. In the first place, it has a most powerful influence upon the cutaneous, nervous, and vascular system, imparting a glow of warmth to the surface of the body, and stimulating the glandular element of the skin. Secondly, it assuages the painful feeling of constant thirst, in some cases more than others, but in all in a marked degree. Thirdly, it allays restlessness, no doubt from the anæsthetic effect of the ether. Fourthly, it diminishes considerably the quantity of urine voided—in fact, in two out of the three cases, reduced it to the normal amount. The first case (that of a stout elderly lady who was passing seven pints of characteristic secretion in the twenty-four hours) is now apparently quite well; the saccharine matter has disappeared, and the water is normal in quantity. The second case is that of a tradesman who was becoming rapidly emaciated, and passing on an average seven pints and a half of highly saccharated urine in the twenty-four hours— the quantity is now reduced to three pints. The progress of emaciation seems checked. This patient had occasion to leave home for a time, and ceased taking the ether; his symptoms soon became augmented. The third case, that of diabetes in a lady, is complicated with advanced disease of one kidney; but even with that disadvantage, added to its chronicity, the quantity of renal secretion has been brought down from about four quarts to three pints and a half in the twenty-four hours, although it varies in amount. This patient, on coming under treatment, was too weak to hope for much improvement; but her condition, otherwise distressing, is now converted into one of comparative comfort. Fifthly, the elimination of sugar by the kidneys

is lessened, probably either by the ozonic ether controlling the excessive elaboration of that material in the liver, or by influencing the hepatic portion of the organic system of nerves, and enabling it to resume its normal function of determining the formation of glycogen by the hepatic cells, thereby converting saccharine elements into an oxidisable substance which becomes resolved into carbonic acid and water, and, in that condition, is constantly cast off by the depurating organs of the body.

In these days, when the study of the action of medicines is partly disregarded in the engrossing search for physiological and pathological lore, it behoves us as therapeutists not to allow all our energies to be absorbed by one department of science, however alluring, but reserve some for the more practical though less interesting pursuit of the discovery and application of remedies for disease. I am, &c.

Alfred E. Wilmot, L.R.C.P. Lond.

Bridlington, Yorkshire, November 14.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 1.

J. Simon, Esq., F.R.S., President, in the Chair.

Dr. Murchison, on behalf of the Committee on Morbid Growths, read a report on Mr. Wyatt's case of diseased suprarenal capsules. Their structure was pronounced normal, but they were surrounded by rounded bodies projecting from their surface, really accessories from the capsules, but presenting no trace of diseased structure.

Mr. Hulke, on behalf of the same Committee, read a report on the facial tumour exhibited by Mr. Weeden Cooke. It was chiefly corpuscular, in some parts something like colloid; on the whole it was rather like the structure of the navel-string or vitreous humour than anything else. It was a kind of myxoma.

Mr. Busk exhibited some of the bones of a Fossil Rhinoceros found in a gravel pit in Essex. The animal was small, but aged, and of high antiquity. The tibia was diseased, presenting marks of chronic osteitis, perhaps rheumatismal. The radius was enlarged, probably from the same cause. The same gentleman showed the tibia and part of the fibula of a bear which had sustained a fracture, probably compound, resulting in a good deal of shortening. The animal had probably sustained the injury just before going into winter quarters. There were many diseased bones both in the caves of Gibraltar and in Belgium. In another bone shown by Mr. Busk, there was a well-marked node.

Dr. Murchison asked if similar forms of disease were known to prevail among wild animals at the present day.

Mr. Busk could not exactly say as to animals in the wild state. When confined they became extremely liable to disease, not, however, of the same kind as that described.

Mr. Adams said the disease was not related to what we called rheumatic arthritis, seeing that the latter originated in cartilage, whilst this appeared to proceed from the periosteum, the cartilage not being affected.

Mr. T. Smith asked if the enlarged specimen had been probed, as it looked as if it contained dead bone.

The President remarked that these were the first specimens of such an ancient date laid before the Society.

Mr. Coles exhibited a living specimen said to be without radius and ulna on the right side. It was, however, discovered that all the bones were present on both sides, although in an extremely rudimentary form.

Dr. Cayley exhibited some Microscopical Specimens of the Cerebral Arteries removed from a girl who died of apoplexy. She had been healthy, but was one day suddenly seized with a great desire to pass water, but could not for a time. This was followed by pain in the head. She became unconscious and comatose, there was slight twitching of the muscles, and she speedily died. In the left middle cerebral lobe, and in the ventricle, was a large clot. The small arteries in the neighbourhood were hard, thickly studded with nuclei as of tubercle; some also contained oil globules. There was no means here, as in the liver and peritoneum, of distinguishing tubercle from inflammatory products.

Dr. C. Bastian said that such appearances had been often observed in association with small aneurisms by Charcot and others, generally, however, in patients of middle age. In one case the individual was only 20.

Dr. Cayley further exhibited a Femoral Aneurism which had undergone a spontaneous cure, yet which had caused the death of the subject. The patient was aged 50, and syphilitic. He was kicked in the belly by a horse in 1867; a tumour formed, which by-and-by increased and pulsated. Soon after one formed in the thigh, and as this increased that in the belly diminished. The tumour in the thigh was very painful, the pain darting down to the shin. By-and-by the pulsation abated, but œdema gradually extended to the whole limb, and the foot became gangrenous. The œdema ceased, but the gangrene remained stationary, the parts slowly separating. Erysipelas of the thigh and ankle set in, which greatly reduced his strength, and he died exhausted. The tumour in the thigh consisted of the consolidated aneurism and a mass of horribly stinking pus which had dissected out the vessels. There were two small aneurisms on the right side, and no sac about the pus.

Mr. W. Adams exhibited a specimen of Atrophied Scirrhus of the Breast, from a married lady. Four or five years ago there was some pain, first on one side, then on the other. The breasts remained indurated for a time, but there was no enlargement. By-and-by they began to shrink, and the nipples became retracted. About ten months ago pain in the legs began, ultimately ending in paralysis. The intellect was not affected. The fifth and seventh nerves became affected, and the cornea sloughed, whilst the face drooped. She died seven months after her confinement to bed. The brain and cord were alone examined; they presented marks of inflammation only.

Mr. Arnett asked if the axillary glands were affected, or if there was any deposit in the brain.

Mr. Hulke said he had only examined the specimens cursorily. He thought they consisted of connective and yellow fibrous tissue merely. There were no cancer elements.

Mr. C. Moore said it looked more like uniform degeneration of the entire mammæ than a specimen of cancer.

The President remarked that there were several points of interest here. The question was not one of cancerous tumour, but of cancerous scar. He doubted if cancer ever affected a scar without going on elsewhere. Double cancer also, as in this case, was extremely rare. Altogether he thought it most probably inflammatory. He could recall a case where the cancer withered from cold, but was found in the viscera. He proposed to refer it to the Committee.

Mr. T. Smith said Mr. Paget, who attended the patient, always looked upon the case as undoubtedly cancerous. Mr. Paget had seen another where he thought the atrophy was consummated.

Mr. J. D. Hill had seen a case somewhat similar.

Mr. W. Adams next proceeded to show and describe some Syphilitic Tumours removed from under the skin of the Leg. They were apparently fibrinous. Many others were removed from the lady's leg during the last seven years. A tumour appears, ulcerates, and slowly separates. Nearly the whole cellular tissue of the leg had been thus removed. Some of the patient's joints have suffered from syphilitic synovitis.

Dr. Kelly showed a specimen of Primary Cancer of the Femur. The patient, a shoemaker, complained of pain above the knee for some time, when he fell and snapped his thigh. The pain increased, and a large tumour could be felt, and with care crepitation was detected. The thigh was removed, but the patient died apparently from exhaustion. There were in the viscera several pyæmic deposits, but no cancerous masses. Behind the tumour was a large shallow groove for the vessels. —Referred to Committee.

Dr. Kelly also showed a specimen of Fractured Coracoid. The wheel of a loaded vehicle went over a man's head and shoulder. He was killed. Both coracoid and acromion were fractured, and the ligaments were torn.

Dr. Beigel showed some Brain Sand from the Choroid Plexus. The patient, a woman aged 54, was epileptic and very weak, her intellect was diminished, and she was choreic. The power of articulation was lost, and she died comatose. The choroid was cystic, and contained much sand. Similar masses had been found in the ovary, and even in healthy urine.

Dr. Williams, jun., asked if there had been any chemical analysis of this sand.

Mr. Busk said it had been found to consist of carbonate of lime. He thought Mr. Rainey's experiments explained its formation.

Dr. Wilks remarked that one of the earliest specimens brought before this Society was brain sand, with an analysis thereof by Dr. Quain. This sand only indicated further changes in the brain, changes ordinarily associated with obscure brain symptoms.

Dr. Bastian had found, in several cases of inflammation of the surface of the brain, sand throughout its substance.

Dr. Moxon exhibited a specimen and drawing illustrative of Tubercular Phthisis occurring at the Base of the Lung. This was exceedingly uncommon, for it was not pneumonia occurring in a person disposed to phthisis. He found a suggestion as to its causation in contracted patches with dilated air cells in the upper part of the same lung—evidence of former deposits in that situation.

Dr. Powell had observed in a case where there was emphysema with contractions, that when attacked by tubercle a second time the base was implicated.

Mr. Legg showed a Dissecting Aneurism of the Aorta from a man aged 40, who died in the streets. His pericardium was full of blood, the aorta dilated and torn transversely. The coats were separated upwards and downwards. In two places the aneurism opened into the aorta. A small opening through the external coat allowed the escape of the contents into the pericardium.

THE CLINICAL SOCIETY.

Friday, November 27.

Sir Thomas Watson, President, in the Chair.

The following gentlemen were elected members of the Society:—Dr. Day, Dr. Rice, Dr. Tatham, Dr. Lawson, and Dr. Bright.

Mr. Bruce communicated a case illustrating the advantages derived from tracheotomy as a remedy for acute diseases of the larynx.

Dr. Marcet remarked on the rapid recovery in this case. After referring to various causes of dyspnœa in these affections, and after relating some cases which had come under his notice, he observed that he thought it probable that the spasms so often observed were due to the congestion of the lungs from impeded pulmonary circulation. In such circumstances tracheotomy offered relief by getting rid of the congestion of the lungs.

After some remarks from Mr. Holmes respecting the different causes of dyspnœa in these affections,

Dr. Williams dwelt upon the good effects produced by the use of antispasmodic remedies, and alluded to the beneficial effects of chloroform vapour.

Mr. Thos. Smith thought it scarcely necessary to regard the lung congestion as the cause of the spasms of the larynx, and alluded to the frequency with which the admission of cold air through the trachea was followed by pneumonia.

Mr. Kesteven mentioned his experience as to the great danger from the supervention of spasm in these cases, and

Mr. Bruce referred to some instances in which the use of chloroform had greatly added to the severity of the symptoms.

The President drew attention to an instructive case in which Sir Charles Bell was about to perform tracheotomy when he observed the scar of a previous operation over the front of the trachea. This led to further inquiries and the postponement of the operation. The patient, a young woman, presently recovered from what proved to have been a purely hysterical affection. The President made some further remarks enforcing the importance of distinguishing this class of spasmodic affections of the larynx.

Dr. Powell communicated two cases of chronic disease of the lungs presenting the characters of "fibroid phthisis." His remarks principally related to treatment. He enforced particularly the importance of insuring the complete resolution of acute pneumonia or pleurisy before allowing the patient to resume his usual mode of life, and recommended iodide of potassium and alkalies as the most important remedies. He had also derived great advantage from the use of iodine as an unction.

The President then called upon Dr. Pollock, who, in conjunction with Dr. Clark, had been appointed at a former meeting to report on Dr. Powell's cases. Dr. Clark being absent,

Dr. Pollock said that as the report on the cases was in the hands of his coadjutor, he much regretted that it could not be read to the Society; the more, as, although Dr. Clark agreed with him in every particular as regards the facts, he was not entirely at one with him as to their significance. He regarded both of the cases under discussion as having originated in acute pneumonia or pleuro-pneumonia. One appeared to him still to come under this heading, while in the other the primary condition had been followed by tuberculosis of the opposite lung. In the course of his observations Dr. Pollock adverted to the charge of too great comprehensiveness made by Dr. Clark against those who use the word phthisis in the ordinary sense, and in return submitted that Dr. Clark himself had brought together under one term—that of "fibroid phthisis"—a number of cases, some of which were certainly not phthisis, while others did not possess the anatomical characters which he had himself described as those of "fibroid" change.

Dr. C. J. B. Williams adverted to cases in which pulmonary contraction arose from repeated attacks of bronchitis, independently of pneumonia or pleurisy. He agreed with Dr. Pollock in regarding such cases of rare occurrence. He considered that, under the circumstances, fibroid change was a curative process, in which respect he differed entirely from Dr. Clark.

Dr. Greenhow drew the attention of the Society to the form of contracted lung which is met with in persons with chronic bronchitis resulting from the inhalation of pulverulent substances.

MEDICAL SOCIETY OF LONDON.

Monday, November 23, 1868.

Dr. B. W. Richardson, F.R.S., President, in the Chair.

Dr. Kelburne King (of Hull) read a paper on

CARBOLIC ACID AND THE ANTISEPTIC TREATMENT IN SURGERY.

Modern science shows that suppuration is not a necessary process in wounds which do not heal by first intention; granulation can occur without suppuration; access of air is the most common cause of suppuration, not on account of the air itself, but the germs which are contained in it. Carbolic acid diminishes or annihilates suppurative action. The author had employed in the following cases dressings of (1) solution of carbolic acid, (2) carbolic oil (proportion 1 to 4), (3) carbolic putty—*i.e.*, whiting added to carbolic oil to a desired consistence. 1. Morbus coxæ with hectic fever; discharge gradually diminished, and patient improved. 2. Abscess in inner portion of thigh; pus rapidly changed to clear serum, and patient left Hospital well. 3. Amputation through injured parts in a case of crushed forearm; slough of hopelessly injured portions separated, and bone was redivided, but healing was rapid. 4. Injury to parts below the knee; recovery most satisfactory. 5. Gunshot wound of left knee; amputation; sloughing of anterior flap. 6. Crushed hand and forearm; severe scalp wounds; collapse. 7. Gun accident; severe laceration of the whole hand and forearm. 8. Severe laceration of hand, which had been drawn into an oil-crushing machine. 9. Accident from wheel of locomotive passing over foot. In all these cases of injury, primary amputation was performed. All recovered with good useful stumps. The author claimed for the treatment—1. That decomposition of discharges is prevented. 2. That it enables those parts injured beyond redemption to slough away without becoming foci for the reformation of pus. 3. That it exercises a control over the formation of pus in the centre of wounds. 4. That it diminishes the chances of blood-poisoning. 5. That it is of signal service to the patient himself, and to those surrounding him, as all fœtor is absolutely prevented.

Mr. De Meric objected that the so-called principles of Lister were unwarrantable. Admitting that excellent results had been obtained, the cases might have done as well had no such treatment been adopted.

Mr. Hancock believed the treatment most valuable. He adduced some very successful examples occurring in his own practice. He preferred all the other applications of carbolic acid to the "putty." He demurred, however, to the practice of amputation through the unsound structures.

Mr. Adams agreed with Mr. Hancock, but found some instances in which carbolic acid was too greatly an irritant *per se;* he found the treatment could not prevent all suppuration. Exclusion of air was a most important concurrent means.

Dr. Sansom thought credit was justly due to M. Lemaire,

who propounded the treatment in 1859. Competent observers have decidedly shown that the treatment is successful, that it diminishes suppuration. It is proved not to act by chemical means, but there is great evidence to show that it destroys germs. The cases of failure may be partly due to the neutralisation of the effects of the acid by fatty matters (as advanced by Lemaire), or to the influence of gaseous compounds of decomposition, against which it cannot contend.

Dr. KING replied, and the meeting adjourned.

OBITUARY.

DR. BENJAMIN G. G. GUINNESS.

WE regret to hear of the death of another member of the Profession in Dublin, Dr. Benjamin G. G. Guinness, who died during the past week from erysipelas of the head and face. Dr. Guinness had been in practice in Dublin since 1854. He was a Licentiate and Fellow of the King and Queen's College of Physicians, in which he was also the Examiner in Midwifery and Diseases of Women and Children, a Licentiate of the Royal College of Surgeons, Ireland, and had been Assistant-Physician in the Rotunda Lying-in Hospital. He was much esteemed in the Profession and by the public, by many of whom his loss will be severely felt.

JOSEPH BROWN, M.D.

(From the *Sunderland Herald* of Friday, November 20, 1868.)

IT is with much regret that we announce the death of our highly respected townsman Dr. Joseph Brown, which took place last night, at his residence, Villiers-street, the deceased gentleman having attained the venerable age of eighty-four years. Few men have led more active lives than Dr. Brown, and could the incidents of his career be fully told they would furnish a narrative of no ordinary interest, but he was never fond of making himself the theme of conversation, and the materials for a full history of his life were never obtained. Dr. Brown was born at North Shields in 1784, and was the seventh son of Mr. George Brown, a much-respected member of the Society of Friends, in the tenets of which sect he was carefully trained, but he evinced an early taste for literature which was wisely encouraged, and had a marked influence in his future career. On entering life he chose the Profession of Medicine, and after study, matriculation, and Hospital Practice at Edinburgh and London, he made a formal break with the Quaker discipline by entering the army in a Medical capacity. In this pursuit he appears to have found full scope for his active and ardent disposition, for after a few months' trial of garrison life at Jersey he was sent to join the staff corps of cavalry in the army of Wellington. He was present at the battles of Busaço, Albuera, Vittoria, the Pyrenees, and Nivelle, discharging his arduous duties with an ability and vigour which gained him warm commendations, until, on the first fall of Napoleon, he returned to England in 1814. Subsequently after the battle of Waterloo Dr. Brown was with the army of occupation until its retirement from France. It was in 1819, soon after his return to England, that Dr. Brown obtained his degree of M.D. in Edinburgh, and in the same year he married the widow of Capt. Elwes, an officer who fell at Waterloo, and with whom he lived happily until 1866, when she was taken from him by death. The opening passage from "Thoughts and Memories," an able work published by Dr. Brown a few years ago, gives some interesting reminiscences of the earlier period of his career :—

"My sojourn on this earth cannot be long, for I am approaching my eightieth year, and my physical infirmities warn me that the frail tenement of clay in which I live and move and have my being, must ere long descend to that dust from which it sprang. Still do I feel alive and bright within this mouldering tabernacle—'that spark of immaterial fire which no violence can quench.' I can still observe, and the faculty of memory (thanks to a merciful Providence) being still left to me, quite unimpaired, can still compare the storms and tempests which rage throughout the world at this moment with those on which my young eyes first opened. Born in September, 1784, during that brief interval of peace for England which intervened between the struggle with our revolted colonies, called the American war, and the war of the French revolution, it follows that I was in my seventh year on June 20, 1791, when the flight of Louis XVI. took place. Now, of the sensation which this event and the capture on the following day, at Varennes, of the most liberal, the best-intentioned, and the most unhappy monarch France ever had, produced in England, I have a perfect remembrance. From this time for a period of twenty-five years my eyes gazed on a series of national crimes and horrors. There was the Reign of Terror in France, with its countless murders, the whole direful scene unquestionably aggravated, if not caused, by the atrocious Brunswick manifesto. There were the French armies rushing across the Rhine with 'Liberty, equality, fraternity,' on their lips—revenge of insults, lust of murder, rapine, and plunder in their hearts. But for ten years before the closing of the dread strife it was with no merely figurative or mental eye that I gazed ; I saw war in its worst form with the outward eye of flesh, and I was literally present at the fall of the mighty empire of Napoleon, I may say that almost literally 'I saw the stone strike the image on its feet and break them to pieces, whose head was of fine gold, but whose feet were of iron and clay mixed, and they became like the chaff of the summer threshing floor.' I saw the tie which bound together the elements forming the base on which rested that gigantic empire, the people and iron army of France rent asunder, when, in April, 1814, the British army marched into Toulouse amid the acclamations of the populace of that beautiful city, and the peasantry of the surrounding district, who earnestly and truly hailed us as deliverers. It seemed to me that I was witnessing the fulfilment of Daniel's prophetic vision !"

About the time of his marriage Dr. Brown settled in Sunderland, where he has resided ever since, and where his rare ability and general high qualities soon gained for him an acknowledged eminence extending beyond the town in which he lived. To review Dr. Brown's labours in his Profession during exactly half a century, while practising as a Physician in Sunderland, is no easy task. His Profession was to him the source of his greatest pleasure, and no one felt more deeply than he "the luxury of doing good." Not only was he successful in gaining the confidence of the public in Sunderland, and occupying the highest position in his Profession in this town, but in all the north of England his name was well known, and his consultations frequently led him to Darlington, York, Barnardcastle, Shields, and Newcastle, at a time when railways were not, and when journeys like these were serious undertakings. He was also well known in the Profession generally as a high authority, especially on fever, cholera, plague, and sanitary science ; and in Sir J. Forbes's "Cyclopædia of Practical Medicine" the essays on these subjects and many others are from his pen. He was also on the staff of the *British and Foreign Quarterly Medical Review*, and his earlier contributions to Medical literature were both numerous and highly valuable.

As a classical scholar and highly educated man, Dr. Brown was pre-eminent, and none could associate with him, down to the last years of his life, without being delighted with his fund of quotation and anecdote, and surprised at the freshness of his memory. His contributions to general literature included his "Defence of Revealed Religion," "Essays on the Food of the People," and "Memories and Thoughts."

In politics Dr. Brown was a true Liberal—Liberal not only in the restricted party meaning of the word, but open to the reception of every real improvement and to every generous and righteous act. Nothing to him had such terror as the thought of a democracy or mob ascendency, and his opinion was strongly against the "leap in the dark" of Parliamentary reform. The day before his death his last intelligent act was to sign his voting paper in favour of Dr. Lyon Playfair in the approaching contest at Edinburgh University.

As a philanthropist Dr. Brown was never wearied of doing good to the poor ; his advice and assistance were freely given, and numbers attended at his house and received his care gratuitously even up to the last few weeks of his life. From his first connexion with the Infirmary, in 1822, when he succeeded Dr. Fearon, shortly after its erection, up to Friday last, when he attended as usual at the Infirmary, his labours have been uninterrupted and most assiduous. No Medical officer this Infirmary has ever possessed was so scrupulously exact in fulfilling his duties—always postponing his private comfort to the calls of his public work.

Dr. Brown was one of the earliest borough magistrates appointed in Sunderland, and discharged with much ability the duties of that office until within a few years of his death. He was elected an alderman of the borough in 1841, and in the previous year he very efficiently filled the office of Mayor. He took a deep interest in the prosperity of the Sunderland

Subscription Library, of which institution he was for twelve years president, holding that office up to the time of his death. In sanitary measures it is to Dr. Brown that Sunderland is indebted for originating the idea of improvement of the dwellings of the poor, which it was afterwards attempted to carry out in the Improvement Bill. Many years ago, when chairman of the Sanitary Committee, Dr. Brown urged upon the Council the necessity of ameliorating the condition of the dwellings of the poor, especially in the parish of Sunderland, and it was, we believe, owing to the opposition which his views met with that Dr. Brown resigned the chairmanship. It was in testimony of their appreciation of Dr. Brown's exertions in this respect, as well as of their admiration of the many excellences of his character, the people of Sunderland presented him with a testimonial of 1000*l* in 1858, in acknowledging which he quoted those beautiful lines, so applicable to himself:—

> "The soul's dark cottage battered and decayed
> Lets in new light through chinks that time has made.
> Stronger in weakness, wiser men become
> As they draw near to their eternal home."

On Friday last, Dr. Brown was in his usual health, and attended to the patients at the Dispensary with his accustomed care. On his return home he complained of having taken cold, and of feeling weak and ill. The following day his cough was distressing, and, though still able to rise, the symptoms of inflammation of the lung slowly but steadily increased in urgency until Tuesday, when, for the first time, he consented to remain in bed. From this time until his death yesterday evening he gradually sank, frequently rousing from the lethargy into which he was sinking to recognise the familiar voices of those he loved, and answering with difficulty, but often with quiet humour, their tender questionings as to his state.

His death was without a struggle. Surrounded by his children, he passed imperceptibly from among us, after having reached so great an age, with his mental faculties unimpaired, and with every comfort with which unremitting filial love could surround him. Which of us in our lives can hope to leave behind us so fair a record, a life so long, its duties so faithfully performed, its termination so peaceful, and the hope of its blissful resurrection so sure and certain?

LEGAL INTELLIGENCE.

COURT OF QUEEN'S BENCH, Westminster, Dec. 4.

(Sittings at Nisi Prius, before the Lord Chief Justice *and a Special Jury.)*

JOHNSTONE *v.* COTHAM.

This was an action by one clergyman against another for false imprisonment in a lunatic asylum. The defendant justified upon the ground that the plaintiff was a dangerous lunatic, and required restraint, which was denied.

Mr. Giffard and Mr. Lopes were for the plaintiff; Mr. Serjeant Ballantine and Mr. Philbrick were for the defendant.

It appeared that in the latter part of 1866 the plaintiff, the Rev. John Johnstone, had been curate to the defendant, the Rev. J. T. Cotham, incumbent of St. John's, Walworth. Soon afterwards he was elected chaplain to St. Mary's Hospital, Paddington, on the duties of which he entered. He continued, however, to reside at Walworth, where the defendant lived, and from some causes, which were the great subject of inquiry at this trial, the latter, at 2 o'clock on the night, or rather morning, of June 30, had him removed to a lunatic asylum at Peckham, where he was detained for about a month. The defendant had obtained from a Surgeon named Dry, who resided in the Walworth-road, a certificate to the following effect:—"I hereby certify that on the 30th of June, 1867, I personally examined the Rev. John Johnstone, and that he is a person of unsound mind and a proper person to be taken charge of and kept under care and treatment." Then the certificate set forth the following "facts and grounds" for the opinion thus given:—"Believes everybody to be a Fenian, and says he had a fear of being shot; being in an excited state, visiting the patients in the Hospital at 2 o'clock in the morning, and stating that he was protected from being shot." There was another certificate from another Medical man stating the following as the facts and grounds for the opinion: "Being in a state of considerable excitement, and using language rambling and incoherent, and stating that he had laboured, with the help of the Prince of Wales, to drive out the Fenians in Paddington," etc.

The defendant upon these certificates had signed an order for the reception of the plaintiff into the asylum as a person of unsound mind, and he was removed to and received into the asylum under the care of Dr. Armstrong, the proprietor. While he was there the plaintiff wrote various letters, one of them to Dr. Sibson, asking that gentleman to come and visit him, which he did. Dr. Sibson, however, was of opinion that he had been in a state which justified restraint, and that he was not of sound mind; and although at the time he saw him he could not have certified for his removal, he could have done so with confidence at the time he was removed. During his confinement the plaintiff was also visited and examined by Dr. Nairne and Mr. Lutwidge, Commissioners of Lunacy, who likewise were of opinion that he was properly under restraint. A sister came to London and made attempts for his liberation, and on July 31 Lord Shaftesbury and Mr. Lutwidge signed an order for his removal for a month to Margate under the care of his sister. He was ultimately liberated from restraint, and he then brought this action.

The evidence supporting the plaintiff's case was first his own. He was examined at great length as to all the antecedents of his removal to the asylum, and according to his account there was apparently no ground for it at all. He made various statements as to his treatment in the asylum: how he was put into a cold bath, and into the strong room; and how he was disturbed at night by the cries of maniacs.

He produced certificates of sanity signed by Dr. Sieveking and others, but, on objection, these were not admitted, on the ground that Dr. Sieveking and the others ought to appear as witnesses.

He said that he had preached and read the service during his residence in the asylum. On cross-examination he admitted that he had visited the patients at St. Mary's at 2 o'clock in the morning, but he denied that he had said that he had been persecuted by Fenians, and that they had followed him and the Prince of Wales, his great friend. Secondly, a policeman who found the plaintiff locked out of his lodgings at 1 o'clock in the morning, said that he seemed quite sane. Thirdly, Dr. Young, Surgeon to the Western Dispensary (formerly House-Surgeon to St. Mary's Hospital), said that he did not think plaintiff was mad, but only over-excited by too much "stimuli." He saw him on Friday, June 29. He saw nothing indicating insanity. He had seen him several times about then, and saw nothing mad about him. There was some idea previously about putting him in an asylum, and he had a conversation with defendant about it. He told him he thought plaintiff perfectly sane.

Cross-examined, the witness stated: It was very like *delirium tremens*. If he had observed delusion, it would have been evidence of insanity.

For the defence Dr. Sibson, Dr. Nairne, and Mr. Lutwidge were called. These gentlemen, as already stated, agreed that the plaintiff required restraint. In cross-examination Dr. Sibson said he would not have concurred in a removal at such an hour, but he certainly was of opinion that he should have felt it his duty to place him under restraint.

Two members of the Hospital Board and the Secretary of the Hospital deposed to strange conduct on the part of the plaintiff.

The secretary of the Hospital stated that the plaintiff told him he had been obliged to leave his lodgings on account of their being "full of robbers and Fenians," and that there was a conspiracy to deprive him of the chaplaincy of the Hospital, and that Canon Boyd (then the incumbent of the Hospital, and now the Dean of Exeter) was at the bottom of it, whereas he took no part in the affairs of the Hospital, and the plaintiff was rather liked than otherwise there, and there was not the least foundation for the idea. There was also some incoherent story about going to the Prince of Wales's levée, and on June 19 there was this entry by him in the Hospital book—"Left to attend the Prince of Wales's levée at Buckingham Palace." That was the last entry made by the plaintiff; and about that time his manner was strange, and gave the idea of his being out of his mind.

Dr. Armstrong, of the Peckham Asylum, stated that he knew nothing of the plaintiff, except what he derived from the certificates. He examined him, and formed the opinion that he was of unsound mind. While witness was talking to the plaintiff the latter suddenly seized him at the throat, saying he was a "d——d Fenian," and an attendant had to interfere, on which he said it was only fun, and went on to

say that he was persecuted by Fenians and prostitutes. The plaintiff, however, was constantly restless and excited, and laboured under delusions. For instance, he imagined his food to be poisoned, and threw away his beer, supposing poison to be in it. His language was incoherent and improper, and unfit for his sacred profession, and he used oaths. After he had been in the asylum two or three weeks, however, his excitement having been allayed, he was allowed to read prayers to the patients.

Mr. Fuller, Dr. Armstrong's assistant, and Dr. Dry, and Dr. Griffith, who had signed the certificates, gave similar evidence. The latter, indeed, had only examined the plaintiff for a few minutes in a cab at the time of his removal; he was quite satisfied as to the propriety of signing the certificate. Dr. Griffith said the plaintiff talked wildly of Fenians, and said he was associated with the Prince of Wales for the purpose of checking them, etc. His speech was incoherent, and he rambled and passed rapidly from one subject to another, his gestures being all the while violent. On the whole it appeared evident that he was a fit subject for restraint.

A very lucid and impartial summing-up by the Lord Chief Justice followed, in which, however, he drew a marked distinction between harmless and dangerous delusions:—

"Therefore it is necessary in all such cases to guard ourselves against supposing that because there are delusions they are necessarily dangerous, or, on the other hand, that because there is apparent responsibility and a capacity for most of the affairs of life (as writing letters or the like), therefore there may not be a state of unsoundness of mind which, if united to a disposition to violence, may not afford reasonable ground for restraint. That delusions do exist which are not dangerous there can be no doubt. I myself constantly receive letters from persons who fancy themselves nearly related to the Queen, and one of whom, indeed, professes to be the Queen, and yet I should be sorry to hear of any of my fair correspondents being shut up in asylums. (A laugh.) But yet, on the other hand, these delusions undoubtedly show an unsound state of mind, and it behoves all who have to deal with such persons to look carefully to see if there be any indication of a general state of excitement or of a disposition to violence, such as may, in such an unsound state of mind, lead to mischief, and show a danger of violence which may call for personal restraint."

The jury retired to consider their verdict, and were absent about three quarters of an hour. On their return they delivered a verdict for the defendant, strongly disapproving the mode in which the removal was effected.

NEW BOOKS, WITH SHORT CRITIQUES.

A Handbook of Uterine Therapeutics and of Diseases of Women. By Edward John Tilt, M.D., M.R.C.P., Consulting Physician to the Farringdon Dispensary, etc. Third Edition. London: J. Churchill and Sons. Pp. 423.

*** Dr. Tilt offers this, a greatly enlarged edition of his work, as a protest against the general disbelief in the efficacy of remedies even among gynæcologists, many of whom, he says, have been carried away by the brilliant results of modern Surgical treatment to the exclusion of that by drugs.

On the Anatomy of the Vertebrates. Vol. III., Mammals. By Richard Owen, F.R.S., Superintendent of the Natural History Departments of the British Museum. London: Longmans. Pp. 915.

*** This volume concludes Owen's great work on the comparative anatomy of invertebrata and the vertebrata. It is fully illustrated. Some of the engravings are not, however, new, having already appeared in others of the author's works; and many of them refer to human anatomy. The organs described in this volume are the muscular and nervous systems, the dental system, the alimentary organs, the absorbent and circulatory organs, the respiratory and urinary systems, the tegumentary system and appendages, the peculiar glands of the mammalia, the generative organs, the generative products and development, and the mammary and marsupial organs. What, however, will most probably attract greatest attention is the concluding chapter, consisting of general conclusions on the homology and teleology, the succession and extinction of species, the derivative law, epigenesis and evolution, homogeny and thaumatogeny.

Lectures on Surgery. By James Spence, F.R.S.E, Surgeon to the Queen in Scotland; President of the Royal College of Surgeons, Edinburgh; Professor of Surgery in the University of Edinburgh; Surgeon to the Royal Infirmary and Lock Hospital, etc. Part I. Edinburgh: A. and C. Black. Pp. 237.

*** This, the first portion of a series of lectures by Professor Spence, has been published separately that it may be rendered available for the use of students this session. It deals with the general departments of Surgery, as of inflammation, suppuration, ulceration, etc. One can see, even on casually glancing at the book, that it is the work of one well skilled in his Profession and in its exposition. The chapters or lectures, if short, each contain much that is valuable, often even, in these barren regions of Surgery, much that is original. The work is illustrated by a series of chromolithographs.

Bibliotheca Pathologica et Therapeutica, oder Verzeichniss aller auf dem Gebiete der Pathologie und Therapie in den letzten 20 Jahren 1848-1867 in dem deutschen Buchhandel Bücher und Zeitschriften. Bearbeitet von Adolph Büchting, Buchhändler. Nordhausen.

The Pathological and Therapeutical Library; or, a Catalogue of all the Books and Magazines on the Subject of Pathology and Therapeutics which have appeared in the German Book Trade during the last twenty years, from 1848 to 1867. Compiled by A. Büchting, Bookseller. Nordhausen. London: Williams and Norgate.

*** We have here selected the title of one of a series of similar works compiled by the same gentleman, and referring to other departments of Medical study, constituting altogether a collection of thirteen small but useful volumes. The others are catalogues of German works on Pharmacology and Therapeutics, the Practice of Medicine, Ophthalmic Surgery, Dentistry, Psychiatry, Diseases of the Ear, Surgery, Gynæcology and Obstetrics, General Medicine, Anatomy and Physiology, Balneology, and Historical and Geographical Medicine. To gentlemen working in any special direction, these little volumes will prove invaluable guides; they might have been better had they been compiled by a Medical man, as in the case of Sir John Forbes's work, but we are thankful for them as they are. It is perhaps suggestive that the largest deals with Balneology and Hydrotherapeutics.

An Attempt to answer the Question, Which Part of the Plant *Conium maculatum* is the best for Medicinal Use? By Wm. Manlius Smith. Manlius, New York, Albany. Pamphlet.

*** From his experiments, Dr. Smith comes to the conclusion that the immature fruit is more potent than the leaves, and that it may be dried without injury. Dr. Smith does not appear to have used the succus conii, and also appears to be ignorant of Dr. John Harley's researches in this matter. Indeed, Dr. Smith's researches would appear to have been laid before the American world prior to the publication of Dr. J. Harley's among ourselves.

Half-yearly Compendium of Medical Science. Part III. July, 1868. Philadelphia: S. W. Butler, M.D. Pp. 351.

*** This compilation is meritorious. It does tolerably ample justice to all, and it aims at being practical. We cannot compare it with the work of Virchow, Hirsch, and Gurlt; still it is not to be despised, and will be especially useful to those who desire to make themselves acquainted with the progress of our cousins in Medical matters. On the whole, it illustrates the saying that American practice is as good as their theory is bad.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of Candidates who passed the Examinations indicated:—

B.S. EXAMINATION.

PASS EXAMINATION.

Anderson, Tempest, B.Sc., University College.
Langmore, John Wreford, University College.
Poore, George Vivian, University College.
Ridge, John James, B.A., B.Sc., St. Thomas's Hospital.

EXAMINATION FOR HONOURS.

First Class.

Anderson, Tempest, University College.
Langmore, John Wreford, University College.
Poore, George Vivian (gold medal), University College.
Ridge, John James (scholarship and gold medal), St. Thomas's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 9th inst.:—

Adams, Edward John, L.S.A., Bethnal-green, diploma of Membership dated April 22, 1866, of St. Thomas's Hospital.
Ainley, Daniel, Halifax, Yorkshire, July 23, 1868, of St. Bartholomew's Hospital.
Chiappini, Antonio Lorenzo, M.D. Edin., Cape of Good Hope, January 23, 1866, of King's College Hospital.
Godson, Clement, Barnet, Herts, April 21, 1868, of St. Bartholomew's Hospital.
Price, William, Cardiff, Glamorganshire, July 21, 1868, of University College Hospital.
Winckworth, Charles Trew, L.S.A., Horsham, Sussex, April 23, 1867, of the Westminster Hospital.

It is stated that three candidates failed to acquit themselves to the satisfaction of the Board, and were consequently referred to their studies for three months.

The following Members of the College, having undergone the necessary examinations for the Fellowship, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at a meeting of the Council on the 10th inst. were admitted Fellows of the College:—

Arnott, Henry, St. Stephen's-crescent, W., diploma of Membership dated July 29, 1864, of University College.
Best, Alexander Eans, M.D. Aber., Her Majesty's Indian Army, April 11, 1856, of the Aberdeen School.
Brookhouse, Joseph Orpe, M.D. St. Andrews, Parliament-street, Nottingham, February 27, 1857, of Guy's Hospital.
Coleman, Alfred, L.R.C.P. Lond., Old Burlington-street, April 21, 1860, of St. Bartholomew's Hospital.
Davy, Richard, M.D. Edin., Welbeck-street, May 7, 1860, of Guy's Hospital.
Eastes, George, M.B. and L.R.C.P. Lond., Trinity-square, Southwark, January 26, 1864, of Guy's Hospital.
Edis, Frederick Pooley, M.B. Lond., Langham-chambers, November 15, 1864, of the Westminster Hospital.
Galton, Edmund Hooper, L.S.A., Brixton-hill, July 17, 1857, of Guy's Hospital.

Harding, Thomas Massey, L.R.C.P. Lond., Euston-road, July 31, 1848, of the Middlesex Hospital.
Humphreys, Frederick William, L.R.C.P. Lond., Trinity-square, Tower-hill, April 28, 1865, of Guy's Hospital.
Ingle, Robert Nicholas, M.D. St. Andrews, Pendleton, Manchester, December 23, 1858, of Guy's Hospital.
Lee, Frederick Fawson, M.B. Lond., Salisbury, April 13, 1860, of St. George's Hospital.
Pearse, George Edmund Legge, L.S.A., St. George's-road, S.W., November 13, 1864, of the Westminster Hospital.
Thornton, William Henry, M.D. Lond., Dewsbury, July 2, 1849, of the Manchester School.
Wood, Miles Astman, L.R.C.P. Lond., Ledbury, January 25, 1865, of King's College Hospital.

It is stated that out of the sixteen candidates only one failed to acquit himself to the satisfaction of the Court of Examiners, and was consequently referred to his studies for twelve months.

APOTHECARIES' HALL. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 3, 1868:—

Brown, Richard Edwin, Holborn-hill.
Foster, Joseph, Louning, Berks.
Hubert, William Henry, Markyate-street, Herts.
Nicholson, P. J. S. Fraser, Cheltenham.
Pollard, Frederick, Taunton.

The following gentlemen also, on the same day, passed their First Examination:—

Fitt, S. W., King's College Hospital.
Kidger, A. A., King's College Hospital.
Naughtin, W., Charing-cross Hospital.
Pritchard, R. H., Guy's Hospital.
Sheard, W., King's College Hospital.
Turner, F. H., St. Bartholomew's Hospital.
Wallis, F. M., Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BLUNDELL, Dr. JOHN W. F.—Physician to the Cluny-hill Hydropathic Establishment, Forres, Morayshire, *vice* Dr. Munro, resigned.

INGLIS, W. W.—Medical Registrar to St. Thomas's Hospital.

WATSON, WASDALE, M.R.C.S. Eng., and L.A.C. Lond.—Surgeon to the Odd Fellows' Medical Association, Newport, Monmouth.

NAVAL APPOINTMENTS.

DUNLOP, Dr. JAMES—Assistant-Surgeon to the *Impregnable*.

GABRIEL, JOHN T.—Surgeon to the *Scorpion*.

INMAN, WILLIAM, M.D.—Assistant-Surgeon to Greenwich Hospital.

SALMON, JAMES, M.D.—Inspector-General of Hospitals and Fleets in her Majesty's Fleet.

BIRTHS.

FINCH.—On December 5, at Stainton Lodge, Blackheath, the wife of Robt. Finch, M.D., of a son.

GOURLEY.—On December 4, at West Hartlepool, the wife of S. Gourley, M.D., of a daughter.

KING.—On November 29, at Rochford, Essex, the wife of Thomas King, M.R.C.S. Eng., of a son, stillborn.

SPYERS.—On December 7, the wife of J. C. Spyers, M.D., of a son.

MARRIAGES.

ANDERSON—TAYLOR.—On November 28, at Kurrachee, Scinde, Lieutenant-Colonel H. Cortlandt Anderson, Bengal Staff Corps, to Alice Forbes, eldest daughter of the late W. B. Taylor, Esq., Surgeon-General, Medical Board, Bombay.

BURTON—FORREST.—On December 3, at the Church of the Holy Trinity, Brompton, John, only son of John Burton, Esq., M.D., Walsall, Staffordshire, to Jemima Matilda, youngest daughter of the late Captain Forrest, R N

CASBERD-BOTELER—PAUL.—On December 8, at St. Giles, Camberwell, William J. Casberd-Boteler, Lieutenant, Royal Navy, of Taplow, to Lizzie Aubin Florence, only child of John H. Paul, M.D., of Camberwell House, Surrey.

GREENE—TAYLOR.—On December 5, at Christ Church, Folkestone, Frederick William Greene, Esq., to Isabella, eldest daughter of the late George Taylor, M.D., Deputy Inspector-General of Army Hospitals.

MORIARTY—MCCARTHY.—On November 26, at Cork, T. B. Moriarty, A.B., M.D., Staff Assistant-Surgeon, to Margaret, daughter of Alexander McCarthy, Esq., J.P.

MORIN—SCOTT.—On December 1, at 26, Castle-street, Dumfries, by the Rev. Donald McLeod, of Montrose, John A. Morin, eldest son of John Morin, Esq., of Allanton and Carzield, to Rachel Amy, only daughter of William Scott, Esq., M.D.

WALFORD—NICHOLAS.—On November 28, at the British Consulate, Antwerp, George Paget Walford, son of the late George Eastfield Walford, of Limehouse, Surgeon, to Emily Laura, daughter of the late William Isaac Nicholas, of Winchester, Surgeon. No cards.

DEATHS.

COLCLOUGH, ANTHONY C., retired Medical Staff Officer, at his residence, Montpellier-villas, Brighton, on December 7, in his 85th year.

DANFORD, FREDERICK, Surgeon, at 10, Upper Dorset-street, Bryanston-square, on December 2, suddenly.

EDWARDS, GEORGE NELSON, M.D., at No. 20, Finsbury-square, on December 6, in the 40th year of his age.

ELLERTON, JOHN, Esq., Surgeon, at Aberford, on November 22, aged 68.

GARRINGTON, SARAH, wife of Arthur M. Garrington, M.D., of Portsmouth, at the residence of her father, after a short illness, on December 5.

GIBSON, HANNAH, widow of R. Gibson, Esq. (late Superintending Surgeon of the Madras Medical Board), at her residence, Corve-street, Ludlow, on November 27, aged 81.

GLOVER, JOHN SMYTH, at Philipstown, King's County, Ireland, on December 1, in the 56th year of his age.

GUINNESS, BENJAMIN G. GRATTAN, M.D., at his residence, 24, Lower Fitzwilliam-street, Dublin, on December 8.

JONES, GEORGE E., Esq., M.D., at Gravesend, formerly of Alcester, Warwickshire, on November 28.

LEADAM, HERBERT BEAUMONT, the infant son of W. W. Leadam, M.D., at Iver, on December 5, aged 8 months.

LEETE, JOHN GRIFFITH, Surgeon, of Thrapton, Northamptonshire, after a short illness, on December 2, aged 62.

SEED, JOSEPH, R.N., F.R.C.S., at Rochdale, Lancashire, on December 6, after a long and painful illness, in the 80th year of his age.

WHITE, JOHN, Surgeon, at Finchley, on December 3, aged 62.

VACANCY.

THE HOSPITAL FOR WOMEN.—An Assistant-Physician.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Henley Union.—Mr. Adam J. Moore has resigned the Caversham District; area 7733; population 2582; salary £35 per annum.

Horncastle Union.—Mr. Hugh George has resigned the Revesby District; area 17,180; population 3085; salary £35 per annum.

Preston Union.—The Fifth District is vacant; area 15,118; population 9622; salary £65 per annum.

APPOINTMENTS.

Blything Union.—Andrew Robinson, L.R.C.P., M.R.C.S.E., to the First District; Frederick Haward, M.R.C.S.E., L.S.A., to the Workhouse.

City of Salisbury.—Humphrey P. Blackmore, M.D. St. And., M.R.C.S.E., L.S.A., to the Parishes; John Winzar, M.R.C.S.E., L.S.A., to the Workhouse.

THE MEDICAL OFFICERSHIP OF HEALTH IN ST. PANCRAS.—We hear that Mr. J. N. Radcliffe, Secretary to the Epidemiological Society, and Dr. Stevenson, Demonstrator of Chemistry at Guy's, are candidates for this appointment. Few men have greater claims on an appointment of this kind than Mr. Radcliffe. He has been long known as a laborious and useful worker in sanitary science.

THE VACCINATION QUESTION. — The Birmingham Board of Guardians have resolved upon the appointment of one public vaccinator only for the whole of the parish of Birmingham. The person appointed will be required to abstain from private practice, and devote the whole of his energies to the requirements of the office. He will be paid the minimum fee of 1s. 6d. a case, and it is estimated that the income derived from this source will amount to over £500 a year, which sum may be further increased by the Government award which is allowed every two years on a favourable report being made by the Inspector of Vaccination. The appointment is a good and lucrative one, and will doubtless attract a host of candidates.

A REPORT has just been made public by the Governors of the Birmingham Lying-in Hospital, which shows that the introduction of the "midwife system" into the Hospital has answered admirably. Out of a number of about 200 cases, in only four have the midwives had to summon to their aid the honorary Surgeons, the remaining cases having been attended to by themselves; all have made excellent recoveries. The patients speak in the highest terms of the kindness and attention shown them by the midwives, who, as an *experimentum crucis*, were introduced to this charity from the London Maternity Hospital.

ODONTOLOGICAL SOCIETY.—At the ordinary monthly meeting of this Society, held Monday, December 7, 1868, James Parkinson, Esq., President, in the chair, the first report of the joint Committee appointed by the Odontological Society of Great Britain and the Committee of Management of the Dental Hospital of London, to inquire into the value and advantages of protoxide of nitrogen as an anæsthetic in Surgical operations, was read by W. A. Harrison, Esq., as chairman of the Committee. The report was decidedly favourable to the use of the gas as an anæsthetic in minor Surgical operations; but as this was only a preliminary report, its conclusions were based rather upon the practical observations of the Committee, both in their public and private practice, and statistics founded thereon, than upon physiolo-

gical investigations, which the Committee stated would be more fully entered into in the next report after more extended and more delicate experiments on this part of the subject. The reading of the paper was followed by an animated discussion, in which Dr. Sanderson, Dr. Marcet, Mr. Clover, and Mr. Weeden Cooke took part.

NORTH STAFFORDSHIRE MEDICAL SOCIETY. — The annual meeting of this Society took place on Thursday, November 26, at the North Staffordshire Hotel, Stoke-on-Trent. The members attended in good force. The retiring President (Ralph Goodall, Esq.) delivered the annual address, in which he reviewed in an elaborate manner the improvements which have taken place in Medicine and the allied sciences during the past year. At its conclusion a cordial vote of thanks was passed to its author. The Secretary's report showed the Society to be in a flourishing condition financially and in the number of members composing it. It now comprises four honorary and twenty-six ordinary members. The election of officers was then proceeded with, and resulted as follows: — *President:* Robert Garner, Esq., F.L.S. *Vice-President:* Ralph Goodall, Esq. *Treasurer:* James Yates, Esq. (re-elected). *Hon. Secretary:* J. M. Taylor, Esq. (re-elected). *Committee:* W. Acton, John Alcock; W. H. Folker, A. B. Greatrex, M.D., and W. D. Spanton, Esqs.

LEEDS FEVER HOSPITAL.—The following is a return of patients admitted into the House of Recovery from July 1 to November 30, 1868:—

	Admitted.	Cured.	Died.
July	43	23	5
August	64	28	5
September	91	51	12
October	68	67	9
November	67	38	11
	333	207	4

Patients remaining in the house, December 1, 122.
Mortality, 12·061 per cent.

Type of Disease.

Typhoid Fever	228	Rheumatic Fever	5
Typhus Fever	44	Febricula	14
Measles	3	Pneumonia	1
Scarlet Fever	12	Erysipelas	2
Smallpox	13	Diseases of the Skin	3
Cerebral Disease	3		
Bronchitis	5		333

Thirty cases of typhoid died, which gives a death-rate of 13·015; seven cases of typhus fever died, which gives a death-rate of 15·090; five of the remainder died, which gives a death-rate of 8·019 per cent. It is said that the death-rate has been much lowered since the system was introduced by Dr. Clifford Allbutt of keeping the windows open day and night, supplying warmth by fires and extra clothing. Our readers may refer to Dr. Allbutt's paper on this subject, *St. George's Hospital Reports*, vol. i., 1866.

REGISTRATION OF BIRTHS IN PARIS.—The plan of registering births by carrying the new-born infants to the *mairies*, which has been so long opposed by the Profession as a prolific cause of disease and death, is at last to be abolished. At a meeting of the mayors of the twenty *arrondissements*, who are the registering officers, it was determined that a special service of Medical Practitioners should be organised, whose duty will be to verify the fact of the birth at the residence of the infant's parent. Such a service already exists for the registration of deaths, no certificate for burial being granted without the Medical officer having verified the fact of the death at the abode of the defunct. This is, in some respects, a superior plan to our own mode of registration, which, as regards births, is not compulsory, and might, if a motive existed, be fictitious. So, too, with regard to deaths, certificates are often received from all kinds of persons.

DR. ARTHUR MITCHELL ON POLAR WINDS.—It is not simply, or even chiefly, their coldness which gives to east winds their peculiar power of doing harm. So far as health is concerned, temperature is unquestionably the most important element of climate. But co-existing conditions may greatly influence the effects of temperature. The hygrometric state of the air, for instance, may increase, diminish, or modify them. Cold air which is moist will have different effects from cold air which is dry, and the action of the latter, if it be still, will not be the same as it would be if in motion. It is often convenient to deal simply with one element of climate, like temperature, and such a procedure may give results of value. But we shall never know the true physiological action of climate till we deal with its elements in the various combinations in which they present themselves. . . . The physiological action of climate must be investigated as we investigate the action of any other agent proposed in therapeutics. And since climate is not simple in its nature, but complex and varying, we must endeavour not only to learn the action of each element, but the action also of the groups of elements in the varying combinations in which they actually occur. Some such groups are of frequent occurrence, and attract attention accordingly. The east, or rather the polar winds of spring, for instance, are steadily characterised by dryness as well as by cold; and we have therefore not only to consider their low temperature, but their low temperature combined with dryness, and these two again combined with motion. These remarks show that attention must be given to the hygrometry of our east winds when considering their effects on health; but they also indicate the method and scope of investigations in Medical meteorology. Such researches as those of Dr. Richardson on the effects of cold, and of Professor Tyndall on radiation, may properly be regarded as contributions to Medical meteorology. . . . . As an illustration of the practical value of looking at temperature and dryness together, I give the following interesting extract from the *Smithsonian Report* for 1865. Dr. Henry, one of the best experimental physicists alive, when speaking of Dr. Wetherill's account of the ventilation of the Capitol, says:—"From the investigations it appears that there is an abundant supply of fresh air forced into the chambers of the Capitol, but that in winter this is greatly deficient in the quantity of moisture necessary to form a comfortable and salubrious atmosphere. It must be evident that if, in an isolated space in winter, we desire to have air of the same salubrity and temperature as in an open space in pleasant weather in summer, we must artificially impart to this air not only the same degree of heat, but also an equal amount of moisture. In an atmosphere entirely devoid of moisture the human body exhales with great energy from every pore of the skin, and especially from the lungs and all the more delicate parts of the mucous membrane. Such an exhalation of moisture in the ordinary condition of the body would be far too great to allow of a healthy equilibrium between the natural excretion and assimilation; and it is with prevision, derived from long experience, that the savage anoints his body when exposed to an atmosphere rendered arid by refrigeration, to prevent excessive exhalation. The tendency of vapour to exhale from the body diminishes with the force of vapour already in the surrounding atmosphere, and a perfect equilibrium can only take place with air entirely saturated, at a temperature of 98°. But at the temperature of zero almost all the moisture of the atmosphere is condensed, and hence the tendency of the body in the open air to give off its vapour would be excessive, were it not for the condensation of the vapour immediately around the body, and retained in the interstices of the clothing. If, however, the surrounding air, without additional moisture, be heated to 70°, all obstruction to evaporation is removed, and excessive exhalation is the consequence. Besides this, the equalisation of the temperature is much more perfectly effected in the case of air properly supplied with moisture."—*Dr. Arthur Mitchell, in Scottish Meteorological Journal*, Nos. xix. xx.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

We reluctantly postpone our obituary notice of Dr. Cowan, of Reading, until next week.

Mr. Swann.—We shall be very happy to publish any cases or other testimony from Medical Practitioners, but we think that the credit of the hypophosphites would not be raised by our publishing the letter of our correspondent.

Oxford Examination Papers.—We have received the papers set in the recent examinations for the degree of M.B. at Oxford. We regret that the demands on our space will not permit us to publish them entire. We can, however, give them a deserved meed of praise as worthy the reputation of the University, the degree, and the examiners. They range over a wide field, as will be seen by the following, which we select as specimens:—

Materia Medica.—7. What are the active ingredients in the following mineral waters:—Harrogate, Bath, Tunbridge Wells, Carlsbad, Töplitz, Vichy, Vals, Aix-la-Chapelle, Aix-les-Bains, Bagnères de Bigorre, Pfeffers? *Pathology.*—4. What are the post-mortem appearances found after death by sunstroke? 8. What is the nature and what are the symptoms of locomotor ataxy? *Therapeutics.*—3. In Bright's disease of the kidneys, what indications for treatment are afforded by (1) urine of normal or high specific gravity, (2) urine of low specific gravity and copious, (3) urine of low specific gravity and scanty?

It may be perhaps objected that the next is hardly a question for a pass examination.

Forensic Medicine and Hygiene.—5. Detail M. Pasteur's plan for the preservation of wine, as tried in the French navy, and explain the principles on which it is based.

And the following strikes us as a little vague :—

Principles of Surgery.—1. Take the symptom of vomiting, (1) in a child; (2) in a young woman; (3) in a man injured in a railway collision; (4) in a middle-aged person; (5) in the decline of life; (6) after a severe Surgical operation. Select the most characteristic case you have seen in each class; give an opinion as to the probable cause of the symptom, and your reasons for the diagnosis you form.

Still, on the whole, the set of questions afford an admirable test of a young man's knowledge.

Additional subscriptions for Mrs. Jump and family received by the Rev. G. W. Winter, Litcham :—

	£	s.	d.		£	s.	d.
The Earl of Leicester	5	0	0	Mr. & Mrs. Tallent, Heigham	1	10	0
P. Ransome, Esq., F.R.C.S.	2	2	0	Mr. Marriott, Swaffham	1	0	0
Mr. Hewitt, Stamford	0	10	6	Miss Rudge, Cromer	1	0	0
Gordon Rich, Esq., Tonbridge	2	0	0	F. Godfrey, Esq.	0	10	0
Miss Lucy Davy	2	0	0	Rev. T. C. Hulbert	1	1	0
A Stranger	0	10	0	Mr. John Potter, Elmham	1	1	0
T. K.	5	0	0	R. A. Mason, Esq., Haslar	5	0	0
James Lester, Esq.	5	0	0	Mrs. Trego, London	1	1	0
				G. Thorne, M.D., Swanage	1	0	0

Received by J. Godwin Johnson, Esq., Norwich :—

	£	s.	d.		£	s.	d.
Dr. Copeman	1	1	0	Dr. Gibson	1	1	0
Per ditto	5	0	0	T. Crosse, Esq.	1	1	0
J. Godwin Johnson, Esq.	5	0	0	C. E. Muriel, Esq.	1	1	0
Per ditto	3	0	0	S. Payne, Esq.	1	1	0
Alfred Marster, Esq.	1	1	0	W. Cadge, Esq.	2	2	0
G. W. W. Firth, Esq.	1	1	0	Mrs. H. J. Muskett	1	1	0

Mr. Johnson has kindly consented to receive subscriptions for Norwich and the district.

SPEAR *v.* DOIDGE.

Subscription received, £1 1s. from Messrs. Robbins and Co., 372, Oxford-street, W.

THE FIFTH NERVE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the report of the last meeting of the Medico-Chirurgical Society, a case related by Dr. Althaus is called by him "unique." In what respect does he consider it to differ from *all* other cases of diseased fifth nerve?

December 5. I am, &c. F.R.M.C.S.

COMMUNICATIONS have been received from—

Mr. ISAIAH DE TOUCHE; Dr. LOWE; Mr. G. C. COLES; Mr. P. LE NEVE FOSTER; F.R.M.C.S.; Mr. HORACE SWETE; Mr. J. B. LAURENCE; Dr. PHILIPSON; Mr. J. F. COLLINGWOOD; Dr. W. H. PEARSE; Mr. EDWARD BOROUGH; Dr. A. DE NOE WALKER; Mr. J. CHATTO; Dr. BARNES; Dr. B. W. RICHARDSON; Mr. A. POLAND; Mr. J. B. CURGENVEN; Dr. JOHN JONES; Mr. H. SERGEANT; Mr. C. J. FOX.

BOOKS RECEIVED—

Monthly Homœopathic Review, December—The Practitioner, December—Thomas's Cases in Surgery illustrating a New Method of applying the Wire Ligature in Compound Fractures of the Lower Jaw—Journal of the Scottish Meteorological Society, October, 1868—Report of the Proceedings of the Association of Medical Superintendents of American Institutions for the Insane—The Melbourne Chemical Gazette—Sanitary Character of Andine Heights—Philipson on the Health and Meteorology of Newcastle and Gateshead—City Diary for 1869—Transactions of the Pathological Society, vol. xix.—Adams on the Sanitary Aspect of the Sewage Question—Powell's Medical Electricity.

NEWSPAPERS RECEIVED—

California Medical Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 5, 1868.

BIRTHS.

Births of Boys, 1136; Girls, 1035; Total, 2171.
Average of 10 corresponding weeks, 1858-67, 1878·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	826	846	1672
Average of the ten years 1858-67	725·8	722·4	1448·2
Average corrected to increased population	..	..	1593
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	1	24	1	2	8	2	..
North ..	618,210	2	16	22	2	13	15	3	..
Central	378,058	..	4	12	2	5	8	2	..
East ..	571,158	1	5	26	2	7	16	3	..
South ..	773,175	2	5	23	2	19	12	1	..
Total ..	2,803,989	8	31	107	9	46	59	11	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·546 in.
Mean temperature	45·6
Highest point of thermometer	57·4
Lowest point of thermometer	30·9
Mean dew-point temperature	43·2
General direction of wind	S.S.E. & S.W.
Whole amount of rain in the week	0·31

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 5, 1868, in the following large Towns :—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Dec. 5.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Dec. 5.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2171	1441	1672	57·4	30·9	45·6	0·31	31
Bristol (City)	167487	35·7	115	75	*69	..	..	..	..	..
Birmingham (Boro')	352296	45·0	239	171	140	56·3	30·4	44·9	0·91	92
Liverpool (Borough)	500676	98·0	347	290	275	56·2	32·3	47·8	0·52	53
Manchester (City)	366835	81·8	241	208	*227	55·3	30·0	44·5	1·28	129
Salford (Borough)	117162	22·7	90	59	88	55·2	30·7	45·2	1·16	117
Sheffield (Borough)	232362	10·2	174	122	120	55·3	26·7	42·7	1·09	110
Bradford (Borough)	108019	20 3	106	55	98	..	..	..	..	..
Leeds (Borough)	236746	11·4	186	120	178	59·0	27·0	42 7	0·64	65
Hull (Borough)	105269	34·4	77	50	55	54·0	26·0	42·2	0·76	77
Newcstl-on-Tyne, do.	127701	23·9	85	68	79	56·0	29 0	40·7	0·33	33
Edinburgh (City)	177039	40·0	106	85	108	54·7	32·0	43·3	0·50	51
Glasgow (City)	449868	88·9	348	262	335	54·0	37·3	44·4	1·73	175
Dublin (City and some suburbs)	319935	32·8	141	157	173	61·9	34·5	49·2	0·46	46
Total of 14 large Towns	6391080	34·7	4426	3163	3617	61·9	26·0	44·4	0·81	82
					Week ending Nov. 28.	Week ending Nov. 28.				
Vienna (City)	(1863) 560000	..	..	..	..	..	..	..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·546 in. The barometrical reading decreased from 29·86 in. on Sunday, Nov. 29, to 29·21 in. on Saturday, Dec. 5.

The general direction of the wind was S.S.E. and S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

December 12. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

14. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

15. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Sir Duncan Gibb, Bart., M.D., "Character of Voice in Asiatics, Africans, and Europeans." Dr. Carter Blake, F.G.S., "French and Belgian Cave-dwellers."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

16. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Dr. E. Headlam Greenhow, "On Motor Asynergy (Tabes dorsalis, Locomotor Ataxy)."

18. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m. Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

On some Forms of Functional and Local Paralysis.

The character of progressive muscular atrophy, and the results of slow poisoning by some of the metals, naturally suggest to our minds some other forms of paralysis occasionally met with, and which appear to be due to the cessation of some natural nervous influence. For example, there is the case before alluded to, where an injury to an ordinary compound nerve will produce a paralysis of all its functions, and the result is a loss of sensation, of motion, and of the nutrition of the parts to which the nerve is distributed, the vasomotor portion affecting the blood-vessels, producing at first their dilatation, with an increase of temperature, followed by an atrophy. Then, again, there is the so-called joint evil of the West Indies, or *lepra anæsthetica*, in which the fingers shrink, and where the nerves have been said to be much affected.

A paralysis by pressure on a nerve may be occasionally met with under a variety of circumstances. One of the simplest is where a man falls to sleep with his arm hanging over the back of a chair, and when he wakes finds the limb powerless. I have seen more than one such case where recovery did not take place for three weeks. Slighter effects of the same must have been experienced by all, and the return to life of the limb with a sensation of "pins and needles." The cause of this has been suggested to be due to the fatty matter of the nerve having been squeezed out of its place for some distance, and thus the current has been virtually broken; but that when the globules run together again the galvanic current is restored in an interrupted manner, and so the succession of small shocks is produced.

I had last year in the clinical ward a man with a partially paralysed arm which was due to his sleeping for several hours on a stone-floor whilst drunk, the alcohol acting (as you know) as an anæsthetic. He did not recover the use of it for a long time. Very often we have cases of paralysis of a limb without any apparent cause; thus I had under my care not long ago a young man in whom the left leg had been gradually wasting and becoming useless for some months. There had been no history of an injury to account for it. The cause, whatever that may be, was in all probability the same as that which produces paralysis in children, the so-called *infantile or essential paralysis*. This common disease is perhaps the most remarkable form of paralysis we meet with, because no light has yet been thrown on its nature. It has, I know, been often ascribed to teething, and said to be cerebral in its origin, but this affords no explanation, for in many cases no other malady but the paralysis has been observable. A child one or two years old, for instance, goes to bed well, and when taken up in the morning is found to have one of his legs paralysed; the child can no longer support his weight upon it, but it dangles helplessly from him and soon begins to waste. In other instances it is the arm which is affected. Formerly, at the Infirmary for Children and amongst the out-patients here, I saw numbers of such cases, and I then thought it possible that very slight causes might induce the paralysis, for, amongst several cases which I collected, (a) I remember more than one where a fall had been received, and in one instance, of a little boy, it was clearly proved that he had been sitting on his leg looking out of a window for some time previously. When the nursemaid put him to bed, he complained of the leg, and in the morning he was quite paralysed. Whatever may be the pathology of infantile paralysis, no organic cause has yet been discovered; and therefore I see no reason why some other varieties may not come under the same category, and why even a similar affection should not occur in adults. For example, we sometimes see hemiplegia and paraplegia coming on without evident cause, but in these cases we generally suppose the existence of some mischief in the brain or spinal cord.

The constant use of a particular set of muscles will in time exhaust them, and even set up an irritation in them productive of pain; of this kind is the complaint known as *writer's cramp* or *scrivener's palsy*. I am now seeing a young man engaged at a banking-house, who, for four years, has been troubled with weakness and pain in his right arm. If he rests it for a month, he quite recovers; but as soon as he begins to use the hand in writing, a feeling of pain or cramp runs up the muscles of the forearm. Another banker's clerk whom I saw some time ago was obliged to change his occupation for an out-of-door employment, and he now informs me that his arm is quite strong. I have another young man, a clerk, now under my care, whose trouble after writing is a numbness in the ring finger. I ought to tell you that we sometimes meet with similar cases where we have no evidence of overwork done by the muscles, although we may strive to make the patient admit this in order to frame a theory for the case. Thus, lately I have seen two such instances. The one is a gentleman, about 30 years of age, of no occupation, whose left arm is weak; he has no pains in it, but a kind of tired feeling. I can discover no local cause for it, and there is not the slightest indication of any central mischief. The other is a man, about 40, a builder, and in good health, but for eight months his left arm has been gradually getting weak and paralysed. In these cases it is probable that the nerve is temporarily affected. We are forced to admit this when pain is present, as in neuralgia of the limbs, and therefore we may regard this as due to an analogous condition where the motor function is for the time in abeyance. Occasionally we meet with a definite cause, as in the case of a gentleman who has consulted every distinguished Surgeon and Physician in this country and on the Continent. He fell and struck his elbow, thereby injuring the ulnar nerve, and permanent paralysis has resulted.

Much allied to this class of cases are those where the arm is not only weak, but shakes; to these we give the distinct name *paralysis agitans*. I have already informed you that tremor implies feebleness, as you see in the drunkard or in advancing age. Consequently the old man not only totters when he walks, but as he is sitting in his chair his hands shake and his head nods. If you see this in an old person, you may put it down to decay, but such explanation does not apply to all the cases we meet with, for sometimes paralysis agitans is seen in younger persons, and those in good health. Thus, a tradesman, aged 47, has been under my care, and that of several other Medical men in London, for this complaint, and I hear that he has received benefit from none, but is growing worse. About a year before I saw him a trembling commenced in the right arm. This gradually increased until the whole limb was constantly in a state of agitation; when it was held or supported, the movements were somewhat restrained, and it was quiet when he was asleep. There was no wasting. He had no other nervous symptoms whatever, and appeared indeed in good health. On questioning him about an injury, he said he had had a fall six months before, but I could not learn that it had in any way injured him. I am now seeing a lady, about 45 years of age, who sits in her chair all day, with both her arms constantly shaking. This has been gradually coming on for a year past. There is some want of power, but no wasting and no loss of sensation.

The connexion between irregular movements and debility of the muscles is well marked in the case of chorea. In this disease not only is there the perpetual movement of the limb, but it is proportionally weak, so that it often happens that the motion may cease whilst the debility remains, and the case then constitutes one of *choreal paralysis*. It is important to recognise this, because a child may come before you for the first time with a weakened limb, and without any symptoms of chorea, and yet this disease is the originator of the paralysis, and the one which requires to be treated. Not only may a limb suffer, but the whole body; thus you may not unfrequently have a very bad case of chorea to treat, where in the course of two or three weeks all movements cease, but at the expiration of this time the child is quite unable to stand, or even move from the bed. A rapid recovery, however, often occurs.

Perhaps the most remarkable instance of general paralysis with which we meet, arising from exhaustion of the cerebro-spinal centres, is that succeeding to diphtheria, and which is usually styled *diphtheritic paralysis*. Since the throat is the part most violently implicated in the original complaint, and since this also is the part which often loses its power, it has been thought that the paralysis really has its origin or cause here, and that the whole body is affected by a reflex action. Be this as it may, it is remarkable, as is true of the sequelæ of many other disorders, that I have met with some very severe examples of the paralysis where the diphtheritic affec-

(a) See *Lancet*, April 18, 1868.

tion was but slight. This paralysis is more deserving of the name *general* than any other which I know, for all the physical powers are affected, and sometimes the mind enfeebled. The patient becomes utterly helpless, quite incapable of standing or moving the arms, the face loses its expression, the saliva runs from the mouth, there is thickness of articulation, and difficulty of swallowing; in fact, the patient has the appearance of an idiot, and much more so if not completely paralysed and able to walk, for then he stumbles along, and, with his head hanging forward and his vacant stare, looks like an imbecile. There is often amaurosis, deafness, and paralysis of the sphincters. The child generally recovers, unless there is that amount of paralysis of the palate which prevents him swallowing, and then he sinks from exhaustion.

As another form of functional paralysis, I may mention the hysterical, but which is of a peculiar nature. It is a case where the mechanism is good, but there is a want of will to work it; as a consequence, however, a real weakness may result, accompanied by wasting of the limb. This is cured by galvanism and other means, as I shall afterwards describe.

I will here just allude to another form of paralysis, lately described by Duchenne under the name of "la paralysie musculaire pseudo-hypertrophique ou paralysie myo-sclérosique." It is characterised by feebleness of movements, especially those of the legs and loins; at the same time, the limbs, instead of being wasted, are much increased in size, but this is due to the production of fibrous tissue and fat in the interstitial tissue of the muscles. Duchenne describes cases of children who, when a few months old, begin to totter in their walk, and yet at the same grow into the form of an athlete or an infant Hercules. He employs a harpoon in order to examine the muscular fibre, as in suspected trichiniasis.

In speaking of functional paralysis, you must know that a considerable difficulty attends the explanation of the cases which resemble in every way those organic forms of disease which I have mentioned, but yet, being recoverable, cannot be considered as identical with them. I have told you that the changes which our naked eyes or microscopes detect are all of the destructive kind—broken fibres, or the presence of new products which have taken the place of the old; we can only conjure up to our fancy some of those alterations which we please to call dynamic. In the case of the brain and spinal cord it is possible that changes may occur of a rougher and material kind, and yet be not perceptible; for we must remember that nerve-substance is complex, and that blood is a necessary ingredient for its integrity. Let the blood supply be deficient, and its function is gone. A good example of this is seen in the case where the carotid artery is tied, and a hemiplegia quickly follows, but which is speedily recovered from when a fresh supply of nutrient fluid arises.

What change takes place in concussion of the brain and spinal cord we do not know, but it is one which implies such a derangement of the integral portions of the nerve-tissue that its function ceases for a time.

Such instances of temporary and recoverable paralysis have suggested an explanation in this deficient blood supply, and since it is known that the blood-vessels are regulated by the sympathetic nerves, we have nothing more to do than suppose an irritation of these nerves in order to arrive at a theory of the cause of functional paralysis. I should not, perhaps, use the word "functional," for it is believed that the alteration, though a temporary, is a real one. A disease of the kind induced by an external irritant is styled *reflex paralysis*. It is thought, I say, that the blood-vessels are thereby diminished in calibre, that the blood supply to the spinal cord is diminished in amount, and its power departs. Since a temporary paraplegia, or one which, if fatal, has shown no organic change in the cord after death, has been associated most frequently with some urinary disturbance, the cases of the kind which I describe have been mostly styled *urinary paraplegia*. You are aware that the theory can scarcely admit of actual proof, and is rather accepted because we have no other explanation for those cases of disease where the usual morbid appearances are wanting. Dr. Gull long ago expressed his doubts, and showed that a phlebitic process might be accepted as far more explicable, and with him I cannot but think that the negative evidence is important in resolving the question—such, for instance, as the statement of one of my senior colleagues, who has had immense experience in all diseases pertaining to the urinary organs, and yet is unacquainted with reflex paralysis as one of the consequences of them: in fact, he does not remember a single case in connexion with stone in the bladder. Paraplegia and urinary troubles so often go together that it may be difficult in any particular case to ascertain which has preceded the other; thus, quite lately I have been attending a lady who has had partial paraplegia and acute nephritis; she is now recovering. What relation these two complaints have had to one another, or which is the primary one, I cannot say. Whatever explanation is given—and the theory of the diminished supply of blood through nerve irritation may serve for the purpose—certain it is that a temporary paralysis may be frequently met with, not only in connexion with urinary disorders, but in several other affections. Thus, I might mention the case of paraplegia succeeding to labour; this is perhaps not common, but every now and then we meet with it. It has been said that a pressure on the sacral nerves would suffice for the understanding of it, also a pressure on the psoas and iliacus muscles; but these causes must be regarded as very doubtful, although I believe cases do sometimes occur where most excruciating pains have accompanied the passage of the head into the pelvis, and these have been followed by a temporary paralysis. Dr. Fussel, in a paper on this subject in the *St. George's Hospital Reports*, states, on the authority of Mr. Youatt, that cows not infrequently suffer from paraplegia after calving, that they lie down, are quite unable to move their hind legs, and apparently do not feel in them when they are touched. In about a fortnight the cows get up well. In such cases the theory of reflex paralysis might be made to apply.

The doctrine is applicable, of course, to many other cases, as, for example, to the paraplegia which occasionally has been observed to follow typhoid fever, and where the disease would be reflected from the ileum. Then, again, the case of diphtheritic paralysis, which I have already alluded to, instead of being regarded as due to simple exhaustion of the whole nervous system, might be referred to a lowered condition of the spinal cord owing to a deficiency of good blood supply arising from an irritation of nerves in the throat. So also the cases of acute paraplegia following direct exposure to cold might be considered due to a similar cause. In corroboration of the possibility of a deficient blood supply being all-sufficient to render the cord functionless, I might mention the case of paraplegia following obstruction of the aorta which occurred here some years ago. That there are causes in operation sufficient to render the brain and spinal cord powerless, and yet beyond our ken, I have already referred to in speaking of concussion, but I might allude to the more striking case of sunstroke. Here the effect on the brain is sufficient at times to paralyse its action and cause instant death, at others to effect those changes which are subsequently shown as epilepsy or mania. It is remarkable, however, as I before said, that changes in the brain which are invisible may be the precursors of ordinary inflammatory attacks—at least, I judge so from the fact of there being well-authenticated cases of children having died in a day or two after exposure to the sun, and inflammatory lymph having been found at the base of the brain and in the ventricles.

I ought also to allude to the doctrine of peripheral paralysis—that is, that the nerves are not injured at their source, but in the course of their distribution. One of the commonest examples of this form is the facial paralysis arising from exposure to cold, or *coup de vent*, as it is often styled. Of the same kind might be the case where a man was paralysed in his legs from standing for some time in cold water, although here the theory of reflex action might come in. More than one such case has been recorded where, after exposure, sensation and motion were lost, ending in a permanent paralysis at last proving fatal, and where after death a chronic inflammation of the medulla and membranes was found.

The greatest difficulty which I have in my own mind in adopting any opinion in explanation of those cases of paralysis which recover, is that such cases are not uniform, but assume the character of every variety of nerve disease with which we are familiar. I can understand how a concussion of the spine can affect one region of the spine rather than another, or even by chance injure the exterior rather than the interior, or *vice versâ*; and I can also understand how in urinary paraplegia the lower part of the cord may be especially involved, and in diphtheritic paralysis the upper; but it is difficult to conceive how one particular strand or a certain functional area is to be alone affected by such causes as I name, and yet certain limited portions of the cord would appear to be temporarily affected. Suppose, for instance, we hold clearly in our minds what is the actual change in the cord when there is paraplegia of motion, paraplegia of sensation, locomotor ataxy, or progressive muscular atrophy, we are bound to believe that those

same parts are affected whenever the same symptoms exist. We have, then, the problem before us which during the last few months has been asking for solution in Stephen ward—first in the case of a man who perfectly recovered of a partial paraplegia of four years' standing; then in the case of a man with symptoms of locomotor ataxy who recovered; also in the case of a man with early progressive muscular atrophy who quickly recovered under the application of the continuous current down the spine, and more remarkably still the case of the girl lately alluded to, who was little more than a skeleton owing to the same disease, and yet perfectly recovered under the use of faradisation. I say we want to know what must be the condition of the cord in these cases which recover. If we are led to believe that organic changes take place in certain portions of the cord in those instances which are fatal, we might, as a matter of easy explanation, suppose that the same changes had occurred in those which recover, but, being in their incipient stage, were removable by remedies. If we are not content with this explanation, and are satisfied with the doctrine of reflex paralysis, or some analogous theory, then we must regard the several portions of the cord much more anatomically and physiologically distinct than we have otherwise done; and it may perhaps be even necessary to admit this in order to explain the selection of parts for the severer organic changes.

Although it may appear difficult to understand the condition of the spinal cord in temporary or curable paralysis, it is less easy to comprehend a functional affection of a nerve. Yet we find a particular nerve, or the parts which it supplies, variously affected, and we meet in one case with a neuralgia, in another anæsthesia, in a third a spasm, and in a fourth actual parlysis of some special muscles. One of the simplest theories which we have to explain the phenomena is that of reflex action; as, for instance, if pain exist in a particular spot, and we discover some source of irritation elsewhere, and we know that a nervous communication exists between the two localities, we at once have our explanation. It is one which can be proved to be true in many instances. Cases of paralysis of a nerve of motion, shown by loss of power in a certain part of a limb, I have already alluded to; but after endeavouring to discover every possible local cause for the paralysis, we are often left without an explanation. Alteration in sensation is very common; it implies either a most important or deep-seated disease of the spinal cord, or is a mere temporary trouble of little importance. For example, in the very worst forms of paraplegia, anæsthesia is one of the symptoms, whilst, on the other hand, we have patients who are able to walk about and present no appearance of disease, and yet declare that they have lost all feeling in some particular part of the body. These persons are mostly hysterical women, so that we may generally diagnose from this symptom the nature of the complaint. In these persons you will often find what I have before mentioned, the remarkable difference which exists between anæsthesia and analgesia, or between the insensibility to touch and the insensibility to pain. Of course, where the first abnormality exists, the second must also; but it is remarkable that the ordinary sensation of touch may be perfect, and yet the patient be insensible to pain. Thus it is not at all uncommon to see an hysterical woman who can feel well, as in using a needle for the purpose of stitching, and yet could bear that same needle to be thrust through her skin without flinching. With this cutaneous analgesia there is often also a muscular anæsthesia, proved by the action of the galvanic battery, which, although producing the ordinary contraction of the muscle, will cause no painful sensation.

Then we meet also with strange and perverted feelings in some part of the body, as "pins and needles," or tinglings in the tips of the fingers. These may denote a central disease or be altogether local. They may be premonitory to apoplexy or ramollissement in patients where the vessels are diseased. An old gentleman whom I know has thus suffered for three years without any relief. Also in Bright's disease such symptoms are not at all uncommon. They are often experienced by gouty persons, especially when rising from bed in the morning. When every explanation has been sought in vain to account for this affection, we must regard it as purely functional. I have quite lately seen a young man who, on several occasions during the last two years, had paroxysms of tingling in his left hand. He is highly nervous, and almost hysterical at times. It probably is due in some cases to cardiac disturbance, seeing that the sensations are described exactly in the same parts as felt in angina pectoris.

Then not only may the motor function of a nerve suffer, and all its sensory functions, but also that portion of the nerve which rules over the blood-vessels and nutrition. This is seen in the case of young people whose fingers become dead. I have observed the phenomenon mostly in those persons who have weak digestion, and whose circulation flags after a meal; instead of feeling refreshed after eating, they become chilly or cold, and then perhaps one particular finger will gradually lose its colour until it becomes dead. It is quite white; no blood can be seen in it, and sensation is lost, just as if it had been subjected to a freezing process. This only endures for a short time, and the circulation returns.

Then we meet with cases of over-sensitiveness of a part, or hyperæsthesia. This may have its origin in spinal disease, more especially in that arising from injury or shock, in which we consider that a membranous inflammation may have been set up. If no such explanation can be given, hyperæsthesia may be regarded as a functional affection, and is generally associated with the hysterical condition. In fact, altered states of sensibility are some of the most characteristic symptoms of hysteria.

Local pains in the course of nerves might serve for the subject of a volume. We endeavour, by tracing the nerve to its root, to discover any source of irritation. If we are unable, we say the complaint is functional—we style it neuralgia. If the pain be due to a morbid or over sensitiveness of the nerve centre, we style the case one of hypochondriasis. The pain may be in the trunk, its branches, or the periphery. In all these varieties we use the term neuralgia. When we consider that the pain is in the muscle, we adopt the term myalgia or myosalgia, and I think it convenient to have a name for muscular pain, or muscular rheumatism as it is often called. A neuralgia may or may not be accompanied by hyperæsthesia; in some cases there is an over-sensitiveness of the painful part—in others relief is obtained by hard rubbing or pressure. So little is positively known of the actual state of the nerve that we are compelled to adopt the simple term neuralgia, as though it constituted the disease. Thus there is the well-known painful affection of the leg known as sciatica; but you may meet with cases where the anterior crural is the nerve more especially affected. You may also not unfrequently meet with a corresponding disease in the arm which is styled brachialgia. I have seen within a very short time three such cases; and it is remarkable that the right arm was affected in all of them—in one it was more especially the ulnar nerve, and in another the musculo-spiral, which was implicated. Two of the patients were of gouty constitutions. Sacral and lumbar neuralgia are also very common.

As regards the face, the complaint is well known under the name of tic douloureux; the fifth is the nerve involved, and according as a particular branch is affected so is there a special name affixed to the disease. The pain in the face and head is often much more diffused than the distribution of the trifacial will explain, and this is accounted for by its connexion with the seventh pair and other nerves. It may be, however, in cases of fixed pain at the back of the head, that the cervical occipital is especially affected. These neuralgias of the face may arise from an organic cause, or from reflected irritation, as a carious tooth. In very many cases, however, we are compelled to call the neuralgia functional, and remain quite innocent of any explanation. It is, of course, always pleasing to a Medical man when he can discover a definite cause for a long-continued ailment; for he not only, perhaps, at once is able to assuage the patient's sufferings, but he can indulge in a very praiseworthy self-satisfaction upon the solution of a scientific problem. In very many organic diseases which finally become self-evident, obscure symptoms may have existed for a long period, and thus in a great many cases of obstinate pains a cause may eventually show itself. A very careful Medical man, however, may often discover a local cause for a pain which a more careless practitioner has overlooked. Thus caries of the teeth will give rise to neuralgic affections far distant from their origin in the decayed tooth. Of this kind Mr. Salter has collected a large number. It is your paramount duty, therefore, in all cases of neuralgia of the face, head, neck, and adjoining parts, to examine the mouth, in order to discover if a carious tooth be at the bottom of the mischief. I think, however, judging from my own experience, that you do not require any hints in this direction, for I generally find that Medical men are quite ready to extract teeth for all facial pains, and, I am sorry to say, often without success. If we regard the subject without bias, we must say that carious teeth do certainly give origin to various neuralgic

affections, but we must also confess that these affections are often quite unconnected with the teeth; this is shown by the fact of their constant extraction without any relief to the patient. I have seen many cases where every tooth in the head has been pulled out for the treatment of neuralgia, but without the slightest benefit whatever. As a proof that many neuralgias are purely functional, we must remember their intermittent character. A patient may have a most violent neuralgia, lasting for days or weeks; this will entirely disappear and again recur. This intermission may go on for years.

Then, again, these neuralgias exist in other parts, as in the joints and mamma or testes. In the former we might consider the patient to be hysterical, and the affection to be due to an extra-sensitiveness of the nerve centre, but in the last-mentioned case we must suppose the cause to be local. Thus, a gentleman, about 60 years of age, after getting cold, as he thought, was seized with a most violent pain in one of the testes. He had recurrences of this every few weeks for four years. The pain was most severe, quite unfitting him for business, and he only obtained relief after a few hours by hot applications and chloroform. The attacks then ceased altogether for some years, but they have lately returned, and are now in the other testicle. Neuralgia of rectum is also not uncommon. Neuralgia may also occur in the different organs of the body, as the heart or stomach. This is important to know, as suggestive of the proper remedy.

If the pain be not in the course of a nerve or in its ramifications on the skin, but in a muscle, we use the term "myalgia." Opinions vary much as to the frequency of this kind of pain. Inman in our country, and Briquet in France, consider that many pains which we suffer are muscular in their nature. The latter writer goes so far as to state his belief that many of the complaints styled cephalalgia, pleurodynia, are really muscular. These pains are mostly met with in hysterical women, and he considers them all to be myosalgic, giving to them the various names thoracalgia, rachialgia, epigastralgia, cœlialgia, and, if in the limb, myelosalgia.

Then we meet with temporary contraction of muscles. The most remarkable case is that of wry neck. It is often, however, observed in the hands of hysterical women. They hold their fingers stretched out, declaring they are unable to bend them. This condition may last for weeks, and then suddenly disappear.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE III.

OF THE GERMINAL MATTER OF THE TISSUES OF THE BODY—VERY SOFT CONNECTIVE TISSUE—WHITE FIBROUS TISSUE—YOUNG AND OLD WHITE FIBROUS TISSUE—REPAIR—GERMINAL MATTER OF THE CORNEA—OF YELLOW ELASTIC TISSUE—OF CARTILAGE—OF THE GERMINAL MATTER AND OF THE FORMED MATERIAL OR MATRIX—OF ARTICULAR CARTILAGE—OF THE GERMINAL MATTER OF FIBRO-CARTILAGE—JUNCTION BETWEEN CARTILAGE AND TENDON—OF SPONGY AND ELASTIC CARTILAGE.

THE tissues of which the internal organs of animals are composed vary remarkably in structure, composition, and properties. We find various gradations of resistance and density, from a texture of such extreme tenuity as to be scarcely demonstrable, to the firm, fibrous, cartilaginous, and osseous tissues, the hardness of which renders their investigation difficult. All tissues are, however, formed from masses of germinal matter alike in general character, though differing vastly in power.

FIBROUS AND CONNECTIVE TISSUE.

Vitreous Humour.—This texture is so delicate that no structure can be demonstrated, even when examined under high powers, and it contains so little solid matter that 100 parts lose by evaporation upwards of 99. It probably forms a delicate web, in the meshes of which the watery fluid is retained. At an early period of development numerous masses of germinal matter may be demonstrated in every part of the vitreous humour, and from each one may be traced extremely delicate fibres, which may be followed for some distance, but are at last lost sight of from their tenuity. Fibres no doubt exist which are too delicate to be seen. As development advances these masses of germinal matter become separated from one another by an increasing extent of delicate tissue, and many of them disappear, but some on the surface may be detected even in the adult, and probably are concerned in the formation of new tissue at the circumference, as well as in certain changes occurring in disease, which may result in a complete alteration in the character of the vitreous.

The mucous tissue of the umbilical cord (the jelly of Wharton) is one of the simplest forms of fibrous connective tissue, and one well worthy of attentive investigation. Like the vitreous, it contains very little solid matter. Its mode of growth is interesting, and it affords an excellent opportunity of studying one way in which interstitial growth and expansion in every direction are provided for. In very young tissue oval masses of germinal matter are seen arranged round small circular spaces. They divide and subdivide, and move in a direction outwards from the centre of each space. From each a delicate fibre extends, which intertwines with the fibres from adjacent masses of germinal matter. The germinal matter extends at the circumference of each circle, while the previously formed tissue remains in the central part. Thus it happens, when the tissue has grown to a certain extent, more or less circular spaces, occupied by very delicate fibrous tissue, are seen free from any germinal matter whatever, while the latter exists only at the circumference. These spaces increase in diameter as the tissue advances in development. In this way growth takes place equably in all parts of the gelatinous tissue.

The structure of the tissue is well seen in specimens 35 and 36 under a low power. When it is examined under a power of 700 diameters, each elementary part is observed to consist of, 1, the oval mass of germinal matter prolonged in either direction for a short distance, and exhibiting oil-globules in consequence of change having taken place after death, and, 2, the delicate fibrous tissue externally, which may be torn and frayed out without difficulty.

The extensions of the germinal matter into the fibrous tissue have been mistaken for tubes, and it has been supposed by Virchow that these tubes anastomose throughout the tissue, and constitute a system of channels for the conveyance of the nutrient juices. But it need scarcely be remarked, first, that the supposed channels do not in all cases anastomose; secondly, that they contain germinal matter and imperfectly developed formed material, not fluid, as has been supposed; and, thirdly, that nutrition is more perfectly carried on by the tissue itself being permeated everywhere by the fluid flowing to and from the germinal matter, than it would be by any system of nutrient tubes like that imagined to exist.

Connective tissue has formed the battle-ground of many a scientific conflict, and the most extreme views have been entertained concerning its nature. By some it has been looked upon as one of the most important and necessary of tissues in the organism, contributing to the support of higher and more complex textures, and concerned in the distribution of nutrient material to them. It has been maintained that some parts of the nervous system consist almost exclusively of connective tissue, which has long been regarded as a most important constituent of nerve organs, being the tissue in which the nerves are supposed to *end*. But, in opposition to these views, a great array of most important facts can be advanced. In some of the lower animals remarkable for their elaborate and delicate textures no connective tissue is to be found, while in the higher animals and man scarcely a trace of the texture is to be met with at a very early period of development when the tissues are very soft and delicate, and when, therefore, they are most in need of support, and require a vast amount of nutrient material distributed to them in the most perfect manner. Moreover, the mode of formation of connective tissue is opposed to the above views. Connective tissue seems to result in many cases during the growth of higher and more important textures. The intervals between nerves, muscles, and other tissues, and between the constituent parts of these tissues respectively, are occupied by connective tissue. When a tissue or organ is to be developed, its germ always originates from

germinal matter occupying the centre of a collection of masses of germinal matter. As its development proceeds, the superficial masses are pushed further outwards; and, instead of taking part in the formation of the particular tissue or organ in question, their formative power is limited to the production of this indefinite fibrous or connective tissue. As organs and tissues decay, much of their structure is removed, but a residuum which remains is known as connective tissue, the masses of germinal matter of which correspond in many cases to those of the original cells or elementary parts of the tissue or organ which has wasted. Nerves, muscles, the tissue of the brain and spinal cord, the glandular tissue of the liver, kidney, and other organs, may thus become converted into what is termed connective tissue, a form of which may even be produced from white blood and lymph corpuscles. In all kinds of connective tissue the relation of the germinal matter to the fibrous tissue or formed material is the same. In disease the masses of germinal matter often increase in size and multiply in number, giving rise to new connective tissue, which is added to that which already exists, and often leads to the condensation and alteration in properties of the original texture.

In many kinds of connective tissue, besides a delicate texture closely resembling certain forms of white fibrous tissue, there are some fibres exhibiting the reactions of yellow elastic tissue. These fibres differ in character and number in different cases. Some of them consist of elastic tissue developed from nuclei or masses of germinal matter, as will be presently described. In some tissues these fibres are probably the remains of nerve fibres or capillary vessels which had been active at an early period of life, while, in many instances, they result from the prolongations of the germinal matter of the tissue being converted into imperfectly developed fibrous tissue, which, like germinal matter itself, is not rendered transparent and caused to swell up by the action of acetic acid.

White fibrous tissue consists of a firm, hard, whitish material which yields gelatine by boiling. The toughness and resisting property of skin depend upon this tissue. The germinal matter of all kinds of white fibrous tissue is continuous with the fibrous tissue or formed material as shown in specimen 37. If you examine a small portion of white fibrous tissue, as tendon, at a very early period of development under a power of 200 diameters, you find that it is composed of oval masses of germinal matter, with a very little intervening fibrous structure. At a still earlier period of its existence, it contained a still larger proportion of germinal matter. As growth proceeds, the fibrous material increases, and the germinal matter relatively decreases, so that when it reaches its adult form the principal portion of the structure consists of fibrous material, while there is comparatively only a very small quantity of germinal matter. To state this more clearly—in equal portions of young and adult tendon the proportion of germinal matter is very different. There may be five or six times as much in the former as in the latter. In specimen 37 is seen a piece of young tendon, and in 38 a portion from an old man 74 years of age. The contrast between the two specimens in the proportion of germinal matter which corresponds to a given amount of formed material is very striking. The formed material increases as the tendon is developed, and at the same time it undergoes condensation. The fibrous material is continuous with, and has been formed from, the germinal matter. Like other kinds of formed material, it possesses no power of absorbing nutritive material, nor can it convert this into tissue like itself. All additions to its substance take place at those points only at which germinal matter exists.

The little masses of germinal matter situated at regular distances throughout the tissue, and having the appearance of nuclei, are the only parts engaged in the process of growth, and upon the outer part of each is a layer of soft matter in a transition state. From each there extends, some distance amongst the fully formed tissue, threads of imperfectly developed formed material which resists the action of acetic acid and refracts highly—circumstances which have led to the opinion that from each nucleus fibres of yellow elastic tissue were prolonged, and, as a consequence, it was supposed that the "nuclei" and their supposed "fibres," or nuclear fibres which were embedded in the white fibrous tissue had nothing to do with its formation. The former were supposed to represent *cells*, and the latter an *intercellular substance*. Careful examination of properly prepared specimens of the same kind of fibrous tissue at different ages will, however, convince you that these doctrines are untenable, and that the facts may be satisfactorily explained upon the more simple view of the structure and formation of fibrous tissue I have ventured to bring before you.

Repair of White Fibrous Tissue.—This simple tissue is repaired after injury by the development of tissue of the same character. White fibrous tissue, there is reason to think, may be formed by white blood-corpuscles, or by the masses of germinal matter descended from them. In the repair of injuries to arteries and veins, Mr. Lee and myself traced the production of white fibrous tissue in what was clearly at first but fibrin deposited from the blood, and I have shown that the recent lymph in certain inflammations has a similar origin, and is formed in the same way. In the repair of a divided tendon, masses of germinal matter probably result partly from the multiplication of the adjacent germinal matter of the tissue itself, and partly from the white blood-corpuscles which have escaped from the divided vessels, or from masses of germinal matter descended from these.

Germinal Matter of the Cornea.—Stellate masses of germinal matter are remarkably distinct in the corneal tissue, where they exist in great number, and possess long branching processes which anastomose freely with one another, and which may be distended with fluid, or contain very little, as was explained in the case of the branching pigment cells of the frog. These are the so-called corneal corpuscles, and are to be demonstrated in the corneal tissue of all animals. Amongst them are, however, masses of germinal matter which belong to the nerves, and some few which are not connected with any tissue (wandering cells of Recklinghausen). In specimen 41 numerous stellate masses of germinal matter are seen very distinctly, and the anatomoses between the radiating processes can be detected without difficulty. These bear to the firm but transparent corneal tissue just the same relation as the stellate masses of germinal matter existing in certain specimens of tendon bear to that texture. The number of these freely connected masses of germinal matter disseminated through the corneal tissue renders this texture permeable to fluids, and probably allows great alterations to take place in its internal structure, as well as in its thickness and perhaps in its refractive power, during life. In properly prepared specimens, the masses of germinal matter which are connected with the nerve fibres may be shown to be distinct from those of the corneal tissue, and the finest ramifications of the nerves which may be traced in the substance of the corneal tissue to have no connexion with the radiating processes of the corneal corpuscles or with the germinal matter of these bodies. Kühne some time since published a memoir in which he endeavoured to prove that some of the processes of the corneal corpuscles were continuous with delicate ramifications of the nerve fibres; (a) but although I have seen many specimens which on first sight appeared to justify such a conclusion, I have been convinced, on further and more careful examination, that this was not the case, and I have been able to focus the delicate nerve fibre distinct from the prolongations of the corneal corpuscles, and in many cases to prove that these bodies were situated upon different planes.

(*To be continued.*)

COURAGE OF RUSSIAN PATIENTS.—The Russian patient is very despairing, and, in nine cases out of ten, fancies that he is going to die whenever he is ill. It is enough for a servant to get a splinter into her finger, and for the place to gather or become inflamed, for her to give warning solemnly with floods of tears, and to make up her mind that St. Anthony's fire, as they call mortification, is coming, and that she must prepare her shroud. Yet in an hour or two you may find her at table eating black bread and kasher with a truly enviable appetite. —*Romanoff's "Sketches of Greco-Russian Church."*

POPULAR MEDICINE IN RUSSIA.—People fall ill, take medicine, and die, or get better (as may happen) quite differently in Russia to what they do in England. There is far less lying in bed, infinitely less physicking and fussing; but there is much more groaning and despairing on the part of the patient, and an apparent indifference on the part of the friends founded on their unbounded trust in the Almighty and unbelief in Doctors. It is seldom that a peasant makes up his mind to seek Medical aid until he is past, or next to past, cure. The lower orders have no idea of diet, and insist that the sick person shall eat what his "heart" desires.—*Romanoff's "Sketches of the Greco-Russian Church."*

(a) "Untersuchungen über das Protoplasma und die Contractilität."

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.(a)

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON THE THERAPEUTICAL VALUES OF PEROXIDE OF HYDROGEN AND OZONIC ETHER.

(*Concluded from page 663.*)

THERAPEUTICAL VALUE OF THE PEROXIDE OF HYDROGEN CONTINUED.

MESENTERIC DISEASE.

THREE cases of mesenteric disease were treated with peroxide of hydrogen. Two of the patients were youths, one a child. They were all anæmic and cachectic. The peroxide was given in free doses in each case, with small doses of iron. The child was far advanced in disease when the treatment was commenced, there being effusion into the peritoneum. It lingered on a long time, but ultimately sank. I am unable to say that the peroxide did any service. The two other cases, occurring in young men, were more favourable. The first of these was placed originally on cod-liver oil and quinine. He could not continue to take the oil, owing to the nausea it excited. I therefore stopped it, as well as the quinine, and ordered the peroxide with small doses of iron. The improvement was almost immediate, and so far was the digestion improved that in a few weeks cod-liver oil could be taken without any nausea. The case did remarkably well.

The second youth presented symptoms similar in character. He had taken for many months iron and cod-liver oil with but little benefit, inasmuch as they invariably disturbed the digestion to such a degree as to render them intolerable. The addition of the peroxide again exerted a beneficial influence on the digestive process, and this case did well.

JAUNDICE.

A case of jaundice of a simple kind was treated. The symptoms had been slowly developed, and the discoloration was connected with painful and obstinate hepatic congestion. The patient had taken purgatives and taraxacum, but the purgation appeared to aggravate the evil. The peroxide solution, given alone in this instance, exerted unquestionably a beneficial influence. The secretions became more natural, and the digestion better; the discoloration of the skin disappeared, and recovery was satisfactory.

A second case of jaundice, complicated with cardiac affection—valvular obstruction—and ascites, was treated with the peroxide. The administration of the solution, in the opinion of the patient, increased the flow of urine, an opinion which I have heard expressed by other patients; but I did not see myself that any material advance was made. The treatment of the case was continued for many weeks. I lost trace of the man at last, and am not aware of the final result. I should fear he died.

CANCER.

A case of cancer in a woman who suffered from development of scirrhous growth in the cervical glands was treated. The disease was too extensive for operation, and I gave the solution in large doses for a time, as a last resource, or, I had rather said, in the absence of knowing what better to do. I was led to this treatment by the observation I had made respecting the influence of the solution on simple cervical enlargements. No good resulted, and death at last occurred from pressure on the trachea and suffocation.

PERTUSSIS.

Nine patients with pertussis were treated—six males and three females; all children. The solution was given in doses of a fluid drachm five and six times a day. I claim for the remedy in this affection a very decided value. Commencing with it in the acute stages of the disease, and trusting to it alone, I have never seen pertussis cut short so quickly and determinately by any other mode of treatment except change of air. I had previously used nitric acid in hooping-cough, as recommended by Dr. Gibb, and am bound to say with the most satisfactory results. The peroxide appears to me to act in a manner very similar, but I think with more energy. It subdues the spasmodic paroxysm, checks the secretion in the throat, and shortens the period of the malady altogether, lessening thereby the dangers of after effects. I shall add another word on this subject when speaking of ozonic ether.

(a) Lecture delivered on December 8.

BRONCHITIS.

Five cases of chronic bronchitis, all of old standing, were treated. In them the solution was given at periods when suffocative dyspnœa and congestion were at the height of severity, when opium only depressed more, expectorants failed, and chloric ether caused dryness. I have no reasonable doubt that in these cases the oxygen solution was the cause of the immediate relief that followed its administration, but I have equal reason to say that no permanent good was brought about, and that the recurrence of the paroxysms was in no sensible degree modified.

A case of bronchitis complicated with mesenteric disease was treated. The bronchial affection was not in this example severe, while the mesenteric affection was in an early stage. The influence of the peroxide, here very useful, seemed to bear most, as I thought, on the digestive system. It caused increased appetite, and produced a tolerance to cod-liver oil.

LARYNGEAL DISEASE.

Three instances of laryngeal disease were treated. One was a simple chronic laryngitis derived at first from cold and exposure. Recovery occurred, but not sooner than might have been expected from quinine and iron.

The second case was a severe complication of phthisis, and was in no way helped by the medicine.

The third case, also a complication of phthisis, was under treatment with peroxide only for a few days, the solution producing too much irritation of the throat to allow of its continuance.

ANÆMIA.

In forty-four persons affected with well-marked anæmia, twenty of whom were males and twenty-four females, the peroxide was fairly tried. They were all persons who had been much confined indoors, and to this confinement they were still subjected during treatment. In the first cases, I used the peroxide alone, with no appreciable result. Next I combined it with five-minim doses of the tincture of the muriate of iron with the most beneficial result; probably, therefore, the iron alone deserved all the credit.

But at the same time it seemed clear to me that certain other cases which were under iron simply did not recover so speedily. I therefore selected six cases of anæmia, and treated them with iron alone, and six other cases which I treated with iron combined with the peroxide. All the patients recovered; but those recovered more quickly who were taking the peroxide in combination with the iron. I have since largely extended this observation with the same result.

I attribute, nevertheless, no specific virtue to the oxygen solution in this instance. It seems to act by promoting the assimilation of the iron or by giving to it an activity which it does not ordinarily possess. Unquestionably, too, in anæmic cases it promotes excretion by the kidney.

PHTHISIS PULMONALIS.

The peroxide of hydrogen has received from me the most extended research as a remedy for phthisis pulmonalis. In one hundred and twenty-one cases I put the medicine to the test systematically and determinately. Of these cases sixty-six were in the first well-marked stage, thirty-one in the second stage, and thirteen in the third stage; six were cases of phthisical affection in the first stage coupled with chronic bronchial disease, three were cases of phthisis in the second stage coupled with chronic bronchial disease, and two were cases of phthisis combined with mitral valvular disease. The cases were nearly equally divided between the sexes; they were carefully diagnosed, but were not selected specially. To attempt to analyse all these cases on the present occasion would be an impossible task. I shall rest content with stating a summary of the facts.

In the first place, after having in thirty cases, during the primary stage, trusted to the use of the peroxide solution alone, I was driven to the necessary conclusion that, *per se*, the solution has no specific effect in preventing the progress of tubercular deposit. This stated, I may add upon it, that although the pulmonary organs derived no direct benefit, there were certain indirect advantages resulting from the remedy of no mean order. Thus the digestion improved in every case, and the overaction of the skin was checked; in several instances the medicine quickly arrested hæmoptysis, and it gave decided temporary relief to the breathing during paroxysms of difficult expectoration and congestive dyspnœa.

From the administration of the peroxide solution simply, I passed next to its use together with iron and with cod-liver oil. Thus employed, it increases the activity of the iron, and

improves the digestive power, so that the oil is more readily tolerated. During congestive stages the peroxide tended also, I believe, largely to relieve the oppression. These results are in themselves so marked that I feel now as much necessity for the use of the peroxide in the treatment of many cases of phthisis as I do for the cod-liver oil itself.

The value of the peroxide in phthisis was naturally most marked in the cases of the first and second stages, but in many instances, during the third stage, it gave support and relief, accompanied by a soothing action which I do not remember to have seen from any other drug—the quiet of an opiate without the narcosis.

Since the time when the above experience was conducted, I have prescribed peroxide of hydrogen in at least fifty other cases at various periods, and with the same general results mentioned above. If there be any new fact taught me by this later experience, it is in favour of the value of the peroxide in the last stages of phthisis pulmonalis, not as a curative, but as a palliative remedy. The terrible suffering of breathless exhaustion common at this stage of the malady is so relieved, that I have hardly known an instance in which the solution has not been represcribed at the request of the patient.

EPILEPSY.

In five well-marked cases of epilepsy I put the peroxide of hydrogen to full test. In the first and second of these cases the paroxysms, which had been frequent, occurring at intervals rarely exceeding five or six weeks, appeared to be held off by the medicine. The first patient believed herself cured, but after a time relapsed. In the second case there was no paroxysm for five months, then a severe paroxysm and relapse to the old condition in spite of the remedy. The good results were, therefore, in these cases problematical—*i.e.*, some other and unknown agency might have been in useful action coincidently with the adminstration. In a third case, that of a lady who was given to literary pursuits as the best means of killing time and forgetting her disasters, the peroxide solution was taken in the proportion of one fluid ounce a day for eleven months, on her own instance after it was first prescribed. She then returned to me to report that in the whole of the period she had had but two convulsive attacks, and that in neither did she lose her consciousness. Her own faith in the value of the remedy was unbounded, so that it was hard to say, although the practical result was excellent, whether the result was due to the mental impression or to the physical operation of the remedy.

In a fourth case very extreme, in which, I think, every other mode of treatment had been resorted to, I prescribed the remedy for four months, the patient at first believing himself better. I could not for my part see any real improvement, and the case ultimately proved fatal from general paralysis.

The last case of epilepsy ought strictly to be called hysterical epilepsy, the attacks, nevertheless, being very severe, sudden, and frequent, with unconsciousness and lividity. I should call them true epileptic seizures, but for the fact that there were usually emotional symptoms either before or after each of the convulsive paroxysms. This case is of interest, because from the first administration of the peroxide the patient herself and her friends have been as satisfied as they can be of any other observation they make that the attacks have not only been reduced in number and intensity by the medicine, but that they can be warded off by it. Hence, for over seven years this patient has had the peroxide always at hand, the confidence in it no jot abated. The husband of this lady, himself a Professional man, is as decided as any one else that a positive good belongs to the administration.

I speak myself of all these cases with due care. I have not a doubt that a one-sided Practitioner would easily make "a cure" for epilepsy out of peroxide of hydrogen; for my part, I am prepared to put forward the facts I have gleaned, and to rest there.

SYPHILIS.

Peroxide of hydrogen is of marked benefit in some stages of syphilis. Administered in *large* doses, it acts very much like a mercurial, and salivation may be induced; but its influence is not persistent, and to keep up the effect the administration must be well sustained. Administered in *moderate* doses, it acts more like iodide of potassium, and singularly combines, according to its administration, the qualities of the two great anti-syphilitic remedies. I do not myself prescribe it, however, with the object of displacing either mercury or the iodides, but rather as an adjunct to both. If it be desired in the earlier stages of syphilis to produce a quick action of mercury, the administration of the solution of peroxide two or three times daily, in two-drachm doses, between the doses of the mercurial, brings about the condition wished for. Or if, in the later stages, iodide of potassium cannot be borne in doses sufficiently large, the peroxide again comes in usefully, and may indeed for a time take the place of the iodide altogether.

DYSPEPSIA.

There are cases of dyspepsia in which the peroxide of hydrogen is very useful. I refer more particularly to cases where there is gouty habit, with sluggish action of the bowels and anæmic plethora. In such cases I am accustomed to administer the peroxide with iron and a gentle saline purgative, the whole making a chalybeate water. Two fluid drachms of the solution of the peroxide, one grain of sulphate of iron, fifteen grains of sulphate of potassa, and two ounces of water, is a good formula of this kind in the class of indigestions to which reference is here made.

SUMMARY.

To sum up, the solution of the peroxide of hydrogen may be fairly considered a medicine which promotes glandular secretion generally, quickens the action of iron, and which, to a certain extent, represents mercury and iodine as a specific remedy for syphilis. Problematically it may be considered as having an influence on nervous function, preventing or reducing over-action. It deserves on this ground extended trial in epilepsy. It is useful as a means of relief in dyspnœa in cases where there is great destruction of the lung and deficient oxidation; but whether its effect is due to the direct addition of oxygen to the blood, or to a sedative action on the nervous centres, or to the promotion of secretion from the liver and kidneys and the removal of temporary congestion, is not known.

MODE OF ADMINISTRATION—DOSE.

The solution of the peroxide containing ten volumes of oxygen is the best form for medicinal use; a trace of hydrochloric acid in the solution is of advantage, as the acid helps to retain the oxygen. I prefer always to prescribe the solution simply with distilled water, for although there are many medicinal substances with which it is compatible if they are chemically pure, it is best not to run the chance of displacement of the oxygen by admixture.(a) The ordinary dose for an adult is from one drachm to four, but this may be gradually increased to six drachms or even an ounce. A free quantity of water should always be mixed with the solution when it is to be taken; too concentrate it leaves a caustic metallic taste in the throat, and causes eructation.

OZONIC ETHER.

The substance called ozonic ether, and which is now creating so much interest in the Profession, is peroxide of hydrogen in ether. The mixture thus formed was first made by myself; I was testing the action of the peroxide of hydrogen on various substances, organic and inorganic, and having one day added a strong solution of the peroxide to some ether, I was surprised to find that a portion of the peroxide seemed to pass to the ether, the ether, when decanted off, having a very strong taste of peroxide, and yielding oxygen freely when treated with oxide of manganese. On being kept, the ether was discovered to undergo further change, the oxygen becoming more stable and fixed. The addition of a little alcohol to the ether facilitates the absorption of the peroxide. The combination of the oxygen with the ether and some water, although it is very slight, is persistent, for the mixture has been sent to Australia without deterioration. The compound is, without doubt, a useful agent. I think I may claim it as an addition to our list of remedies likely to hold its place.

I used it in the first instance for diffusion in the air of the sick-room, dispersing it in the form of spray. It is quick in action, and effective for purifying the air; it does not charge the air with moisture, and it does not irritate the breathing organs. The disadvantage of it is that it cannot be safely used near a light or fire. It should be sprayed through a glass tube.

From this use of the ether I passed to administer it, also in

(a) To oblige me, Mr. Robbins, of Oxford-street, who has for a long time made the peroxide of hydrogen, tested the compatibility and incompatibility of the peroxide solution with other medicines. He reports it as incompatible with all vegetable tinctures, and with the citrates and tartrates of the alkalies and of iron. With hydrocyanic acid it forms in a few days beautiful crystals of oxamide. With sulphate, chloride, and nitrate salts, decomposition is slow; but on the whole it is best in every case to prescribe the solution direct—*i.e.*, without admixture.

form of spray, to ulcerated fœtid or sloughing surfaces. I have applied it in this way to the throat with the best result, and in a case where there was fœtid discharge from the nose.

The ozonic ether may be administered by inhalation. If a fluid half-ounce be poured on a cambric handkerchief, and the vapour be inhaled, the taste of the peroxide is at once detected at the back of the throat when the inhaling process has been concluded, the ether while present obscuring the peroxide. The ether may be inhaled in cases of phthisis pulmonalis, especially when there is cavity of the lung. It soothes in these cases, destroys the fœtor of the breath, and relieves the sense of suffocation. I am now administering the peroxide thus by inhalation in most phthisical cases, instead of by the mouth as I did formerly when I had only the solution in water to prescribe.

The ether solution of the peroxide of hydrogen may be administered by the mouth in doses of from ten to thirty minims, or even a drachm. It may be prescribed with alcohol and water. Dr. Day, of Geelong, a very excellent observer, has prescribed it largely in diabetes. He commenced to prescribe an ether which had become ozonic by what may be called a process of natural change; but he finds the ethereal solution of the peroxide—as I have described it above—equally effective. Dr. Day's idea as to the mode of action of this remedy in diabetes is much the same as my own when I began first to administer the peroxide of hydrogen; but his results seem to be better than mine, and he is very strongly supported by many observers in this country and in Australia. It may be that the solution in ether possesses advantages which the solution in water does not, and the ultimate results of the inquiry will be most interesting. I have as yet no sufficient evidence of the value of the ethereal solution in diabetes to enable me to speak with authority.

I can nevertheless speak well of the practice of administering the solution in ether by the mouth in other cases. It replaces the peroxide solution in water, and it goes excellently in combination with one common remedy—I mean cod-liver oil.

A mass of material, collected from experimental research and accumulated from time to time for many years, lies still before me; it has special relation to the pure physiological action of the peroxide of hydrogen. The results of injecting the solution into the vessels of animals; the effects of the peroxide during asphyxia; its influence on muscular motion and muscular rigidity; its action on the tissues in detail and on blood—these topics, with several experiments ready to hand, must stand over, the hour being far exceeded. Meantime I am content if I have tempted you to test in practice the value of what fairly looks like a leading remedy, having a physiological meaning not difficult to investigate and to learn. Whether your experience, and that of the Profession generally, proves or disproves the remedy in any case, I shall be satisfied.

ORIGINAL COMMUNICATIONS.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,

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Sequence of Spasm in Unilateral Convulsions.

In a former note (on Localisation Aug. 15, 1868; see also Dec. 21, 1867) I spoke of the order of frequency in which parts begin to be affected in those convulsions which commence unilaterally. I wish now to remark on the sequence under which parts are most frequently affected in a single paroxysm of unilateral convulsion. This paper is to be read in connexion with former papers of this series, and especially with the one at pp. 178 and 179, where I refer to "Broadbent's hypothesis." It is most important to observe convulsive paroxysms minutely; but it is obviously difficult to observe them precisely. It must be understood that the following only purports to give what is, to the best of my belief, the *usual* sequence in *one* variety of those convulsions which begin unilaterally. I never forego an opportunity of watching patients in fits, but the opportunities are rare, and the observations are painfully difficult to make. I dare not, therefore, imply that the following is in all respects an accurate representation. Moreover, the description is admittedly incomplete.

The muscles acting unilaterally are first seized, then those acting bilaterally, and lastly the unilateral muscles of the opposite side. *But the sequence is not a simple sequence.* I have tried by use of figures to show at what stage in the march of the convulsion of the unilateral muscles of the side first convulsed the bilateral muscles begin to be involved.

Then there is an order of involvement of the unilateral muscles of the side first affected. But this again is not a simple sequence, as the figures are intended to indicate. Let us say, for convenience of description, that the spasm begins on the right side, and let us limit the illustration to those cases in which the thumb and index finger are the parts first affected. It is important to bear this in mind, as I think the mode of beginning makes a great difference as to the march of the fit. When the fit begins in the face, the convulsion in involving the arm may *go down* the limb. I know comparatively little of the progress of spasm in paroxysms so beginning. When the fit begins in the leg, the convulsion marches up; when the leg is affected after the arm, the convulsion marches *down* the leg.

Unilateral Muscles of Right Side.

Arm.—(1) Thumb and index finger, (2) whole of fingers and forearm, (3) upper arm.

Face.—(2) Cheek drawn up, (3) eye closed, (4) both eyes to right, (5) head to the right.

Leg.—(3) Thigh, (4) leg.

Sometimes the leg is affected before the face.

Bilateral Muscles.

(3) The occipito-frontalis. (4) I think the next thing is that the two buccinators, the orbicularis oris, the right zygomatici, and depressor anguli oris, are contending. The appearance is an ovoid mouth drawn to the right, the large end of the ovoid being to the right. The lower jaw is drawn down. Next, the two masseters and temporals are acting, and bring the jaws together. (5) The thoracic and abdominal muscles are involved, the inspirations becoming snatched; the chest rocks, and in the severest cases breathing seems to stop for an appreciable time at the height of a full inspiration.

Unilateral Muscles of the Left Side.

The unilateral muscles of the opposite side commence to move when the chest begins to be decidedly involved. First the head becomes straight, both eyes look forward, and then the head and eyes turn to the left, and the left arm and leg are in a spasm.

When the convulsion passes rapidly to the other side, we may observe little change of position of the eyeballs besides conjugate deviation from one side and then from the other. But in some cases the eyeballs move in several ways—*e.g.*, both up, and (especially in children?) they may move towards each other—not in a conjugate manner. I am unable to say anything as to the order of march of the spasm in the second side—*i.e.*, whether it begins in the hand or foot and then goes up, or *vice versa*. The parts, I think, begin to move more contemporaneously.

In describing the above as sequences, it is not asserted that the several parts which are seen to move one after another are not really affected simultaneously, but simply that whilst some are visibly affected, others are not apparently affected.

A patient will have not only a tingling sensation, but a feeling of contraction in the face, before the facial muscles begin to move visibly; but even this feeling usually begins *after* the hand is visibly affected.

It is to be observed that the spasm may cease at any stage, there being often only a little twitching of the hand. Slight seizures are sometimes called "partial fits" or auræ.

It does not follow of necessity that both hemispheres are affected one after the other when the spasm affects one side of the body after the other. In subsequent notes I hope to give reasons for the belief that the unilateral muscles of the two sides are represented in each side of the brain, although unequally and perhaps differently represented. I shall also try to point out how convulsions beginning unilaterally resemble and differ from those more general convulsions which set in without warning or are preceded by an obscure sensation in the head or by a strange feeling at the epigastrium. The latter kind of convulsions are sometimes called "genuine" epilepsy, or idiopathic epilepsy.

CASE OF INJURY TO THE KNEE.

GANGRENE—AMPUTATION OF THIGH—OSTEOMYELITIS—DISARTICULATION AT THE HIP-JOINT—RECOVERY.

By J. W. TYLER, M.D.,
Superintendent of the Mynpoorie Sudder Dispensary.

[*With engraving.*]

May 15, 1867.—R. L., aged 16. At 8 a.m. the patient was brought to the Dispensary by his parents, who were anxious to have his leg removed. On examining the lad I found his left knee-joint dislocated, and the bones fractured; both condyles of femur, denuded of periosteum, were protruding externally, and the soft parts about the knee-joint and lower third of thigh were gangrenous. The leg had a discoloured appearance, without any sensation in the parts, and the skin peeled off on the mere touch. The patient had been under the care of a native hakeem. The patient is quite emaciated; has fever; loss of appetite. Pulse quick and feeble; tongue furred and dry. There is no enlargement of either spleen or liver; the lungs free from abnormal sound. The only hope of recovery lies in removal of the limb. At 9 a.m., present Mr. W. Tidy, Civil Surgeon, and Baboo Laul, native Doctor, I removed the limb under chloroform by double flap amputation from the middle third of thigh. On examining the bone I found it had a dirty-looking appearance; there was suppuration of the medulla; the discharge was thin and fœtid, and highly characteristic of osteomyelitis. On discovering this, I considered it advisable to continue the operation and remove the entire limb by disarticulation from the hip-joint, and proceeded to do so. There was very little hæmorrhage during the operation. The flaps were formed antero-posteriorly. The bleeding vessels were secured; femoral vein had to be tied. The flaps were brought together by horsehair sutures (fourfold); the patient put to bed. Pulse hardly perceptible; respiration feeble. Mixture of ammonia every quarter of an hour; hot bottles; sinapism to the chest. Brandy and sago every second hour. 6 p.m.: No bleeding; complains of pain and discomfort; is very low; pulse 145, barely perceptible. Continue mixture.

16th.—Slept very little; is feverish; pulse quick, and has a peculiar thrill; countenance anxious; bowels not opened. Continue stimulant mixture. Cold bandage to the stump. Soap enema. Brandy and sago, beef-tea; port wine at bedtime. 6 p.m.: Is much the same; there is no discharge from the wound; feverish; has not slept; bowels relieved. Liq. opii sed. ♏xij.

17th.—Dr. G. Grant, Civil Surgeon, Futtehgurh, went with me to see the patient this morning. He does not consider that there is any hope of recovery, as the patient is too feeble, his constitution broken down. Patient is feverish; pulse 148; looking no better; slept very little during the night; the wound is looking well enough; no discharge. Continue medicine. Beef-tea and brandy, sago and port wine. 6 p.m.: Refuses food; is still feverish; pulse feeble and quick. Beef-tea and ammonia enema every fourth hour.

18th, 6 a.m.—Complains of restless night; is feeling no better, but is slightly less feverish this morning. Omit medicine. ℞ Tinct. opii ♏xv., sp. æth. sulph. ♏x., ammoniæ carb. gr. iv., aquæ camphoræ ʒj.; fiat haust. statim. 4 p.m.: Slept during the day; is feeling a little better; pulse is about 140; healthy discharge from the centre of wound. Union has commenced from both ends of stump. Cold bandage, with M'Dougall's solution dressing. Repeat draught at bedtime.

19th.—Bowels not relieved; fever a good deal less; is feeling slightly better; pulse 128; wound uniting at both commissures; healthy discharge from the centre of wound; two sutures removed from external commissure of stump. Omit medicine. Castor oil draught statim. 6 p.m.: Bowels were relieved; is free from fever; pulse 120; is improving in look, and not so anxious; the skin is moist for the first time since admission; tongue is clean, has a slight tendency to being dry; wound has a healthy discharge. Continue M'Dougall's solution as a dressing. No medicine.

20th, 6 a.m.—The pulse is good; patient is looking more cheerful, wants some sweetmeats; has no fever; wound is healing; the discharge is wholesome. Strapping and dressing. Quinine mixt. gr. iij. to an ounce ter die. Beef-tea and brandy ʒiv., sago and port wine ʒiv. 6 p.m.: There is no change; as the bandage is not stained, the dressing was not opened out.

21st.—Three ligatures removed; some more of the sutures came away; the appearance of wound is most promising; discharge small and healthy; no fever; pulse 120; skin moist; tongue clean. Continue treatment. Beef-tea and brandy ʒiv., sago and port wine ʒiv. 6 p.m.: Doing well.

22nd, 8 a.m.—Is feeling better; anxious to know about his recovery; is free from fever; has not much appetite; is very anxious for sweets. Let him have half an anna's worth of simple sweetmeats. Continue dressing and mixture. Beef-tea and brandy, sago and port wine, half an anna's worth of sweetmeats. 6 p.m.: The sweetmeats did not agree with him; has slight diarrhœa; wound is all right. Chalk mixture and opium.

23rd, 6 a.m.—The diarrhœa is much less; only two feculent stools since taking the mixture; no fever; pulse 120; tongue clean, but slightly dry; wound is looking well; very little discharge, and that healthy pus; union on both sides looking well. Continue medicine and dressing as usual, with fresh strapping this morning. Beef-tea and brandy, sago and port wine; omit sweetmeats.

24th, 6 a.m.—Has good sleep at nights; there is no tendency to diarrhœa this morning; wound looking well; change dressing. Omit chalk mixture. ℞ Quinine gr. iij. bis die.

25th, 6 a.m.—All the remaining sutures came away. Two more ligatures removed this morning; wound looking well. Patient not improving much in flesh; has no fever; pulse 120, but not strong. Instead of quinine, give the following mixture:—Decoct. cinchonæ ʒj., ammoniæ sesquicarb. gr. iv. Misce; fiat haustus, bis die.

27th, 6 a.m.—The remaining ligatures came away this morning. There is very little discharge; the pulsation of the femoral artery can be felt distinctly; has had no fever; appetite does not seem to increase, nor does he seem to pick up flesh. Continue treatment.

31st.—Is anxious to oil himself, and would like some more food to-day, as he feels hungry; wound nice and healthy. Half a chittack of ghee to rub all over the body. Continue treatment. Beef-tea and brandy ʒiv., sago and port wine ʒiv., milk 1 pint, atta 4 chittacks.

June 1, 6 a.m.—Is feeling in good spirits, and comfortable. Would like the ghee increased to a chittack, as he could eat some with chupatees. Allow a chittack of ghee.

2nd.—Complains of his father having to leave him for Etah to-day, and feels unhappy about it. Ordered the man not to leave his son. Continue treatment.

3rd.—Is as well as can be expected; is anxious for more solid food, and some sugar with his milk; wound healing fast. Beef-tea, etc.

11th.—Is feverish this morning; pulse quick; skin hot and dry; bowels have not been opened for three days; wound is healing fast, the discharge is thin and unhealthy; complains of severe headache. Omit medicine. Magnesiæ sulph. ʒiij., liq. ammon. acet. ʒij., aquæ camphoræ ʒij. Misce; fiat haust. statim. To be repeated in two hours if bowels are not relieved and if skin is still hot. Sago, milk diet.

12th.—Free from fever; bowels were freely opened; wound is about the size of a pin's-head, otherwise all healed; the discharge from this is thin. Dressing. Quinine gr. ij. t. d. s. Beef-tea and brandy ʒiv., sago and port wine ʒiv.

17th.—No fever; this minute sore will not heal; probe enters deep down, and gives a slight gritty feel in the socket. Lint to be applied as dressing. Would like more food and the ghee; give him the ghee. Atta 4 chittacks, dall 1 chittack, beef-tea and brandy ʒiv., sago 1 chittack, port wine ʒij.

18th.—Inject the wound with Condy's solution diluted. No fever; pulse and appetite both good.

24th.—On probing the wound a distinct feel of something rough was detected; syringe the opening. Patient is otherwise much improved in health; would like a little sago and port wine at bedtime; ghee to be increased to 1½ chittack. Beef-tea and brandy ʒiv., sago 2 chittacks, port wine ʒiv., atta 4 chittacks, dall 1 chittack.

July 1, 6 a.m.—Pulse, appetite, and health much improved; hardly any discharge perceptible. Continue treatment.

2nd.—Allowed his bed to be taken outside in the garden morning and evening; wants more food.

8th.—Can walk all over the Hospital on his crutches; has gained flesh; would like more food; wound nearly closed. From this date he improved in health, put on flesh, and the stump was free from pain, and the wound showed a tendency to close. The opening was barely perceptible, and the discharge was scanty.

On the 31st he had a sharp attack of cholera (which was prevalent in the district and city at the time); he continued very poorly for several days, and was much reduced. The

wound, which was healing, looked angry; the discharge became sanious. Shortly after this an abscess formed, which had to be laid open; the discharge increased, and resumed an unhealthy appearance accompanied with rigors. The treatment consisted of quinine, bark, and ammonia, with a liberal and nourishing diet, and the wound injected daily with Condy's solution and dressed with moist poultice. After several weeks the fever left him, his health improved, and the wound gradually put on healthy action. The discharge was laudable pus, which decreased daily, and both openings continued to heal fast; the original opening in the stump had a tendency to close. On squeezing, a few drops only of pus oozed out.

December 22.—The patient's appetite is very good; he can walk about on his crutch, and is anxious to go home.



27th.—Both openings closed; stump is quite healed; free from pain; no fever; is perfectly well; discharged cured.

Remarks.—I trust that the record of this case may be found of sufficient interest to plead my apology for the space which it occupies. The expediency of operating and continuing the operation to disarticulation, even with a patient whose vital powers had been so severely taxed, was proved by the result; the only chance of recovery lay in the amputation of the diseased limb, and prevention of future systematic mischief by removal of the unhealthy and effete matter, which would certainly have been productive of fatal results. I enclose a photograph showing the appearance of the patient after he had been discharged as cured.

Mynpoorie.

REMARKS ON

THE NATURE AND TREATMENT OF DELIRIUM TREMENS.

By WILLIAM M'CREA, M.B. Lond.,
Chief Medical Officer of Victoria, Australia.

The Melbourne Gaol, the Medical charge of which is in my hands, receives all the drunkards, prostitutes, and vagrants which come under the notice of the police in the city and its suburbs within a radius of seven miles, the population of which is about 150,000; and, as a large proportion of the improvident individuals who have been lucky in digging and speculation in other parts of the colony often come to Melbourne to spend their money, a good many find their way into the gaol. The numbers who suffer from the effects of intoxication are consequently enormous, and the numbers of cases of delirium tremens which have come under my care have afforded me an ample opportunity of studying the complaint. A record of these cases has been kept for the eleven years ending December, 1867. During this period 898 cases of delirium tremens, of various degrees of intensity, from the milder ones, in which the delirium only lasted one night, to the most severe, occurred. The mortality during the whole eleven years was thirty cases, or 3·34 of the numbers treated; but this mortality was by no means uniform. It varied considerably under different modes of treatment. The modes of treatment were three. For the first three years the old method of giving opium was adopted. The stomach and bowels were emptied by an emetic and a purgative, and opium was given in doses varying from twenty to sixty minims every six hours till sleep was procured. Under this system of treatment the mortality was 9·6 per cent. of the cases treated.

During the years 1861-2 fifty-seven cases were treated by half-ounce doses of digitalis. The number of doses varied from one to ten, according to the duration of the disease. In twenty-seven cases the medicine seemed to exercise a beneficial effect; in four cases a very decided good effect was manifest. In twenty-three cases it is doubtful whether the medicine had any beneficial effect. Among the doubtful cases I include all those where the patient had only one dose of digitalis. In almost every case an emetic was first given, and generally this was followed by alterative medicine. This treatment alone was sufficient to effect a cure in an equal number of cases treated before and since the digitalis mode. In these cases the disease was not severe, and I think it is very probable the sound sleep and quick recovery would have occurred had the digitalis been omitted. It is certain that they did occur in an equal number of cases, in other respects similar, when no digitalis was given. In the other doubtful cases the digitalis was followed by sleep one night, whilst in the previous or following night no such effect was produced, though no apparent cause for the difference could be ascertained. Even when sleep followed, the effect on the disease was not permanent. The cure could not be ascribed to the digitalis alone, as other medicines tending to act on the liver and digestive organs were given in the intervals.

In eight cases the digitalis exhibited no good effect whatever. The number of doses in these cases ranged from two to eight respectively. It could not be said to produce any bad effect; but no sleep followed its exhibition, no effect was produced on the circulation, and it did not modify the disease in any way.

All the cases were narrowly watched, in order to ascertain whether there was anything in the constitutions of the patients, the state of the circulation, the duration of the disease, or the character of the symptoms, which would afford some indication as to the cases in which the medicine was likely to be efficacious or otherwise. In three of the cases, where the pulse fell considerably below the normal state, the digitalis seemed to be undoubtedly beneficial; beyond these there was no indication. In a little less than half the cases the effect of the medicine seemed to be beneficial; in a little more than half the cases the effect was either doubtful, or no effect was produced. The mortality in the cases treated by digitalis was 5, or 8·7 per cent.

During the five years ending December, 1864 (with the exception of the cases treated by digitalis), the disease was treated by giving at once an emetic, followed by a brisk purgative, the application of the cold douche to the head, and the subsequent employment of blue pill in alterative doses with the tincture of the perchloride of iron. The cold douche formed an important element in this treatment, the head being subjected, for five or six minutes, two or three times a day, to a powerful stream of water (of eighty pounds pressure to the square inch) issuing from an inch tap. The effects of this remedy were always good, and, in very many cases, the benefit was very remarkable. On the whole this mode of treatment was a decided improvement on the two previous modes by opium and digitalis. The mortality attending this last method by the cold douche was 4·6 per cent. of the cases treated. At this period (December, 1864), my attention was forcibly drawn to the uniformity of the appearances presented by the post-mortem examinations. (I should premise that post-mortem examinations were made in all cases of death.) In all cases there were signs of very great congestion of the brain and its membranes, and effusion of an abnormal quantity of fluid in the ventricles and about the medulla oblongata, often in the spinal column. Very often, especially in those who had suffered previous attacks, there were opacity of the arachnoid and signs of inflammation in it and the pia mater. I began to think that the causes of delirium tremens had been misunderstood, and that congestion and inflammation of the membranes of the brain were the true causes of the disease. Acting on this idea, I began to use leeches in the aggravated cases, applying twelve under each ear; the effect was very striking and beneficial, the excitement being greatly reduced, and very often sleep following very rapidly the application of the leeches. In some cases an aggravation of the symptoms came on again, and again twenty-four leeches were applied with corresponding benefit. In one case a third application of twenty-four leeches was necessary, with the effect of permanently controlling the disease. For the last three years (1865, 1866, and 1867) this practice has been pursued. The patients usually arrive at the gaol about 3 or 4 o'clock in the afternoon. I see them at once, and all cases are subjected to one uniform treatment. An emetic is first given; after it has ceased to operate, cold affusion is extensively applied to the head, and, if the emetic has not acted on the bowels (which it often does), a brisk purgative of sulphate of magnesia is given. The patient is then put

to bed in a quiet room, under the care of night nurses, who supply him with drink (tea or cold water), and keep a succession of wet cloths to his head during the night. In the morning, should the disease show no signs of yielding, twenty-four leeches are at once applied. During the course of the day cold affusion is repeated at intervals of six hours, and if the bowels are not acted on the purgative is repeated. If the symptoms are aggravated towards night, and the delirium becomes more violent, the leeches are repeated; but unless this is the case, another night is allowed to elapse before the second application of leeches is had recourse to. Then, if there has been no sleep or signs of the disease yielding, the leeches are applied. As before stated, a third application may be necessary. The absence of any great amount of debility subsequent to the application of a large number of leeches was remarkable, and contrasted favourably with those seven cases which had been previously treated without the application of leeches.

The result of this practice is very striking, the mortality for the last three years till December, 1867, having been 1·1, or little more than 1 per cent.; and for the first seven months of the present year (1868) the mortality has been *nil*.

In the statistical statements of the Melbourne Hospital for the eleven years ending December, 1867, there were 278 cases of delirium tremens treated, the mortality being 37 cases, or 13·3 per cent. I have no doubt these cases were all severe attacks. The mode of treatment is not stated.

It will be seen that this rate of mortality does not differ greatly from that given in "Aitken's Practice of Medicine" as the mortality of the British army in different parts of the world and of the Calcutta Hospitals, and it probably fairly represents the average mortality of the disease.

I have avoided all theorising in support of my opinion as to the true cause of delirium tremens, and content myself with placing the recorded results of my practice before your readers, in order that they may be verified by the Medical staff of the several Hospitals or other institutions of Great Britain, who may have opportunities of treating large numbers of cases of the disease. I only ask that the application of leeches, in such cases as require them, be not delayed beyond twenty-four hours after the commencement of the attack. The conditions to which the patients in the gaol were subjected were uniform in all modes of treatment—viz. perfect quiet; diet: for the first twenty-four hours, arrowroot and tea; afterwards, beef-tea, bread, and tea; cold water for drink; and, lastly, an entire absence of stimulants.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GERMAN HOSPITAL, DALSTON.

THREE CASES OF RELAPSING FEVER.

(Under the care of Dr. SUTRO and Dr. HERMANN WEBER.)

Relapsing fever, which for many years past has been entirely absent from London, has during the last few months been observed in some solitary cases admitted into this Hospital. They may be the precursors of an epidemic of this disease, but there is strong reason to believe that they did not originate in this country; for all the cases presented one peculiar feature, which makes it probable that the infection was in some way imported from Continental countries in which for some time past relapsing fever has been epidemic. The peculiarity just alluded to is this—that all the patients were Polish Jews, and that they all came from Whitechapel. Some of them had only recently arrived in this country from Russian Poland. Now, relapsing fever has been very prevalent during the last few years in some parts of Russia, and more recently cases have also occurred in Silesia. The Polish community in Whitechapel is in constant intercourse with these countries by fresh arrivals; and, although conclusive evidence cannot be adduced of the disease having been thus imported, yet, at all events, there is very great probability that the germs of the infection may have come from abroad, and that they were developed under the favourable conditions which are constantly present for the development and spread of infectious diseases in the localities in the east of London inhabited by the Polish immigrants. The first of these cases was admitted into the German Hospital on September 1.

S. J., aged 28, a tailor, had arrived in London only three weeks before admission. He had been living at 20, Castle-street, Whitechapel, and was quite well up to five days ago, when he was suddenly seized with severe headache, pain and stiffness in the neck, and loss of appetite. He was tolerably well nourished, and presented all the symptoms of some form of continued fever. The spleen was enlarged; there was no rash; he complained of epigastric pain; the abdomen was slightly tender on pressure, and he had diarrhœa. The temperature varied between 101·2° in the morning, and 103·2° in the evening, when, much to the astonishment of all who watched the case, a complete crisis took place in the night from the 3rd to the 4th of September, the mercury on that morning rising only to 96·5°, and the pulse having fallen from 100 to 68. During the day he perspired freely, and in the evening the temperature was 98·4°, the pulse 60. Slight diarrhœa continued for some days, but he rapidly recovered his strength, and asked to be allowed to leave the Hospital on September 10. Up to this day temperature and pulse had been normal, or slightly below the normal range. On September 17 he came again to the Hospital very much in the same state as on his first admission. This fresh attack had commenced on September 14, with loss of appetite and epigastric pains. The spleen was again much enlarged, and could be felt below the ribs. The temperature varied between 102° and 104·8°, and the pulse had risen to 108, when on the 19th a crisis again occurred in the same rapid manner as in the first attack, the temperature receding to 96·7° and the pulse to 72. He had perspired during the night, and was slightly collapsed in the morning. Again he rapidly got better, and although it appeared very desirable to keep him under observation in the Hospital for some time longer, he insisted on leaving it on September 24, on account of the Jewish holidays. It should be mentioned that there was no jaundice in this case. The rapid decline of the fever on the seventh day of the first attack was in striking contrast to what is generally observed in the more common forms of continued fever, the case resembling, in that respect, more one of pneumonia; but in the absence of all pneumonic symptoms, it was at first placed in that somewhat loosely defined class of cases termed "febricula." When, however, the patient came again under observation with an attack precisely similar to the first one, only of shorter duration, Dr. Bäumler, under whose care the case had been in the absence of Dr. Weber, expressed a strong suspicion that it might be a case of relapsing fever, all the principal features of the case coinciding with the descriptions given of that disease. Dr. Murchison, to whom the case was related, concurred in this opinion. If any further confirmation was necessary, it was afforded by the two following cases, in which a careful observation in the Hospital throughout the disease placed the diagnosis beyond any doubt.

M. A., aged 19, tailor, was admitted on November 13, under the care of Dr. Sutro. He had been in England nine weeks, and resided at 7, Hutchinson-avenue, Gravel-lane, Houndsditch. According to his statement, several persons had been ill in that house at the time. His illness commenced on November 10, with shivering and heat, headache, and pain in the back. There was much pain in the epigastrium, slight jaundice, and the spleen greatly enlarged. On the evening of November 14 he was delirious, and complained of much headache. The temperature on that evening had risen to 106·6°, and the pulse to 120. Next morning, however, the temperature had fallen to 97°, and rose in the evening only to 98°, the pulse being 68. The abdominal pain and the jaundice gradually disappeared, the appetite returned, and he was quite free from fever, the temperature keeping at or somewhat below the normal range for the next seven days. On November 22 the temperature was still normal, 98·4°, but during the day it began to rise, and in the evening the mercury rose to 100·6°, the pulse still remaining at 60. This rise continued, the temperature next morning being at 102·9°, pulse 100, and in the evening 105·6° and 120. The pyrexia remained at this height until the evening of November 26, there was again much headache, great irritability, slight cough, and on the 24th diarrhœa and vomiting. In the night from the 26th to the 27th, the pyrexia began to subside, and on the morning of the 27th the temperature was only 99·6° and the pulse 80; during the day the temperature further decreased to 98°. Since then he has been convalescent, and up to the time of our visit at the Hospital on December 11 no fresh attack had occurred.

In the third case there was much greater prostration than in the two preceding ones, the crisis terminating the first attack being accompanied by a complete collapse, similar, although

less severe, symptoms also occurring with the decline of the second attack.

S. L., aged 19, tailor, a native of Poland, but having been in this country for two years, and residing at 16, Leman-street, Whitechapel, was admitted on November 21, under the care of Dr. Weber. He had been ill four days, was very prostrate, the tongue dry, the spleen much enlarged, and there were rhonchi in the lower parts of the chest. The pulse in this case rose to 130, and was very weak throughout. The highest temperature recorded was 105° on the morning of November 25, whence it began rapidly to fall, so that at 6 p.m. the mercury in the axilla rose only to 96°, whilst in the rectum it rose to 97·9°, when the patient was in a state of complete collapse. The pulse during the day had receded from 128 to 94. Brandy was given freely, and he was much better the next morning, and remained free from fever until the morning of December 4, when a slight rise of temperature was observed, 99°; in the evening it had already risen to 103°. The patient gradually became more apathetic as the pyrexia continued, and was again completely prostrate, when, on December 8, this second attack terminated with a rapid fall of the temperature and pulse. The highest point of temperature recorded was 105·5°, on December 6; on the morning of the 8th it was only 101·4°, and with profuse perspiration it fell to 96·2° (rectum) on the evening of the same day. Vomiting and bleeding from the nose also occurred on that day. This patient is now convalescent, but still very weak.

The treatment in these cases has been almost entirely indifferent, a solution of sodæ bicarb. having been given in Case 2, and a sulphuric acid mixture in Cases 1 and 3. Only in the second case 20 gr. of quin. sulph. were given on the evening before the crisis set in, and 10 gr. on the day following. Considering that in the first case, where no quinine was given, the fall of temperature also amounted to more than 8° F., it becomes somewhat doubtful whether the quinine had in this second case any influence on the decline of the fever.

In all three cases the pyrexia during the second attack was of five days' duration. The first attack varied from five to seven days, and the intermediate period from seven to ten days.

Dr. Weber mentioned that two other patients were under his care, who had been admitted with febrile symptoms, without any local cause, which subsided so rapidly that one might have been inclined to think of relapsing fever, the more so as the patients were Jewish children from Whitechapel; but no relapses were observed in these cases.

SEAMEN'S HOSPITAL DREADNOUGHT.

LARGE SACCULATED ANEURISM OF THORACIC AORTA, CAUSING EXTENSIVE EROSION OF BODIES OF FIFTH AND SIXTH DORSAL VERTEBRÆ—PARAPLEGIA AND LOSS OF SENSATION, REACHING UPWARDS TO STERNUM—COMMENCING GANGRENE OF BOTH FEET—DEATH.

For the opportunities of compiling the following clinical history we are indebted to Mr. Harry Leach, who has watched the interesting case with which it deals, and carefully recorded the various morbid phenomena. The chief points of interest seem to be the extensive destruction of the spinal column, the remote and spreading nervous lesions caused by pressure on the spinal cord, and the appearance, shortly before death, of large bullæ and black patches of gangrene on both feet.

George S., aged 32, was admitted into the *Dreadnought* Hospital Ship on September 27, 1868, with shortness of breath, pain in the chest and back, and general debility.

History.—Has led a very irregular life, and been a great spirit-drinker. Had been in fairly good health until three years ago, when, after working for many hours lifting heavy ballast into his ship, which was then off the Chinca Islands, he jumped from a height of about fifteen feet into the sea. He struck the water with his chest, and then immediately lost his breath, and experienced a sensation of great oppression behind the sternum. His comrades came to his assistance, and at once brought him on board. For the following twelve hours he suffered from great pain on left side of chest, and also had shivering. Was laid up for four months, and at the end of that time was obliged to give up his occupation as a sailor, as he was not able to go aloft. He then acted as overseer of a mine in South America, but soon found that the increasing general weakness and the pain in the chest rendered him unfit for any active employment. He has since been an inmate of several Hospitals, both abroad and in this country, but with very little benefit. During the last twelvemonths has been losing flesh. Has had since the commencement of his illness a short hacking cough unattended by expectoration. Has never brought up blood.

State on Admission.—Patient is very pale and anæmic; his face thin, and expressive of anxiety. Great pain in the middle of the chest, and occasional fits of dyspnœa. A short dry cough at intervals. Respiration short, quick, and laboured. Slight angular curvature in dorsal region of spine, with elevation of angles of both scapulæ. No pain over this projection on pressure. The man complains of a severe gnawing pain in the region of the kidneys, accompanied, when he is in bed, with a sensation as of a great weight pulling down the body. Pulse 60, weak, intermittent, and irregular. The forcible impulse of apex of heart can be seen in seventh intercostal space. Dulness over præcordial region more extended than in the normal condition. A double aortic bruit, diastolic much louder than systolic. A loud sighing murmur heard over front and upper part of chest as far as the base of neck, and also over the whole of the chest posteriorly; this murmur is loudest between third and fourth ribs on left side of sternum. Patient complains of great pain in left shoulder, extending at times to the elbow. Appetite good; bowels somewhat constipated; urine passed without difficulty. Locomotion was not impaired at the time of admission, but in consequence of the pain and sense of heaviness in the back the man was kept in bed. Decubitus dorsal.

October 2.—Very little improvement since admission. To-day the patient has suffered from violent fits of pain and dyspnœa, recurring at frequent intervals. Ordered a mixture containing chloric ether and camphor; one ounce to be taken every four hours.

16th.—Has been getting gradually worse since his admission. Bruit generally louder, and more distinct on left side behind. Intermission of heart's action at every eighth beat. The man cannot sit up in his bed without suffering increased dyspnœa and great oppression in the chest. Obstinate constipation.

November 4.—Since last date the chest symptoms have apparently been stationary, but a train of morbid phenomena has been gradually presented in the lower extremities and pelvic viscera, which point to a considerable impairment of the nervous supply. Formication and occasional severe pains, followed by numbness and great loss of muscular power in both legs, but in the left limb first and with greater intensity, finally resulted in a complete loss both of sensation and of voluntary motion of the whole of the lower extremities. The loss of cutaneous sensibility has gradually extended upwards over the front of the abdomen. The bladder has also shared in the paralysis, and to-day the urine had to be drawn off by the catheter. Abdomen tympanitic. Bowels constipated.

9th.—No sensible improvement. Employment of the catheter still necessitated on account of the retention. Urine fœtid and ammoniacal. Mucous membrane of bladder evidently much congested, as the most cautious use of the catheter is followed by profuse hæmaturia. Bladder injected daily.

11th.—Dyspnœa increasing. Urine now flows away constantly from the urethra, and the bladder can be emptied by slight pressure over the hypogastric region. Fæces are discharged involuntarily. Loss of sensation has extended as high as the xiphoid cartilage. The patient during the last three days has had frequent rigors, and to-day is suffering from an attack of subacute bronchitis. Coughing frequent, with expectoration of frothy mucus, stained here and there with blood.

14th.—Bronchitis still continues, and also the incontinence of urine and fæces. The patient at times is delirious. This morning the following appearances were noticed in the lower extremities:—Feet and legs below the knee slightly œdematous; skin pale and not congested or inflamed; the sole of the right foot covered by a large dark-coloured bulla containing about one ounce and a half of fluid; over the heel is a large gangrenous patch, the integument being dry and of a deep black colour; no line of demarcation; the dorsal surfaces of second and third toes of left foot covered each by a dark-coloured bulla.

16th.—During the whole of the previous day was gradually sinking; frequent coughing and expectoration of clear mucus. No tendency to spreading of the gangrene in feet. At nine last night had a severe attack of pain and dyspnœa resembling angina pectoris, after which he became violently delirious, and continued so for some hours. At 5.30 a.m., died.

Post-mortem Examination thirty-two Hours after Death.—Both lungs were bound to the inner surface of thorax by firm and dry adhesions of long standing. Both organs were crepitant, and contained air. Their surfaces were congested and stained by diffused deposition of black pigment. The anterior free margins of both lungs were slightly emphysematous. On section the pulmonary tissue was found much congested, and a quantity of frothy white fluid exuded from the cut surfaces. The pericardium contained about six ounces of yellow serous fluid. The heart was somewhat larger than normal, and increased principally in extent from side to side. Its surface presented the pale yellow colour of adipose tissue, which seemed, on superficial examination, to have entirely replaced the muscular structure. The walls of both ventricles were of the normal thickness, but very flabby. Firm fibrinous clots, of a pale red colour, were found in both ventricular cavities; the auricles were almost empty. The valves of the heart and of the aorta and pulmonary artery were free from deposit. On following the thoracic aorta, a large aneurismal tumour was found in connexion with its posterior surface opposite to the fifth and sixth dorsal vertebræ. This tumour measured about four inches from above downwards, and over seven inches from side to side at its widest part. It extended over four ribs on the left side and over two on the right, and was firmly bound down on both sides to these ribs and to the corresponding intercostal spaces. In its lateral extent the tumour affected the left side much more than the right. On slitting up the anterior wall of the thoracic aorta, a regularly shaped oblong opening, about two inches from above downwards and half an inch from side to side, was found at the posterior wall of the artery, leading directly into the aneurism. The edges of this opening were smooth and rounded. The cavity of this aneurism, which contained a quantity of coagula, was bounded laterally and in front by a very distinct thick-walled sac, and posteriorly, without any intermediate membrane, by rough and denuded bone, presenting at several points sharp osseous spiculæ. On closer examination, the bodies of the fifth and sixth vertebræ were found to have been almost wholly absorbed, also the commencement of the corresponding ribs on the left side. At the bottom of the large chasm thus formed was the fibrous sheath of the cord, which was in close proximity to the posterior wall of the vertebral canal. The spinal cord had been considerably compressed, and was much reduced in size. The stomach and intestines were distended with fœtus. The peritoneal surface was pale and anæmic. The right lobe of the liver was larger and the left lobe smaller than normal. The surface of this viscus was of a uniform dark red colour; the capsule was thickened and semi-opaque. The kidneys were healthy, with the exception of two small yellow deposits of fibrine found on dividing the left organ. The spleen was distended with blood. The mucous membrane of the bladder was very much congested, and in many places thickly covered with plastic lymph.

The Acouoxylon.—This is the designation which Dr. Paul Niemeyer, of Magdeburg, proposes to give to a modification of the stethoscope. He draws attention to the fact that Laennec's hollow instrument is only an imperfect conductor of sounds, through the two media air and wood. Chladni and Savart have established that wood is a far more perfect conductor than air, and that deal is eighteen times superior to air in this particular. On this account solid deal is always employed in musical instruments when the mere conducting of sound is the object in view. He recommends, therefore, that Practitioners should deliver the stethoscope which by practice they have found most convenient into the hands of a turner, and desire him to construct a solid copy of well-seasoned deal, all in one piece. This, the "acouoxylon," is the only stethoscope constituted according to the law of physics, and in consequence it is superior to Laennec's cylinder.—*Gazette Méd.*, December 12.

Dental Hæmorrhage.—Mr. S. Lawrence states that he usually applies persulphate of iron, and if that does not succeed he adopts the following mode of making a plug, which invariably arrests the hæmorrhage. Having spread out a piece of lint or cotton as thin as possible, he places on it as much dry plaster of Paris as will fill the cavity. This is made into a ball or pellet, which, after removing the coagulum, is forced into the alveolus by some blunt instrument, the finger being pressed evenly on it for five minutes, or until the plaster is completely set.—*Boston Med. and Surg. Journal*, Oct. 22.

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Medical Times and Gazette.

SATURDAY, DECEMBER 19, 1868.

MARRIED SOLDIERS.

Imprudent marriages are such frequent causes of misery and want, that the wonder would be to discover any class of society from which instances might not be selected to illustrate and enforce the truth of the assertion. Our soldiers certainly are not the class among whom to search for exceptions to the rule, notwithstanding that a Medical contemporary, having come across a typical instance of an imprudent marriage among the troops at Woolwich, appears to be of a contrary opinion, and to expect that a rule universally applicable to all other ranks in the social scale should cease to act where soldiers are concerned.

Our contemporary, in a pathetic description of the miseries and deficiencies of the home of a married soldier and his family, contrasts it with the perfect sanitary arrangements and comfort of the stables in the neighbouring barracks, now under the supervision of a Royal prince, etc.; and asks would it not be advisable, on the grounds of policy, to say nothing of humanity, for commanding officers occasionally to look after the comforts and requirements of the married soldier with somewhat of the same vigilance that they evince in the care of horses?

We yield to none in the desire for the welfare of our soldiers, but must say that our contemporary in the outset of his description has, unintentionally no doubt, conveyed an impression which puts in a false position the whole question of the relation between the State and the married soldier whose case is narrated, by the assertion that he was married "with leave," but had no lodging money, furniture, or bedding allowed to him. The man referred to may have been married with the knowledge or connivance of his commanding officer, and on the understanding that he should be taken on the strength of the married men of his corps when an opportunity might occur; but "married with leave," as such term is understood in the service—that is, as one of the 10 per cent. of married soldiers at present allowed by the regulations—he cannot have been, or he should have had the barrack accommodation granted to married soldiers, or allowances in lieu thereof.

It is not fair to charge either the superior military authorities or the commanding officers of corps with the results of the recklessness and imprudence of individual soldiers. Every soldier knows perfectly well the only terms on which, according to the present military system of this country, he can marry so as to have a claim for assistance towards the support of his wife, the education of his children, and their Medical treatment

when sick; he must be one of a limited number, and when he marries under other circumstances, or without a fair chance of shortly coming within the terms of the regulations, he takes a step for the results of which he alone is responsible, having actually infringed the terms on which he was enlisted, as well as overstepped the limits of prudence. Neither he nor his wellwisher has any right to claim for him any exemption from the operation of a law which acts with relentless force on every other class of society. So long as our present system of enlistment for long periods of service exists, only a small proportion of our soldiers can be permitted to marry. If the term of enlistment for general service were for five or seven years only, it would be actually better that marriage should be forbidden altogether during that time, for on the expiration of it the soldier desiring to continue in the service, and being drafted into the militia or reserve force, and only liable to be called out for short periodical drills or on extreme emergency, would by his labour or other civil employment, aided by a retiring pension, be in a much better position to support a wife and family than many men of his class—the agricultural labourers, for instance, whose condition Canon Girdlestone so powerfully describes.

Until, however, the public opinion of the country, of which Government and the military authorities are in reality merely the exponents, decides upon this and other questions of army reform which are now forcing themselves so prominently on our attention, it is as idle to urge the claim of the soldier to marry when he pleases, and to be exempt from the results of so doing, as it would be to desire or expect the suspension of any other general law.

THE WEEK.

TOPICS OF THE DAY.

The ratepayers of London will be glad to see that Mr. M'Cullagh Torrens, the member for Finsbury, has lost no time in raising a question as to the justice and necessity of saddling ratepayers indiscriminately with enormous burdens for the purpose of providing vast buildings for the reception of sick paupers. On Tuesday last, in the House of Commons, he gave notice of a resolution affirming "that the purchase of sites for new district asylums or workhouse Hospitals in the metropolis should be preceded by an inquiry into their necessity, and into the ability of the ratepayers to bear increased burdens." Mr. Wyatt, the Chairman of the St. Pancras Board of Guardians, on the occasion of laying the first stone of the new St. Pancras Infirmary at Highgate, on a site which has cost about £1100 an acre, expatiated on the comparatively small cost of the new Infirmary—only £70 a bed—represented by a rate of three farthings in the pound for thirty years. As if this were the only burden which the ratepayers had to bear, and as if they were all people who could afford luxuries at home in case of sickness. Whereas it is the fact that a large number of the St. Pancras ratepayers are people just above the pauper class; to the self-relying struggling portion of whom an extra rate is an injustice and a cruelty; whilst to the indifferent and vicious the luxurious accommodation to be offered to the sick pauper must act as a fresh inducement to carelessness about the future. We sincerely hope that Mr. M'Cullagh Torrens will succeed in carrying his resolution. Justice to the sick pauper requires that the State should provide him with all necessaries in his sickness. Justice to the ratepayer requires that he should be taxed for nothing more. Certainly, palatial Hospitals and asylums are not necessary.

According to the *North British Daily Mail*, the fact that the member for the Universities of Glasgow and Aberdeen early accepted office in the new Ministry as Lord Advocate of Scotland has given rise to a doubt as to the necessity of his re-election. The Liberal side maintain that, Mr. Moncreiff having accepted office before he was declared duly elected member for the Universities, there is no need for his re-election, as, according to the Act of Queen Anne, it is only when a Minister of the Crown has already been elected that he must on accepting office seek re-election. Mr. Moncreiff, it is said, is acting in accordance with this view. The Conservative party, on the other hand, maintain that Mr. Gordon was Lord Advocate of Scotland until the moment the late Ministry gave up their seals of office, and that therefore Mr. Moncreiff could not be Lord Advocate prior to his election. A more serious question, affecting directly the status of the Scottish University constituencies and the respectability of their seats, is likely to arise out of this election. It is said that the new Lord Advocate's return is to be petitioned against on the ground of bribery through himself and agents, the bribery consisting in the payment of registration fees by associations formed in his interest. Of course it is a new question whether a payment of registration fees would constitute bribery in a legal sense, however clearly it does so in a moral one. It seems to us that, if it be not held to be bribery, the prestige of a University seat will be terribly lowered. It appears that Mr. Moncreiff's opponent, Mr. Gordon, is not promoting the petition, but that it is undertaken by the Conservative party in the University of Glasgow. An analysis of the poll taken in the University of Aberdeen, published by one of the Aberdeen papers, shows that Mr. Gordon had a majority of nearly two hundred in that University, and that of the Medical Practitioners seventy-seven more voted for him than for the successful candidate.

The contest for the office of Medical Officer of Health in St. Pancras has resulted in the selection of Dr. Stevenson, the Chemical Demonstrator at Guy's Hospital. Undoubtedly the choice is a good one. Dr. Stevenson is Examiner in Forensic Medicine in the University of London, of which University he is a graduate, and was formerly University Scholar in Midwifery and Forensic Medicine. At a preliminary special meeting of the St. Pancras vestry, applications were received from fourteen candidates. Of these, two—one of whom was Mr. John Netten Radcliffe—were pronounced by the chairman ineligible, in consequence of not possessing both Medical and Surgical diplomas. Of the other twelve three did not appear, and of the remainder, on a show of hands being taken, three were pronounced to have the largest number of supporters. These were Mr. J. T. Dickson, 21; Mr. W. J. Smith, 49; and Dr. Stevenson, 50. At the ordinary meeting of the Vestry on Wednesday, these three names were again submitted, when Dr. Stevenson won the post by four votes. Whilst we undoubtedly support the principle that these appointments should ordinarily be only open to men who have given guarantees to the public by having passed examinations in all branches of their Profession, we are bound to assert that the exclusion of Mr. Radcliffe on such grounds was a mere piece of redtapism. Mr. Radcliffe's testimonials were the very highest a candidate for such a post could produce. He has served with the most marked distinction as a sanitary commissioner, in the investigation of epidemics, under the Privy Council, and surely this alone should have been a sufficient passport to a candidature for any local sanitary appointment. We believe, however, that Mr. Radcliffe's friends have reason to congratulate him upon his non-success. Metropolitan vestries are not, as a rule, pleasant bodies to work with; and the shabby cutting down of the salary, on which we commented last week, does not augur very brightly for the future of the Medical Officership of Health of St. Pancras.

A series of horrible cases of husband poisoning have been discovered and brought to justice at Marseilles. The poison used was arsenic. A woman named Biggadike has also been condemned to death at Lincoln for poisoning her husband with a large dose of the same agent. These cases do not present any fresh points of Medico-legal interest, and we therefore do not notice them at length. We think that the time

has passed for filling Medical journals with criminal reports, unless, indeed, they contain anything throwing new light on matters of science.

In a paper read before the Salford Sanitary Association on Monday last, Dr. Syson again asserted his belief that the greatest number of sick children in Salford were attended by chemists, whose business, he added, was now one of the closest and most profitable monopolies in existence.

A "gentleman farmer," owning 3000 acres of land, has been fined 200*l.* and 10*l.* costs for sending ten carcases of sheep that had died from disease, and were evidently unfit for human food, to the London market. Serve him right.

A curious point in natural history was argued in the Court of Common Pleas last week. It was whether a sword-fish could pierce a ship's bottom, through copper and wood, to the extent of fourteen inches, and then withdraw his sword without breaking it. Professor Owen and Mr. Frank Buckland were amongst the witnesses. It was abundantly proved that the sword-fish could pierce a ship's bottom, but it appeared that in every known case the animal had broken his sword in endeavouring to escape. Mr. Buckland said that although the fish could get its beak in it could not get it out. It had plenty of power to go ahead, but none to go astern. It might, however, possibly wriggle out by lateral movements. The action was against a Marine Insurance Company, and eventually the jury gave a verdict that the injury was caused by some substance other than water, and probably by a sword-fish.

At the recent annual re-election of the Medical officers of the Aberdeen Infirmary, Dr. Reith was not re-elected. It is stated that the whole Medical staff of the Infirmary had signified their intention of resigning in case of Dr. Reith's re-election. The Medico-Chirurgical Society of Aberdeen are also, we hear, discussing whether they shall expel homœopathic Practitioners. We can only regret that men who are well qualified to advance the Profession of legitimate Medicine should be seduced by such dogmatic and mythical nonsense as homœopathy.

We regret to announce the death of Dr. Collins, for many years one of the most eminent Practitioners of Midwifery in Dublin, at one time Master of the Lying-in Hospital, and author of a well-known work on Practical Midwifery. We shall, in a future number, publish an obituary notice of this eminent Physician.

THE LORD MAYOR OF DUBLIN.

The opinion we expressed in our number of the 5th inst., that Sir John Gray, M.D., M.P., would decline the honour of the Mayoralty proffered to him by his fellow-citizens, and that the present occupant of the civic chair, the Right Honourable Sir William Carroll, L.K.Q.C.P.I., would continue in office for another year, is likely to be fulfilled in both particulars. We stated last week that a meeting had been summoned for December 11 to elect a successor to Sir William. At that meeting the re-election of Sir William was proposed by Alderman Moylan and seconded by Mr. Dennehy, T.C. An amendment to the effect that the re-election of the Lord Mayor would establish a precedent "embarrassing to the Corporation and prejudicial to the interests of the citizens" was moved by Alderman M'Swiney, and seconded by Mr. Leonard, T.C., and on a division was lost by a majority of 9 in a house of 49. Sir William Carroll was then re-elected *nem. con.* It is 175 years since the civic chair of Dublin has been occupied by the same individual for two years in succession, and we trust that the unusual event of the re-election of the Lord Mayor may be taken as the verdict of the Dublin Corporation that the first Medical Mayoralty of the Irish metropolis has been what we from the first anticipated it would be, and what events from time to time recorded in our columns showed it to be, a splendid success.

THE PATHOLOGICAL SOCIETY.

Notwithstanding the heavy rain of Tuesday evening, this Society was fully attended, and many specimens of interest were exhibited. First Dr. Thudichum showed the spectrum of a new substance which he called lutein, the colouring matter found in corpora lutea and in ovarian cysts. He said it was characterised by its absorption bands existing towards the violet rather than towards the red extremity of the spectrum. Corpora lutea were supposed to owe their colour to hæmatoidin, the result of transformed blood-colouring matter. Spectral analysis has, however, shown that the colour does not depend on this, but on a substance analogous to the colouring matter found in the yelk of the egg. Dr. Thudichum further stated that, in his opinion, this gave a new aspect to the doctrines at present accepted as to ovulation, hinting that the yelk of the ovum was left behind in the ovary when the germinal vesicle was extruded. To this we shall only reply that the view requires something more than spectral analysis for its support.

Another matter of perhaps greater interest to the members of the Society was started by Mr. Heath, who wanted to point out some facts bearing on the treatment of aneurism, but was stopped by the President. Mr. Heath complained, and, we believe, most justly, that the time of the Society was taken up by the exhibition of specimens of no interest whatever except to the exhibitor, and by elaborate reports which the members could not follow, even if they could hear them read, which was not infrequently impossible. When, therefore, any specimen of unusual interest came forward, all debate on the subject was suppressed on the ground of want of time and the specimen abruptly referred to the Committee on Morbid Growths. There is a great deal of truth in these points, and they deserve careful consideration; but the remedy is not so easy. Even now the secretaries are overworked, and any addition to their arduous labours must be carefully considered. The work done by the Committee on Morbid Growths is also of immense value; but their reports are better adapted for quiet study than for being read when members are taking their seats. It was suggested that a very short abstract of these reports might be read, and the more lengthy document exposed for consultation in the rooms of the Society, and that some time should be given at the beginning of the meeting for the inspection of specimens. Now, it is not unusual for some gentleman who has only had a specimen passed on to him to jump back to a subject every one fancied dismissed many minutes before. The question of selecting specimens is also one of difficulty—the selections might seem invidious. There are men who distinguish themselves by bringing forward specimens of no value, and by indulging the Society with their lucubrations on them; still, it is difficult for the officers to say that such specimens need not be received, and that the said lucubrations, if valuable, are no novelties. On the other hand, there are many who not only bring admirable specimens, but admirably describe them, and we fear we must continue to take the bitter with the sweet. The division of labour is said to be of great service in economising time and force. We cannot say that this is the case with our Medical societies. This was shown by two specimens, exhibited on Tuesday evening, which had already furnished the subject of discussion in a sister society. Unfortunately, the one society takes notice of the living only, the other of the dead, so that we have thereby two imperfect histories instead of a single thorough one in each case. Men cannot afford to spend every night of their lives at societies, which have been so multiplied that they begin to starve each other. The struggle for life is beginning. On the occasion of the last meeting of the Medical and Chirurgical Society only one unread paper was on the list—a list which used to be crowded. It is no part of our business to inquire into the causes of this scarcity, but we may be allowed to regret it, and to sigh for

the fulfilment of Mr. Solly's dream of an Academy of Medicine. Another matter of interest in Tuesday evening's proceedings was the proposal of certain names of distinguished foreigners as honorary fellows. These were Louis, Virchow, Billroth, Bernard, pathologists, and Helmholtz, Ludwig, and Brücke, physiologists who have done much to advance pathology.

FROM ABROAD—THE ELASTIC SPONGE BED—TRACHEOTOMY IN SYPHILITIC AFFECTIONS OF THE AIR-PASSAGES—THERAPEUTICAL EMPLOYMENT OF OPIUM-SMOKING.

THE number of the *Boston Medical and Surgical Journal* for November 12 gives an account of the new elastic sponge bed, or rather mattress, which shows that the invention deserves attention in this country.

"All are aware how great a desideratum it has been to find some cheaper, more durable, and *cleaner* substitute for hair in stuffing mattresses. In Hospitals particularly, the beds are always a source of trouble and disease, difficult to preserve, and still more difficult to purify. They often swarm, too, with insect life, which can only be destroyed by a very high temperature and by repicking and refilling the hair. In the use of sponges for filling beds, it really seems as if a very great improvement had been reached. The cheaper sponges from the Bermuda and Florida reefs are cleansed with chlorine, cut up, and saturated with glycerine, so as to retain that elasticity which is due to moisture, and then compressed into the mattress."

Professor Doremus, the eminent chemist of New York, in his testimonial, says:—

"I sleep each night upon one of your sponge mattresses, and find it soft, springy, and elastic. It is as delightful as the finest hair mattress, for it is not to be compared with any inferior article. The basis on which success in accomplishing your object depends is the elasticity of the sponge when its tissues have been dilated or swollen by some liquid. As is well known, sponge acquires this property when moistened with water; but, as this speedily evaporates, it cannot be employed, for, by its loss, the sponge shrinks and hardens. For this reason you have substituted glycerine, as it is possessed of properties most valuable for your purposes. It is absorbed readily by the tissues of the sponge, and does not evaporate, except at high temperatures. It does not oxidise or become rancid on exposure to the air, nor will it rot the sponge. The practical application of this liquid is simple. After cutting, washing, and drying the sponge, you saturate it with glycerine and water, press out the excess, and then evaporate most of the aqueous part, leaving the pieces in a soft and highly elastic state, fitted for use. To determine the relationship of water to sponge so prepared, small pieces were weighed daily in a delicate analytical balance for several weeks, and though they were openly exposed to the air in my laboratory, at the end of the first month they had precisely the same weight as at the commencement. The sponge is superior to hair in elasticity, for after being compressed it resumes its original bulk more readily than hair, and hence will not require redressing as cushions or beds of this latter substance. Another most decided advantage which it possesses over hair, moss, etc., is that there are no germs of insect life to be developed when warmth and other conditions are favourable. Its perfect cleanliness is a high recommendation, whether it is used in mattresses and furniture in private residences and hotels, or for cushions or beds in sleeping cars. It is, moreover, superior to hair in lightness and cheapness. It is possessed, likewise, of additional valuable qualities, as it neither disintegrates nor decays. Even when saturated with water, a cushion will soon lose the excess of moisture and be restored to its most desirable conditions."

M. Trélat, a candidate in the Section of Surgical Pathology, read at the last meeting of the Académie de Médecine a paper on "Tracheotomy in Syphilitic Lesions of the Air-passages," of which the following are the conclusions:—1. Syphilitic lesions of the air-passages necessitating tracheotomy may arise at any stage of the disease, but are of most frequent occurrence during the tertiary period. Their nature, seat, and extent vary, but yet they are of most common occurrence the nearer they are to the upper orifice of the larynx. 2. The obstruction they give rise to may arise suddenly, but it is in general more gradual, and supplies an element of diagnosis. 3. An attentive study of the signs and symptoms characterising obstruction of the larynx and of the trachea prove that it is possible to distinguish these two orders of lesions which it is of such importance to recognise with regard to prognosis and therapeutics. 4. The diagnosis is based upon the loss or preservation of the voice, on the epoch of the appearance of the dyspnœa, and on laryngoscopic examination. 5. Excellent results have followed upon tracheotomy in laryngeal obstructions, while to the present time it has only been attended by failure in tracheal obstructions. 6. When the operation is indicated, it should be executed without delay, as death may result from the occurrence of a sudden suffocative paroxysm. 7. Although tracheotomy offers so few chances of success in contractions of the trachea, it should nevertheless be tried after a diagnosis which may have to be rendered more accurate and precise during the course of the operation. 8. The operation requires to be modified according to the nature of the lesions, and success is only to be hoped for when the obstruction can be passed and dilated by means of a suitable canula. In the contrary case failure is certain. 9. When tracheotomy is followed by a cure, the period during which the canula has to be retained varies according to the nature of the lesions. The Medical treatment must be resumed as soon after the operation as possible, and carefully persisted in. The employment of M. Broca's canula (its opening limited to inspiration) enables us to exactly determine the epoch at which the canula may be removed and the wound healed without incurring any danger.

At the same meeting of the Academy M. Armand, a distinguished Army Surgeon, read a paper on the "Therapeutical Employment of Opium-smoking." He is well acquainted with the practice as it prevails in the East, and in 1865 published in the *Gazette Médicale* several papers upon the subject; and he observes that Sydenham, who stated that he would rather abandon the Profession than give up the use of opium, would certainly have utilised the Chinese opium-smoking had he been aware of it. M. Armand, during several years' trial, having found it an easy, inoffensive, and very efficacious mode of treating chronic and neuralgic affections, is anxious to bring it more prominently before the Profession. The pipe employed is quite peculiar in its construction, in nowise resembling that used for tobacco, and M. Armand not only described, but exhibited it in action to the learned body which he was addressing. A mere buccal aspiration does not suffice, the object being to make as deep and prolonged an inspiration as possible, so as to charge the bronchi with the opium smoke. This is essential, in order to effect the combustion of the opium and to derive advantage from this. The smoking is an agreeable operation even on the first attempt, and if the inspiration has not been too forcible no coughing is produced. In his own personal trials M. Armand has found that he can smoke ten grains without any ill effect, but beyond this quantity it induces heat of surface and troublesome dreams. Keeping within the moderate amount of from one to ten grains, a sedative and highly useful therapeutical action is procured, especially in chronic bronchitis and laryngitis, pertussis, asthma, nervous palpitation, angina pectoris, gastralgia and enteralgia. Next in order come facial and dental and supraorbital neuralgiæ and migraine, as also articular and muscular rheumatism; for it is to be noted that, besides its sedative action, opium-smoking carried to a high degree increases the temperature and induces diaphoresis. M. Armand has tried the effect of various opiated cigars, but finds that nothing but the vapour proceeding from the extract of opium burnt in the pipe produces the beneficial effects he has been adverting to.

ETHNOLOGICAL SOCIETY OF LONDON.—The Council has resolved to postpone the meeting of the Ethnological Society fixed for December 22.

THE MICROSCOPIC ANATOMY OF THE NERVOUS SYSTEM.

A VERY valuable memoir on this subject has been recently presented by M. Grandry to the Royal Academy of Belgium, and it possesses additional interest from the fact that the researches which are described in it were conducted under the personal superintendence of the father of cellular physiology, Professor Schwann. M. Grandry commences with a reference to the late researches of Fromman,(a) who has written two memoirs—(1) "On the Axis-cylinder," and (2) "On the Connective Substance of the Spinal Cord, and on the Structure of the Nerve-cells of its Anterior Cornua."

Fromman has shown that the axis-cylinder, when treated with nitrate of silver, in the great majority of cases exhibited transverse striæ, while sometimes, but much more rarely, the striæ were longitudinal; and he further maintains that the nerve-cells when similarly treated present longitudinal striæ, which extend into their prolongations.

M. Grandry's results are in perfect accordance with those of Fromman in so far as the axis-cylinder is concerned, but differ very materially in relation to the nerve-cells. For an account of the method pursued in his investigations, we must refer to the original memoir or to the abstract furnished by the author to the *Revue des Cours Scientifiques*. On examining with even a weak magnifying power a properly prepared, quite fresh spinal cord, a transverse, well-marked, and very regular striation of the axis-cylinder is observed, similar to that which is seen in striped muscles. Throughout its whole extent the cylinder presents alternate clear and dark points, as if the reagent had attacked one part of its substance and respected the other. The breadth of the striæ varies from 0·001 mm. to 0·005 mm., while the spaces intervening between the striæ (b) vary from 0·001 mm. to about 0·003 mm. (1 mm. being nearly = 0·04 of an inch).

Each stria, considered separately, shows itself as a line of varying thickness (of course a physical and not a mathematical line), the thinner lines being most clearly defined, while the coarser ones are granular and less sharply defined. The intervening structure is slightly coloured, but far less so than the striæ.

Such are the chief characters presented by the axis-cylinder if placed in its still living state in a solution of nitrate of silver, and then exposed to the action of light.

The preceding remarks apply only to the axis-cylinder when completely isolated; but virtually similar results are obtained when it lies in the interior of a fibre and invested externally by the homogeneous coat of Schwann and internally by the medullary matter.

From his various observations and experiments, M. Grandry comes to the following conclusions:—

(1) Nitrate of silver exerts a special action on certain parts of the axis-cylinder, while it does not attack, or only very slightly affects others.

(2) The axis-cylinder is composed of two substances differing in their physical and chemical properties.

(3) These two substances are not blindly intermixed, but are completely separated from each other, lying in a regular order of arrangement.

(4) The axis-cylinder is probably formed of superimposed discs, separated from each other by a substance with properties distinct from those of the discs.

(5) The axis-cylinder, while lying in the interior of a fibre, presents exactly the same characteristics as the isolated cylinder, due allowance being made for the additional impediments which the test-solution meets with.

With regard to the nerve-cells and their prolongations, M. Grandry attributes the discrepancies between his own results and those of Fromman to differences in their mode of procedure. Grandry proceeds as follows:—He takes the organs in as nearly a living state as possible, plunges them for a certain time into the solution of nitrate of silver (one part of the crystallised salt to 400 of distilled water), and then exposes them to the light; and this exposure must extend over a considerable time, because light acts much less energetically on the cells than on the axis-cylinder. (Some of his most beautiful preparations were submitted for a fortnight to the action of nitrate of silver in the dark, and then to a fortnight's exposure to light, while half an hour's sunlight was often sufficient to call forth the appearances in a preparation of the axis-cylinder.) The structures yielding the best results were the cervical portion of the cord, and especially the tissue of its anterior cornua.

When subjected to the above treatment, the nerve-cells and their prolongations present a decided and well-marked striation, the striæ varying in thickness from 0·001 mm. to 0·005 mm. The finer striæ are homogeneous and of a brown colour, while the thicker ones have a blackish granular appearance. The intervening spaces are almost colourless. Most commonly (but not invariably) the striæ on each cell are of the same thickness. The cells also present deep-coloured patches or spaces much larger than the ordinary striæ, and are thus divided into two or three segments. In opposition to Fromman's view, M. Grandry finds that the direction of the striæ follows no definite rule, except that all the striæ are parallel, and that the nucleus exercises no influence on their course. The prolongations of the cells present a transverse striation in all respects similar to that which occurs on the axis-cylinder, the thickness of the striæ being the same as that of the striæ on the segment of the cell from which the process is given off.

If a prolongation is carried round a cell, no striation is apparent; if, however, it be moved into the rectilinear position, the striæ are at once seen, and on returning the prolongation to its original position, they again immediately disappear. On submitting the nerve-cells to compression, we see the larger striæ increase in thickness, while the thinner ones remain unchanged.

From these facts M. Grandry concludes that:—

1. In the body of the nerve-cells there exist two substances with distinctly different properties.

2. These substances appear to be isolated.

3. There is probably a discoid arrangement, as in the axis-cylinder—there being this fact in its support, that sometimes a coloured plane is seen traversing the cell.

4. The nerve-prolongations and the axis-cylinder present the same appearances when submitted under certain conditions to the action of nitrate of silver.

"From these reactions of nitrate of silver on the axis-cylinder and the nerve-cells, we may hope," says M. Grandry, "to elucidate questions regarding the *substance conjonctive* and the nervous substance in the posterior cornua of the spinal cord and elsewhere. With regard to the posterior cornua, my researches are not as yet sufficiently complete to enable me to hazard an opinion."

(a) It is strange that no reference is made to the recent investigations of Gerlach. A good condensed report of his micro-chemical examination of the structure of the spinal cord is given by Ranke at the end of his excellent work on "Human Physiology," lately published.

(b) The spaces between the striæ in muscle vary from 0·0009 mm. to 0·002 mm.

AGUE IN RUSSIA.—The ague presents to the Russian *baboushka* (wise woman or midwife) a field for the most singular operations in the healing line. It is surrounded by superstition and mystery; it is called "the neighbour" (fem. gen.), the "friend;" whilst its real Medical name, *likhoradha* or *likhomanka*, signifies spiteful joy or spiteful allurement, as though an unseen spirit took a spiteful delight in torturing his victim. There is a belief that until it is frightened away it will continue to bother the patient, also that when coming to a favourable crisis, it appears in a hideous form in dreams.—*Romanoff's "Sketches of the Greco-Russian Church."*

MONTHLY RETURN OF DEATHS REGISTERED IN THE EIGHT PRINCIPAL TOWNS OF SCOTLAND, FOR NOVEMBER, 1868.—The deaths of 2474 persons were recorded in the eight towns during the month, of whom 1253 were males, and 1221 females. Allowing for increase of population, this is 117 more than the average number for the month of November during the last ten years, and is 425 more than the number registered during the corresponding month of last year. The zymotic (epidemic and contagious) class of diseases proved fatal to 642 persons, thus constituting 26 per cent. of the total mortality of the eight towns. From the prevalence and fatality of scarlatina, this rate was exceeded in Glasgow and Paisley. Scarlatina, though on the decrease, the deaths therefrom being 53 in number, and the percentage to the whole mortality 3·1 less than during the previous month, still continues the most fatal of the epidemics, having caused 272 deaths in the eight towns, or 11 per cent. of the mortality. In Leith, 8·3 per cent. of the deaths were from that cause; in Greenock, 10 per cent.; in Edinburgh, 11·9 per cent.; in Paisley, 13·5 per cent.; and in Glasgow, 14 per cent.

REVIEWS.

RECENT WORKS ON OPHTHALMIC SURGERY.

The Natural and Morbid Changes of the Human Eye and their Treatment. By CHARLES BADER, Ophthalmic Assistant-Surgeon to Guy's Hospital. Illustrated by Ten Plates. London: N. Trübner and Co. 1868. Pp. 505.

Treatise on the Diseases of the Eye, including the Anatomy of the Organ. By CARL STELLWAG VON CARION, M.D., Professor of Ophthalmology in the Imperial Royal University of Vienna. Translated from the Third German Edition by CHAS. E. HACKLEY, M.D., and D. B. ST. JOHN ROOSA, M.D., of New York. London: Robert Hardwicke. 1868. Pp. 774.

A Manual of the Diseases of the Eye. By C. MACNAMARA, Surgeon to the Calcutta Ophthalmic Hospital, etc. London. 1868.

An Improved Method of Extraction of Cataract; with Results of 107 Operations. By J. R. WOLFE, M.D., F.R.C.S.E., Ophthalmic Surgeon, Aberdeen Royal Infirmary, etc., etc. With Illustrations. London: John Churchill and Sons. 1868. Pp. 70.

Du Diagnostic des Maladies des Yeux. Par X. GALEZOWSKI.

On the Diagnosis of Eye Diseases by the Chromatoscopy of the Retina. Preceded by an Essay on the Physical and Physiological Laws of Colour. By X. GALEZOWSKI, M.D., etc., Professor of Ophthalmology. With Thirty-one Woodcuts, etc., etc. Paris: J. B. Baillière and Sons. Pp. 267. 1868.

The Royal London Ophthalmic Hospital Reports and Journal of Ophthalmic Medicine and Surgery. Edited by J. C. WORDSWORTH and J. HUTCHINSON. Vol. VI. Parts 1 and 2. 1867-1868. London: John Churchill and Sons.

[SECOND NOTICE.]

A SUBJECT of great practical interest in Ophthalmic Surgery is the treatment of extensively thickened and opaque cornea, the so-called pannus existing in connexion with granular lids. Attention has in late years been directed to the inoculation treatment, which consists in the application to the affected organ of purulent matter taken from foreign sources, for the purpose of setting up purulent ophthalmia, and causing removal of the palpebral granulations and also the opaque and vascular covering of the cornea. With this aim, gonorrhœal discharge has been applied to the conjunctiva, but the inoculable material is now generally taken from the eye of an infant affected with blennorrhœal ophthalmia. Although this plan of treatment has been followed by good results in many well-authenticated instances, it cannot, we think, be considered in any other light than that of an heroic and hazardous remedy, which should be applied and controlled most carefully, and be preceded by a thorough investigation into the general condition of the patient and the nature and amount of the corneal disease. The liability of the inoculated matter to set up severe and injurious inflammation, leading to anterior staphyloma, and even to sloughing to the cornea, and the great risk of the other eye becoming involved by the passage of pus across the bridge of the nose, are points which ought to be fully considered before the treatment by inoculation is carried out. Mr. Bader has not dealt with this subject in the complete manner we expected from one who had paid great attention to the changes produced by pus applied to diseased conditions of the cornea and conjunctiva. In the treatise he fails to give any clear impression of the true character of the inoculation plan, which is discussed as if it were a slight matter, somewhat akin to the application of a leech or a caustic lotion. Nothing is stated concerning the indications and contra-indications for inoculation; and the danger of both eyes becoming inflamed, and even permanently impaired, by the intensity of the attack, is only hinted at by the directions given for closing the non-inoculated eye by layers of Canada balsam or gum mastic spread over the skin of the closed eyelid and the adjoining side of the nose. The results of the treatment at Mr. Bader's hands are not given very fully; it is stated that in all the cases—about 300 in number—the granulations disappeared, but the number of cases of pannus in which the opacity was removed or sensibly diminished is not given.

The morbid changes which sometimes appear in a sound eye after its fellow-organ has been affected by injury or spontaneous disease, are tabulated by Mr. Bader under three heads, viz.—1. Sympathetic irritation, marked by pain in the ciliary region and forehead of the corresponding side, an increased flow of tears, and an undue vascularity of the conjunctiva. 2. Sympathetic inflammation of the iris alone, or of all the tunics of the eye, which are matted together by a semi-transparent fibrinous material—sympathetic ophthalmitis. 3. Sympathetic amaurosis. In this form there are no external morbid changes, but the ophthalmoscope reveals more or less anæmia and atrophy of the optic disc. The following are given by Mr. Bader as the usual causes of these sympathetic ocular changes:—"(*a*) Injury to one eye, implicating the ciliary muscle and ciliary processes; or the presence of a foreign body lodged in the eye, and more particularly in the ciliary region. The injured eye may be inflamed, suppurating, glaucomatous, staphylomatous, or even shrinking, when the sympathetic changes appear in the fellow-eye. (*b*) Dislocation of the crystalline lens (*e. g.* depression). (*c*) Choroiditis, followed by chalky deposit among the ciliary processes." (P. 378.)

Professor Stellwag von Carion describes but one variety of these morbid changes—viz., the sympathetic irido-choroiditis, which seems to correspond in its stages to Mr. Bader's two forms of sympathetic inflammation. The affection, according to the Vienna Professor, is transmitted very readily, and often at an early period, in those cases especially where inflammation is excited or maintained by any of the following causes:—extensive adhesion of the pupillary margin to the anterior capsule; stretching of the iris from penetrating corneal cicatrices; a foreign body remaining in the globe; dislocation of the lens; swelling of pieces of its substance, etc.

With regard to treatment, Mr. Bader urges immediate removal of the injured eye if vision is destroyed, or if symptoms of sympathetic inflammation appear in the other eye, though vision of the injured eye may not be quite lost; or, again, when the symptoms of sympathetic irritation do not subside on proper treatment. Mr. Bader states that removal of the injured globe does not insure the patient against future attacks of sympathetic inflammation, even 'though there may be no sign of disturbance in the sound one at the time of the operation.' On this important point Mr. Lawson, who has contributed much to our knowledge on sympathetic ophthalmia, seems to hold a different opinion, as he asserts "that he has never seen sympathetic ophthalmia *originate* in an eye after the other had been removed on account of injury. He has frequently seen it continue its course after enucleation, but in each case sympathetic symptoms were manifested before the eye was removed."

Professor Stellwag believes in the advantages of iridectomy in certain cases of sympathetic irido-choroiditis, where the iris is not much degenerated or changed in form and position. Removal of the globe is enjoined in cases in which the ciliary region is very painful to pressure, and also when the results of iridectomy have been fruitless or incomplete.

The last number of the *Ophthalmic Hospital Reports* contains an interesting report of a case by Mr. Lawson, which proves the danger of applying an artificial eye to a shrunken globe still bearing upon its surface a portion of transparent or semi-transparent corneal tissue. The irritation of this tissue will often set up in the other eye severe sympathetic ophthalmia, which may result in irreparable mischief.

Of the various subjects in Ophthalmic Surgery concerning which the views of acknowledged authorities are always eagerly sought after, there is no one of greater importance at the present day than the operative treatment of glaucoma. Since the appearance of Von Gräfe's remarkable papers published in the *Archiv für Ophthalmologie*, and translated by Mr. Windsor for the Sydenham Society in 1859, the attention of the Profession has been directed to iridectomy. Von Gräfe's operation soon found in this country very zealous advocates, but in some quarters was opposed as a measure futile and even hurtful, and in others as being far less satisfactory in its results than simple division of the ciliary muscle. The opponents of iridectomy have asserted that the operation is often followed by cataract, that it sometimes accelerates the disease in the eye, and that it sometimes causes hæmorrhage into the vitreous substance and the retina by reducing too suddenly the distension of the eye. Stellwag mentions, as another objection, the formation of what is termed a cystoid cicatrix; in cases of this kind the lips of the incision made through the sclerotica are united by a soft fibrous tissue, which yields to the pressure of the aqueous humour, and finally forms a thin-walled cyst. The first two evils, when

they occur, cannot, we think, be fairly attributed to iridectomy; the third is not an objection of any great moment, since hæmorrhagic effusions exist in most cases of severe glaucoma, and are often absorbed without leaving any traces. Lastly, cystoid cicatrisation is of rare occurrence, and depends very much upon carelessness in the after-treatment.

The importance of a right estimate of iridectomy is shown by the facts that acute glaucoma is by no means of rare occurrence, and that it is often very rapid in its course. If the operation be really a fitting plan of treatment in acute glaucoma, and immediate performance of it be necessary in order to prevent disorganisation of the textures of the eyeball and subsequent incurable blindness, then it ought to be regarded by the Practitioner in the same light as tracheotomy, and as a proceeding which he must be prepared to apply at any time, and with the indications and performance of which he must be well acquainted. This point has been alluded to by Von Gräfe in his essay on acute glaucoma, where it is stated "that iridectomy differs from other ophthalmic operations, the performance of which has remained in the hands of a relatively small number of Practitioners, owing to the indications being so rarely urgent."

The views of Stellwag and Bader upon the operative treatment of glaucoma are very decided, and prove that in the ophthalmic cliniques of Vienna and Guy's Hospital very little doubt exists as to the results. Stellwag asserts that if iridectomy be performed early in acute glaucoma, the eye may, as a rule, be restored and regain its full former functional power. He goes on to state that "experience teaches us that we may count on this brilliant result with more certainty in a case of ordinary acute glaucoma, when the iridectomy is done within fourteen days after the first attack; and the hope is the more justified the sooner it is undertaken within this time, always provided that the eye in question was normal before the attack—that, at the time, the visual field had not suffered a decided limitation, and the sensitiveness to light was still very acute." In less recent and chronic cases, where the visual field is already contracted, and the patient has lost the power of qualitative perception of light, Stellwag holds the common opinion, "that a good result very rarely occurs, and should never be expected." Mr. Bader describes two plans of operative treatment for glaucoma—tapping of the aqueous chamber and frequent instillation of a strong solution of atropia, and iridectomy. The former, he states, affords temporary relief; the latter, in cases of acute glaucoma, is "of the greatest service, and no excuse exists for not performing it, especially if vision has beengood before the attack." The following conclusions have been arrived at by Mr. Bader, and written in his treatise:—

"1. That iridectomy may be recommended as long as there is perception of light; and, in acute glaucoma, even if perception of light has been lost for a week after the attack. 2. That the usual causes of failure are: Advanced structural changes of the optic nerve and of the retina; fresh increase of tension; hæmorrhage, especially in the region of the yellow spot, or into the optic disc; and accidents during or immediately after the operation, as intraocular hæmorrhage, etc. 3. That in the majority of cases the amount of vision is preserved which the patient had before the operation, and that for months vision continues to improve. 4. That the result is the less favourable the more the paralysis of the retina has approached the yellow spot, especially if it has done so more from above and below; or if the sensibility of the region of the yellow spot is so much diminished that the patient, when looking at an object, turns the eye to one side ('eccentric fixation'). 5. That if we find the aqueous humour turbid, the transparency of the vitreous impaired, and the entire retina sensitive, a better result is obtained by iridectomy than if these are clear, with a similar amount of impairment of vision. 6. That in acute glaucoma the pain ceases almost immediately. The external 'inflammation' and the turbid state of the media, as a rule, disappear after from ten to fifteen days. 7. That the less the eyes are used for near work the more satisfactory and lasting is the result of iridectomy."

MARSHALL HALL MEMORIAL SCHOLARSHIP.—A project is on foot of instituting a scholarship, in memory of the late Dr. Marshall Hall, in University College. A large committee, comprising many well-known men in Edinburgh, Dublin, and the principal provincial towns, as well as in London, has been formed for the purpose. Dr. Tilbury Fox is the Honorary Secretary for London. The sum to be raised is, we hear, £500.

GENERAL CORRESPONDENCE.

"THE ART OF EXAMINING."

[To the Editor of the Medical Times and Gazette.]

SIR,—I read with much interest an article in your last number concerning the "art of examining," especially as it was my lot to undergo the rigid ordeal of having to answer, among others, the two papers you mention, in the time allotted for each—viz., three hours. Your remarks exactly bear out my own opinion of examinations in general, and of the recent M.B. Lond., in particular, that they are not tests so much of what a man knows as of the amount of cram he possesses at the time of the examination. With regard to the first question of the second paper, which refers to the "cutaneous diseases of the head, including those of the face," I can candidly state that it took me two out of the three hours to answer it, and even then I had to curtail and leave a great deal of matter out altogether, so that *one* hour was all that was left to answer the five remaining questions, when such questions as "acute dysentery," "scarlet fever," and the "pulse," required at least one hour each to do anything like justice to them.

I am, &c.

December 13. A WOULD-BE M.B.

P.S.—The art of cramming is repulsive to some minds. I suppose I possess such a one, and hence the result.

[To the Editor of the Medical Times and Gazette.]

SIR,—No doubt many candidates for examination will thank you for your article on this subject in your number of December 12. Perhaps your criticism would be more useful to examiners if you could show them how to examine. A most distinguished veteran, equally eminent as a Professor and an examiner, may safely be taken as a model. Any of Dr. Christison's questions, selected at random, will teach examiners how to set a "fair paper." I beg to enclose one copied from p. 208 of the "Edinburgh University Calendar" for 1868-69. If desirable, I shall be happy to supply you with selected questions for all other Medical subjects.

December 15. I am, &c. R. T. W.

Materia Medica and Therapeutics.

Describe nitrate of silver (60 marks) under the following heads:—Composition (2 marks); characters—viz., form (1), weight (1), colour (1), fracture (1), taste (1), solubility (2); effect of exposure (2); test for it in solution (3); action in large doses internally (4); any remote action then caused? (2); antidote (3); action in medicinal doses (6); special uses (6); form and dose (3); inconvenient effect sometimes arising (2); in what circumstances? (2); precautions against it (4); action externally when concentrated (2); applications in acute disease (3), in chronic disease (3); actions in diluted solution (2); examples of this (3).

THE LEEDS FEVER HOSPITAL.

LETTER FROM DR. T. CLIFFORD ALLBUTT.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your last number I observe a notice of the Leeds Fever Hospital, and a kind reference to a plan which I introduced there some time ago of keeping all windows open day and night.

In my article in the *St. George's Hospital Reports* to which you allude, I only recommend this plan for cases of typhus fever. I am still convinced of the great importance of free draughts of fresh air through wards where typhus patients are treated. Both the disease and the danger of infection are lessened by it. In typhoid fever very free ventilation must be more carefully used, and during epidemics attended with much lung mischief, the entrance of air should be cautiously managed.

In small-pox there need be no fear of the fullest ventilation, which lessens infection, sweetens the patient, and helps recovery. In scarlatina and measles, on the contrary, I think that anything like draughty ventilation would do more harm than good. However, I have never ventured to try it.

I am, &c.

Leeds, December. T. CLIFFORD ALLBUTT.

CONGESTION OF THE LIVER.

LETTER FROM DR. FENN.

[To the Editor of the Medical Times and Gazette.]

SIR,—To complete the history of the class of cases alluded to last week under this heading, I should have stated that, if the disease persists for a long time, or recovers frequently at short intervals, the repeated impediment to the excretion of the bile, following the usual law applicable to all glandular operations, causes a more or less complete arrest of the secretion itself; the motions become clay-coloured, and the patient rapidly loses strength and flesh. At this stage the alkaline diuretic plan of treatment is no longer useful, and sometimes even harmful, whilst the disorder invariably yields to the continued use of the dilute nitro-hydrochloric acid, and the vegetable aperient pill.

One word as to this pill. Much of the success in the treatment of these cases depends on its composition. The important qualities are that it should dissolve high up in the intestinal tract, and so act specially on the bile ducts, and not much on the intestines. The relief is found as soon as the bile clears the ducts and passes into the duodenum, often without the bowels being moved at all. To effect this, the various ingredients of the pill should be most intimately mixed with powdered soap, and the aperient ingredients should not be too powerful; otherwise the pill merely acts rapidly on the intestinal contents, and but little relief is afforded to the liver.

I am, &c.

Nayland. EDWARD L. FENN, M.B.

CONGENITAL CIRCUMCISION.

LETTER FROM DR. F. J. BROWN.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your notice of Darwin's writings you state (Nov. 14, 1868) that congenital circumcision is occasionally witnessed in Germany amongst the children of the Jews. I am desirous of recording the fact that it is occasionally observed in England amongst the children of Christians. I have met with two cases in midwifery practice. In one no cause was assigned for the circumstance; in the other the mother attributed the event to a judgment on her for ridiculing the covenant of circumcision one day during her pregnancy, whilst her husband was reading the Scriptures to her.

Doubtless the true cause lies in the domain of Nature—viz., an arrest of development, such arrest being induced in three different modes under different circumstances, as follows:—(*a*) Failure of the organising process corresponding with other forms of arrest. (*b*) Maternal mental impressions. (*c*) An attempt to set up a variety in the instance of the children of circumcised parents or ancestors.

I am, &c.

Rochester, Dec. 11. FREDERICK JAMES BROWN, M.D.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 8, 1868.

DR. E. MERYON, Vice-President, in the Chair.

DR. W. P. BAIN read a paper on

A NEW AND SIMPLE METHOD OF INDUCING ARTIFICIAL RESPIRATION IN CASES OF ASPHYXIA FROM DROWNING, STRANGULATION, CHLOROFORM, POISONOUS GASES, ETC.

The author speaks of the necessity of the best and simplest means being employed in the above cases immediately and on the spot, and rapidly runs over the several methods which have been adopted up to the present time for restoring animation. He mentions in terms of considerable praise the mode of compression and relaxation of the walls of the chest, especially by simply pressing down the sternum, showing that as much as 600 cubic inches of air may be exchanged in the lungs this way in a minute—a plan which it has been the fashion to speak rather disparagingly of. He explains Dr. Marshall Hall's mode, which, although a very inconvenient one, is also better than it has lately been represented to be. To Dr. Silvester he gives high praise for his discovery of utilising the muscles used in respiration, by drawing the arms over the head of the patient, thereby expanding the chest, and thus favouring inspiration. He finds fault with it, however, in its being a roundabout mode of accomplishing its purpose, and necessitating three separate movements. The author then introduces a plan hitherto not known in this country, the invention of the celebrated Pacini, of Florence, which consists in placing the patient on his back on a table or bed, the operator having his abdomen against the head of the patient, placing his hands in the axillæ on the dorsal aspect, and then pulling the shoulders towards him with an upward movement at the same time. The shoulders are then relaxed, then the former movement, and so on alternately. In many cases operated on by this method the air makes a loud noise when it passes the larynx, as in snoring. The author was so impressed with the excellence of this plan that he determined on his return from Italy to make experiments on it, as suggested to him by its illustrious inventor. He had not long, however, proceeded with these before he discovered two modes considerably superior, and throwing also somewhat in the shade the labours of Marshall Hall and Silvester. In experimenting on the dead subject he employed an india-rubber tube, one end of which was tied in the trachea, and the other communicated with a small spirometer, upon the principle of Hutchinson's, so that the passage of air to and from the lungs could be easily observed by means of a scale showing cubic inches. He found that the simple process of raising the upper part of the thorax from the table by taking hold of the arms caused a considerable influx of air, varying with the angle that the arms made with the body. For instance, if the body were raised by the arms at an angle of 45° (towards the face), the inspiration would amount to, say, 20 cubic inches. If the body were lifted by the arms in a vertical direction, the amount would be 15 cubic inches, and if pulled up by the arms at an angle of 45° (towards the feet), the amount would be about 10 cubic inches. But by the first of these modes a quantity of air considerably greater than by Hall's or Silvester's plan was generally obtained. The best and most simple method, however, which the author has discovered is founded upon those of Silvester and Pacini. He simply places his fingers in the axillæ in their front aspect, with his thumbs over the outer ends of the clavicles, and draws, with a certain amount of power, the shoulders towards him. On relaxing his hold, the shoulders and chest return to their former position, and so on with alternate motion. In this case, therefore, there is only one movement to be effected instead of three, and he avoids the fatigue of having to bear the weight of the patient's arms as well, as is required by Dr. Silvester's method. It has the advantage also of being accomplished in a more rapid manner than any other plan. As far as the author's experiments have gone, the quantity of air inspired at each movement by this plan is about 30 to Dr. Silvester's 20, and as the operation can be conducted with much greater rapidity, the author considers that at least twice the quantity of air can be inspired by this mode than by any other yet known; and he expresses a wish that a subject which is of such practical importance should be further investigated.

Dr. BARNES would like to ask Dr. Bain two questions. By the tables sent round it would seem that the quantity of air introduced increased with each attempt at inducing artificial respiration, so that in the last it seemed greater than in the first attempt. Did, then, Dr. Bain revert to the different methods, or were his own invariably tried last? Further, he would ask if the method had met with any success in newly-born children.

Dr. BAIN replied that the plans were taken in their vertical order, so that all had their turn.

Mr. BOWLES remarked that with regard to the Marshall Hall method, it had been omitted that efficient pressure should be made on the spine when the patient was on his face. Certain vital principles were also forgotten—first, that in suspended animation from drowning there was a quantity of water in the lungs which had to be removed. In the experiments undertaken by the Society's Committee death in animals resulted from the water in the lung, not the want of air. In one case Marshall Hall's plan elicited frothy water after long treatment, and much more was found in the body on post-mortem examination. In another, Marshall Hall's method succeeded after Silvester's had failed. The first thing was to get rid of the water; introducing air before that was done would only prejudice the patient. The second point was that little air was necessary at first. The third, that the efforts at recovering

the patient should be long continued. In Dr. Wiblin's case five hours elapsed before the patient breathed freely.

Dr. Silvester said he had tried Bain's method in the course of his researches on the subject, but found he injured the muscle. He then tried the plan by means of the intervening arm. It really does not matter much what part of the arm is used as a handle. The motions should not be too frequently repeated, otherwise the air does not penetrate deep enough. The quantity introduced always increases after a time, and Dr. Bain had really not been so successful as the Society's Committee had been. Rigor mortis was a great difficulty in the way of experimenting, and he had tried many of his on the body immediately after death. He was always glad to get rid of the water, but this will come up by any method. Water in the stomach was no great obstruction; still he contended that Dr. Marshall Hall's method neither removed the water from the lung nor from the stomach.

Dr. Greenhow thought Dr. Bain's method would be best if the arrested respiration was from any other medium than water, but in drowning the lungs became waterlogged. After a time the water may pass away if a post-mortem examination is not made. The chances of recovery vary greatly.

Dr. Peacock thought the matter should be investigated by a committee; many chances of fallacy would be thereby avoided.

Mr. Clover said that artificial respiration was the great thing in threatened asphyxia from anæsthetics. He always employed the readiest means—pressure on the abdomen, then Silvester's plan. Some efficient means were wanted nowadays more than ever, when the nitrous oxide was being largely introduced into practice. In experiments with it on animals respiration stopped long before the heart ceased, and they could consequently be readily revived by artificial respiration. Mr. Clover also alluded to Dr. Marcet's instrument, which he said was of no use in asphyxia from chloroform.

Mr. B. Carter was surprised to hear nothing of faradisation of the phrenic, especially in connexion with chloroform. Solid metallic handles were to be used, and pressed down at the outer border of the sterno-mastoid. Diaphragmatic respiration was thereby set up, and with very good results. Rolling the patient had been known from time immemorial in the county of Notts as a means of inducing artificial respiration.

Dr. Barnes remarked that something like this rolling was mentioned by Smollett; still, Marshall Hall based his process on scientific principles. In stillborn children Marshall Hall's plan was inconvenient; he therefore used Silvester's, which succeeded much better.

Dr. Hawkesley suggested that Dr. Bain's process might be improved by placing the patient in the prone position.

Mr. Jolly said that during the last nine years he had at St. George's Hospital seen thousands of cases of drowning. On the whole, he liked the plan of alternate pressure and relaxation of the chest and abdomen. The great objection to Marshall Hall's method was that one could do nothing else while it was going on; further, that it sometimes requires a good deal of strength. He objected to Silvester's plan for somewhat similar reasons. Mr. Jolly also narrated a very successful case in the instance of a child which had been exposed in the park.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, December 2, 1868.

Dr. Hall Davis, President, in the Chair.

The following gentlemen were elected Fellows:—Dr. J. W. Black, Mr. Blair (Melbourne), Mr. Edwin Child, Mr. T. W. Hime (Sheffield), Mr. W. R. Jordan (Mosely, near Birmingham).

Dr. Sansom and Dr. Rogers were appointed auditors of the accounts for the current year.

Dr. Sansom exhibited some Pessaries containing fluids. They consisted of a hollow cone of white wax, containing a drachm of the fluid desired to be applied, the apex of the cone being made of cocoa-nut butter, a fat which easily melts at the temperature of the body. When this apex is dissolved, the pessary being in the vagina and impinging on the cervix uteri, the contained fluid escapes, and comes in contact with the parts at the summit of the vagina. In the cases in which they had been used the results had been most satisfactory. The pessaries exhibited were made by Messrs. Francis, and contained solution of tannin in glycerine, solution of nitrate of silver, of perchloride of iron, of permanganate of potass, of morphia, etc.

Dr. Copeman, of Norwich, read a paper on

THE TREATMENT OF IMPERFORATE HYMEN WITH RETAINED MENSTRUAL FLUID.

After referring to the question of the diagnosis of these cases, the author proceeded to consider the various plans of treatment advocated, and alluded to the fact that he was one of the earliest writers to recommend the gradual evacuation of the fluid contents of the vagina and uterus. Full particulars were then given of an interesting case in which, in spite of this treatment being adopted, and every precaution used, a severe attack of peritonitis followed the operation, the patient, however, ultimately recovering.

Dr. Barnes drew attention to the fact that the crisis of intolerance caused by the accumulation of fluid in the cavity of the uterus was postponed by two partially compensating conditions. The first was that the watery part of the menstrual blood was absorbed, thus lessening the bulk of the matter retained in the uterus; the second, that after the uterus had been distended by the accumulating fluid, a supplementary receptacle was made by the dilatation of the vagina. The pouch formed in the vagina was often very large, and might, when opened, lead to the belief that it was the uterus itself, unless care were taken. With regard to priority in recommending gradual evacuation by a small opening, he did not know who was entitled to credit. He was under the impression that it had long been admitted as the wiser course. An interesting case had happened to him lately in a way which, perhaps, ought to have been prevented. He had, some months ago, removed, by the wire ecraseur, the vaginal portion of a uterus affected by cauliflower excrescence. The removal was complete, and recovery rapid. The woman, anxious to return home, left the Hospital before sufficient means had been taken to preserve the cervix open. She returned with symptoms of retained menses. He had great difficulty in opening up the closed cervix. It was, however, done, and a quantity of characteristic fluid escaped. She again went out to return after a time with similar symptoms. An opening was again made, but this time severe pelvi-peritonitis followed, from which the patient was but now recovering. He did not gather from the author's paper that any distinct opinion was expressed as to the causes of the danger and mortality which so often followed these operations. He thought it was still a problem requiring comparison of many cases to clear up. In some cases the cause seemed to be this:—The uterus, suddenly collapsing concentrically, tended to expel its contents by all the openings into it. Fluid escaped, of course, by the vulva, but the Fallopian tubes, also distended by the fluid, poured it out into the peritoneum, setting up inflammation.

Dr. Tyler Smith could not quite agree with the author of the paper on one important point. So far from avoiding pressure on the abdomen, he would insist upon it, as the chief means of averting risk. In these cases the uterus was distended rather than developed, and on the withdrawal of the fluid it did not contract as it did after parturition. He believed the danger was caused by the entry of air into the flaccid uterus. This caused decomposition, and led in the first instance to metritis, and then to peritonitis. Similar mischief sometimes occurred from the entrance of air into ovarian cysts after tapping. The fœtor and escape of air in the case related were to be explained in this way. The evacuation of the uterus and vagina by a small trocar had long been practised, but to do it *guttatim* when the uterus was of large size would be an interminable process. His own plan was to make a moderate opening, and to keep up firm steady pressure on the abdomen by bandaging, as the fluid escaped, so as to prevent the entrance of air into the uterus.

Dr. Routh said that, looking at the question physiologically, he would remark that the vagina during the act of inspiration had a power to expel any air or contents in it, and during expiration these were drawn up. This he had proved by the kinometer. Now, it was clear that any opening made into the vagina (once the excess of fluid had got out) would gradually tend to the sucking up of air and putrefaction of the contents, as occurred in this case. This was also what occurred in cases of cellular abscess pointing into and opened per vaginam. In both cases he preferred an opening per rectum, which could easily be done, and by which the admission of air into the uterine cavity, and its consequent train of symptoms, were avoided. The hymen might be subsequently divided when the uterus had well contracted, and all fear of septicæmia was

at an end. As a preliminary measure Dr. Routh also advocated the use of ergot, to be followed by the application of a bandage. When the opening had been made per vaginam, if the uterine contents became offensive he thought it highly important to evacuate the whole as speedily as possible, and wash out the interior with some disinfectant fluid.

Dr. Rasch could not agree with Dr. Routh as to the advisability of evacuating the menstrua retained by imperforate hymen by an operation through the rectum, as a second operation would have to follow to open the hymen. In Mr. B. Brown's case, which Dr. Routh had cited in support of his view, there was complete absence of vagina. With regard to air entering the vagina, he was convinced that no air entered the vagina of a woman on her back, as there is no natural power to overcome the close apposition of the vaginal walls; while, on the contrary, in the lateral position, and much more so when the patient rests on her keees and elbows, air certainly entered, and the lower part of the vagina was kept distended.

Dr. Routh would just remark, in answer to Dr. Rasch, that the vagina, only when the patient had her legs closed, did not "suck up air."

Dr. Alfred Hall (of Brighton) related a case of retained menstruation from imperforate hymen, which occurred in his practice two years ago. The patient was in her 19th year. Dr. Hall made a tolerably large opening through the membrane, and after the escape of a considerable quantity of characteristic fluid, he washed out the vagina with warm water. The case had done perfectly well, and at the end of three months the catamenia came on naturally.

Dr. Wynn Williams said that the occasional fatal results of operation in these cases were undoubtedly due to septicæmia, arising from the absorption of putrid animal matter. The same altered condition of blood could be produced by injecting putrid animal matter into the tissues of healthy animals. The remedy was the free use of disinfectants, of which his favourite was the tincture of iodine, which he had proved by experiment to have the property of rendering the poisonous emanations of decomposing animal matter inert. He thought too much stress had been laid upon the entrance or non-entrance of air into the vagina, for all collections of matter inside the pelvis were nearly always offensive. He believed that the close proximity of the gases in the rectum would be quite sufficient to set up putrefaction.

Dr. Phillips believed that the more immediate danger in these cases was of acute peritonitis, caused probably by the escape of some of the uterine contents into the cavity of the abdomen, even after a free external opening had been made. In the only fatal case which he had seen, death resulted from this cause in a few days. On a post-mortem examination, the cavity of the peritoneum was found to contain a quantity of grumous fluid, with which also the Fallopian tubes were greatly distended. Dr. Phillips then referred to some cases treated by puncturing the uterus through the rectum. This method had offered, however, only temporary relief, as the opening generally closed unless the tube was kept in for a longer period than seemed advisable.

Dr. Barnes said that, with reference to the question of opening into the uterus per rectum, he must remind Dr. Routh that there was always air in the rectum retained by the sphincter.

Dr. Arthur Edis referred to a case in which, there being no vagina, the puncture was made per rectum with an ordinary curved trocar, the canula being allowed to remain in, and through it a thick treacly fluid continued to flow for two days, when it ceased. Pelvic pain and constitutional symptoms then ensued. A violent paroxysm of pain on the fourth day terminated by more than a pint of the same treacly fluid being suddenly discharged per rectum, after which the patient was easier. On the eighth day the canula was removed. At the end of five weeks the uterus was again punctured per rectum, and the canula retained in position for four days. Two months after her admission, by her own wish, she left the Hospital, and within a few weeks she died. From the constitutional symptoms which arose in this case, it was fair to conclude that air had gained access to the uterus through the puncture.

Dr. Routh said he believed the cause of the fatal result in this case was that the canula was left projecting from the rectum. The moment fluid ceased to flow from it, it should be withdrawn.

The President, after giving details of a case similar to Dr. Hall's, expressed his opinion that a firm bandage with compress should always be applied around the hypogastrium before the opening was made, and gradually tightened as the fluid escaped. Of the utility of disinfecting injections he had a high opinion. With regard to the question proposed by Dr. Routh, whether it would not be better to discharge the retained fluid by an opening per rectum, he thought that the results of the operation were not in its favour, and that it appeared self-evidently wrong to make an entry for the feculent gases from the rectum into the vagina, and more rational to make the opening where it was permanently required, through the hymen.

(To be continued.)

OBITUARY.

DR. COWAN.

The death of Dr. Cowan, of Reading, is an event in the life-history of Physic in this country. It is not easy to state in minute detail in what manner this remarkable man, so lately amongst us, influenced all around him, all of his Profession who knew him, and to some extent all who knew him not by personal knowledge. He was a Physician of eminence, he was a man of eminence; and, indeed, was more powerful by the general than by the special or Professional part of his character. Such breadth had he of thought, such singular depth of learning, such immortal brightness of expression, that he was not to be classed, as other men commonly are, among the representatives of any one type of man or any one calling. He bore introduction from every point of his nature. A scholar always, he was scholastic naturally, wherever he was touched, and when his argument was even opposite, and his illustration unhappy, he stood still strong, a man it were a pleasure to see in error, and who carried defeat with so noble a candour that even the defeat were finer to observe than the victory of the lesser dignified.

Materials for the life of Cowan are scant so far. His father seems to have been a man of genius and stern impulse; or, far better expression, a man of stern impulse, and therefore a man of genius. Dr. Charles, our friend, was a third son; he took to physic, studied in Paris, became a pupil of Louis—not a great master, but fortunate in his advent—translated Louis' book, learned the new science which Laennec—really a master, amongst some eight or nine other actual masters in physic—and became an early exponent of the science and art of auscultation. In the epidemic of cholera in Paris, in 1833, Cowan was an active healer, and nearly lost his life as a suspect of the superstitious, who attributed the disease to the agency of the doctors acting as general water poisoners for the State. Thence from Paris he passed to Edinburgh, studied there, was made President of the Hunterian Society, graduated as Doctor of Medicine, revisited Paris after the graduation, and, coming back to England in 1835, married and settled down to practice in the city of Bath.

In Bath Dr. Cowan, together with Dr. James Watson, opened an Infirmary for the treatment of diseases of the chest, and gave courses of lectures on auscultation and percussion, as well as lectures on special anatomy. He left Bath in 1839, and commenced practice in Reading as a Physician, where he resided until his death, on Sunday, November 29 of this year, his name identified with the place more fully, perchance, than the name of any resident in his time.

Professional success attended Dr. Cowan in Reading from the first. He was made Physician to the Dispensary, and soon became the senior Physician of the Royal Berkshire Hospital. His life was a persistent activity. He maintained a steady conversance with the scientific progress of Medicine; discussed, with as much candour as force, questions of a political and religious nature, and, securing for himself both opposition and admiration, succeeded in avoiding personalities with marvellous integrity. In the course of his career Dr. Cowan joined the British Medical Association, formerly the Provincial Medical and Surgical Association, and, exercising his natural qualities of earnestness, heartiness, and love, soon became in the Association a master mind. He knew how to influence the meetings of this influential organisation better than most men, and at the Oxford meeting, when it was determined to transfer the journal of the Association to London, his eloquence was the prevailing influence. In the same body, at the meeting in Manchester, when the provincial character of the Association was virtually changed into a national character, his voice again led the way to the change. This trans-

formation, indeed, was to him most congenial, for he had no prejudice, no idea of isolated strength, no idea of class distinctions in a common Profession, no belief in divisions founded on locality or time. He longed for unity. Some of us remember, when the Metropolitan Branch of the British Association was established, how gladly as a provincial man he came to the fore. His speech on that occasion rings yet in our ears, so genial was it, so solemn, so enthusiastic withal. "Whatever elevated ideas," he exclaimed, "we may entertain, there must be a *bonâ fide* something by which we are kept together—not a mere abstract feeling of what is right or what is desirable. It is true that we are united to chartered bodies, and subject to a vast number of influences running through our ranks, but I believe that the greatest means of improvement is that of voluntary association on the part of Medical men, the Profession showing itself as one undivided unity (scattered, it is true, over a vast distance as to space, and occupied in many different manners), each member having the feeling—I am a member of a united body; that body has common purposes, common intellectual and scientific purposes, and the more I identify myself with that body, the more I partake of that spirit which is consistent with the welfare of the body at large, just in that proportion am I reaping that benefit I ought to deserve to receive from it, and imparting that which as a Profession we ought to seek equally amongst ourselves. We shall never do better for the Profession than by associating together; and I trust that all notions of *provincial* and *metropolitan* will be entirely excluded from our consideration at the present moment. Let us feel that every legitimate Practitioner of Medicine, every man whose moral character will bear examination, shall be welcomed as a member of our institution, that we have nothing to exclude but that which is inconsistent with our highest and best interests as members of society and of an honourable Profession."

It was by these fervid appeals that Dr. Cowan strove to bring into one national body the Provincial Medical Association, and we are bound to say, as eye-witness of the facts and active partakers in the events which led to the amalgamation of the provincial and metropolitan members of the Association, and their progress under a new and more throughly representative institution, that he more than any one else contributed to the success which crowned the effort. Indeed, we doubt whether any other member of the Profession could, at that time, have influenced in any degree as he did. Removed from metropolitan strife and party, trusted on all sides as honesty itself, utterly unselfish, and, in fact, avoiding place and office, he was followed by all who wished for change of constitution with implicit reliance, and was respected and trusted by those who most urgently opposed him. Sir Charles Hastings, the founder of the Provincial Association, and, by long years of labour, connected with it as though it had been a part of his own existence, was almost by necessity opposed to change; but, nevertheless, he, also a man of deep and earnest feeling, admired Cowan with all his heart, and expressed, with quite a youthful happiness, the relief he felt when, after a very stormy debate at Manchester, and some coldness as a consequence, he and his old friend were brought again, by the good and ready office of Mr. Flint, of Stockport, into warm and friendly communion.

It had been well for the British Medical Association had Dr. Cowan continued to take an active part in its councils, but his mind was occupied with other things, and he was by nature rather an initiator than a director. Impelled to action by an irresistible impulse, impelled to action that was always as exalted in principle as it was intrepid, he overlooked those details by attention to which ordinary men often became distinguished; while, measuring other men by the purity of his own intents, he was slow to see that the best principles may be sapped unless the strong hand that projected them do steadily hold them in their place. Thus we have heard it said of him that he was uncertain, that he changed from subject to subject, that he was extreme. Enough! he was good; true to himself, he cared not a jot who held him inconsistent, uncertain, extreme. That which was external to him, and, as he knew, untrue, he could live down; that which was internal he must retain, and abide by for ever.

We have spoken incidentally of the eloquence of Cowan. It was wonderful. To say that we had no other such eloquent man in Physic is little, for in his best moments it is probable that no living English orator excelled him. His words fell like an avalanche, and yet in the very fury of expression, for we can use correctly no less a term, there was a closeness of argument, a persuasion, a conviction, which was as perceptible as if the utterance were in slowest time, and were arranged by the most studied of readings to carry what was desired to be instilled. Though thus gifted with natural eloquence, he was often slow to speak, and he was as good a listener as could be desired. The effort to speak seemed to come to him by impulse, and was never unduly prolonged. He saved time and gained power by dealing only with principles, leaving everything in debate that approached the personal to the disputants of baser sort and mind. He was slow to mirth, we think; yet, perhaps, only because we did not know him so well as the dear friends near him. Once, indeed, we did see him laugh beyond description. There was a brief luncheon or dinner at Birmingham, and one of us produced the prospectus of a man who was proposing to form "a society for the sale of suggestions." As the details were read out, and the price of various suggestions reported, some being put at magnificent figures, Cowan, who had been demurely listening, began to brighten up; and when at last the suggestion was read—"How a man may fly like a pelican, carrying his refreshments; value of suggestion five hundred pounds"—he could keep silence no longer, but laughed with every one else till he nearly cried.

In his own town, and in his own professional circle, Dr. Cowan was beloved with a universal fervour. He was President of the Pathological Society of Reading, and in all local associations tending to the achievement of learning he was incessantly active. To visit Reading, to move there amongst different classes, and to hear, as was always heard, such unanimity of praise as was bestowed on our friend, afforded a positive pleasure rarely tasted and not easily described.

We regret we dare not say that Dr. Cowan, endowed as he was, has left any great scientific impress to transmit his name to the Medicine of the future. He might have done so. He had genius for research, original conception, insight, expanse of view; but he seems never to have entered into any line of new observation so ardently as to make it a life study. And yet, after all, he did many good things. His works on thoracic disease were advanced works; his bedside manual was an admirable guide; his "reports" were clear, concise, and full of meaning; and his papers on the brain, if a little bending to one side of argument, and abrupt to another side, were and are charged with fine thought, and with touches here and there of new light which make us wish for more.

Dr. Cowan died as he lived. His illness was somewhat protracted, his fortitude abiding. On November 4 he was buried in Reading, amid a solemnity rarely accorded to the private citizen. The whole town, we had almost said, joined in the lament. Distinctions of class, of sect, of party were forgotten in the sad acknowledgment that a large community had that day paid the last homage to one who for years had been to friend and opponent alike "a perfect and an upright man."

MR. EDWARD MAUNDRELL.

A professional career of fair promise has been untimely terminated at Manchester. On October 22 last, Mr. Edward Maundrell, of Tredegar, was elected by the guardians of the poor as assistant resident Medical officer at the Workhouse Hospital in New Bridge-street. He entered on his duties on November 9, and on the 3rd instant—in less than a month—he died from an attack of fever taken in discharge of his duties. Mr. Maundrell was but 31 years of age.

NEW BOOKS, WITH SHORT CRITIQUES.

Conservative Surgery: its General and Successful Adaptation in cases of Severe Traumatic Injuries of the Limbs; with a Report of Cases. By A. G. Walters, M.D. Pittsburgh, U.S.A. Pp. 213.

*** Dr. Walters's results are eminently encouraging, and at the present time, when the value of carbolic acid as an antiseptic is being so vehemently contested, the little work before us assumes a new value. Dr. Walters's agents are—free deep incisions in the parts implicated, rest, and warmth. No attempt is made at bringing the edges together. Dr. Walters maintains, as do other American authorities, that Professor Lister has mistaken the secondary for the primary cause of his success, and has ascribed to carbolic acid what is due to good surgery and hygiene.

Sea-sickness, and how to prevent it. By John Chapman, M.R.C.P., M.R.C.S., Physician to the Farringdon Dispensary. Second Edition. London: Trübner and Co. Pp. 112.

*** Dr. Chapman is an enthusiastic advocate of neuro-therapeutics, and has done much to bring the use of cold and heat applied to the spine before the Medical world. Sea-sickness is such a dreadful thing for those subject to it, and who are nevertheless compelled to take long journeys by sea, that we heartily sympathise with any attempt at getting rid of their

terrible enemy. Dr. Chapman has collected a considerable amount of evidence as to the efficacy of his spinal ice-bag in these cases. This question really demands investigation, and it is well worth while to compare these results with others obtained by simple hygienic means, as detailed in a recent number of the *New York Medical Journal*.

Transactions of the Pathological Society of London. Vol. 19. Comprising the Report of the Proceedings for the Session 1867-68. London. Pp. 492.

*** The volume for this year is of more than average value and importance. The subject of tubercular inoculation and of pus formation would alone give interest to the proceedings; but when we look at the many beautiful drawings and descriptions of new forms of tumours, we are still more impressed with the good work done by the Society. Our reports have kept our readers *au fait* as to the progress of the Society's labours, so that further reference to them here would be superfluous.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital by Sir Henry Thompson, Surgeon-Extraordinary to H.M. the King of the Belgians, Professor of Clinical Surgery and Surgeon to University College Hospital. London: John Churchill and Sons. Pp. 180.

*** We are well pleased to see these short but practical and extremely interesting lectures in a separate form. In the columns of a contemporary they proved welcome to many, and now, when slightly extended and published by themselves, they will be rendered more widely useful. The author tells us that they were taken down by a short-hand writer, rendered *in extenso*, and corrected by himself before going to press. Although condensed, it was necessary to shorten them still more for weekly publication. They now appear as they were delivered.

Phrenology and its Application to Education, Insanity, and Prison Discipline. By J. P. Browne, M.D. Edin., formerly Pupil Dissector to the late Dr. James Macartney, Professor of Anatomy and Physiology, Trin. Coll. Dublin. London: Beckers and Son. Pp. 586.

The Fundamental Principles of Phrenology are the only Principles capable of being reconciled with the Immateriality and Immortality of the Soul. By J. C. L. Carson, M.D. London: Houlston and Wright. Pp. 470.

*** We had come to the conclusion that phrenology as a science (falsely so called) was extinct, except among the half-educated classes of the community. So many serious objections can be raised against phrenology as taught by Gall and Spurzheim that we wonder any man of sound sense can believe in the possibility of detecting character by means of an organ only very partially and indirectly manifested through its bony covering. Gall and Spurzheim no doubt did good work in their day, but their attempts at localising particular faculties in certain parts of the brain have been shown by pathology, probably our surest guide, to be utterly fallacious. One great obstacle to the reception of phrenology by the mass of the people was said to be the encouragement itappeared to hold out to materialism, and this difficulty the above-named works are specially intended to combat. We shall not pretend to speak of conclusions which to our minds must be foregone, considering the nature of the subject.

The City Diary and Almanack, 1869. London: W. H. Collingridge, City Press. Price one shilling.

*** This is a very good memorandum book for every day in the year, interleaved with blotting paper. The almanack portion contains a large amount of information as to civic matters—schools, clergy lists, officials, etc. The book is a very cheap shilling's worth, and will be found useful either for Professional or household memoranda.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows held on Monday, December 14, the following gentleman, formerly an extra Licentiate, was duly admitted a Member of the College:—

Hoggan, William, H.M.S. *St. Vincent*, Portsmouth.

At the same meeting the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Barkas, William James, Newcastle-upon-Tyne.
Brewer, Henry Melvill, Newport, Monmouthshire.
Butlin, Henry Trentham, St. Bartholomew's Hospital.
Clayton, Richard, Oswaldtwistle.
Dickinson, William Lindon, Workington, Cumberland.
Eck, Vincent Frederick, 58, Cleveland-square.
Giles, William Betts, Guy's Hospital.
Greene, Walter, 19, Merrick-square, Trinity-square.
Hicks, Edward Buller, Easingwold, York.
Humby, Edwin, M.D. St. Andrews, 83, Hamilton-terrace.
Lewis, William Bevan, Cardigan.
Lucas, Richard Clement, Compton, Hants.
Pierce, Frederick Morrish, Royal Infirmary, Manchester.
Richardson, William Edmund, Rochdale.
Rouch, James Ryall, St. Bartholomew's Hospital.
Rowland. Hugh Mortimer, M.D. Aberdeen, Wolverhampton.
Sedgwick, Henry, 79, New North-road.
Thompson, John Ashburton, Guy's Hospital.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 10, 1868:—

Andrew, James Lawton, Bagaley-hill, near Manchester.
Butler, Charles, Sutton Benger, Wilts.
Clark, Andrew, Greenford, Middlesex.
Elphick, Edward, Burra Burra, South Australia.
Harvey, James D'Arcy, St. Just, Cornwall.
Hogg, Richard Bowen, Rotherhithe.
Marshall, Henry Flamank, Birmingham.
Molecey, Octavius Twigge, Stamford, Lincolnshire.
North, John, Winchester.
Perkins, Alfred Roberts Steele, St. Sidwell's, Exeter.
White, Frederick, Liverpool.

The following gentlemen also, on the same day, passed their First Examination:—

Davenhill, Robert Septimus, St. Bartholomew's Hospital.
Gray, George James, University College.
Latham, William Henry, St. Bartholomew's Hospital.
Nettle, William, St. Bartholomew's Hospital.
Smith, James Adolphus, St. Mary's Hospital.

Mr. Alexander Young Stewart, F.C.S., late assistant to Dr. Thomas Anderson, F.R.S. Edin., Professor of Chemistry in the Glasgow University, has been appointed chemical operator to the Society of Apothecaries, in the room of Mr. George Warrington, resigned.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Hyde, W. D.—Assistant Demonstrator of Anatomy at Charing-cross Hospital.

Milson, R. H., M.R.C.S. and L.S.A.—Surgeon to the St. John's-wood and Portland-town Provident Dispensary, *vice* R. P. Bickerton, deceased.

Pearce, W. H.—Assistant Demonstrator of Anatomy at Charing-cross Hospital.

Shears, A., M.D.—Honorary Surgeon to the Brixton, Streatham-hill, Herne-hill, Tulse-hill, and Angell Town Dispensary.

Vacher, Francis—House-Surgeon to the Birkenhead Borough Hospital, *vice* G. W. Harrison, resigned.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The undermentioned officers have been promoted to the rank of Staff Surgeon, with seniority of December 2, 1868:—John Ward, Esq.; William Thomas Wilson, Esq. Robert Rottinger, Esq., has been promoted to the rank of Deputy-Inspector-General of Hospitals and Fleets in her Majesty's Fleet. The undermentioned officers have been promoted to the rank of Surgeon in her Majesty's Fleet:—Maxwell Rodgers, Esq., and Henry Hadlow, Esq. Surgeons:—Frederick Piercy to the *Cossack;* Henry Hadlow, additional, to the *Ariadne;* Thomas L. Horner, acting assistant, to the *Cossack;* Charles Maclean, acting assistant, to the *Duke of Wellington;* George Murdoch, acting assistant, to the *Dauntless;* Dr. R. A. Moroll, acting assistant, to the *Excellent;* William P. M. Boyle, assistant, to the *Lynx;* Dr. E. J. Butler, assistant, to the Chatham Division of Royal Marines; and William Young Paton, assistant, to the *Trafalgar;* Angus Robertson, Surgeon, additional, to the *Fisgard;* Thomas S. Bickford, Assistant-Surgeon, to the *Jackal*.

Brevet.—Surgeon-Major George Eleazer Blenkins, Grenadier Guards, who retires upon half-pay, to have the honorary rank of Deputy Inspector-General of Hospitals.

Grenadier Guards.—Battalion Surgeon and Surgeon-Major in the army James John Majoribanks Wardrop to be Surgeon-Major, *vice* George Eleazer Blenkins, who retires upon half-pay—Surgeon Henry John Hughes Lawrence to be Battalion Surgeon, *vice* Surgeon-Major Wardrop—Staff Surgeon Constantine Caridi Read to be Surgeon, *vice* Lawrence—Staff Assistant-Surgeon Albert Luis Fernandes to be Assistant-Surgeon, *vice* Read, promoted.

Medical Department.—Surgeon Thomas Knox Birnie, from the 12th Foot, to be Staff Surgeon, *vice* William Sinclair, appointed to the 12th Foot—Assistant-Surgeon Constantine Caridi Read, from the Grenadier Guards, to be Staff Surgeon—Assistant-Surgeon John Alexander Scott, from the 91st Foot, to be Staff Assistant-Surgeon, *vice* Thomas Parker Smith, M.B., placed upon half-pay—Assistant-Surgeon William Hill Clino, M.D., from the Rifle Brigade, to be Staff Assistant-Surgeon, *vice* Andrew Arthur Macrobin, M.B., who exchanges.

12th Foot.—Staff Surgeon William Sinclair to be Surgeon, *vice* Thomas Knox Birnie, appointed to the Staff.

Medical Officers.—To be Surgeons-Major: Surgeons Cavendish Johnson, June 21; Francis Pearson, July 2; William White, M.D., July 4; Norman Clevers, M.D., Aug. 1. To be Surgeons: Assistant-Surgeons Sarkies Michael Shircor, July 2; James Towns Norton Wise, M.D., July 16; William Eddowes; James Lumsdaine Bryden, M.D.; Travers Sherlock; William Henry Kirton; George Farrell; Charles Egbert Wimon Bensley, M.D., Aug. 4. The following undermentioned officers will rank as follows: Surgeons William Henry Adley, from Aug. 11, 1863; Henry Francis Williams, M.D., Aug. 24, 1863; Edward John Vivian, Sept. 10, 1863; James Alexander Caldwell Hutchinson, Sept. 16, 1863; John Barclay Scriven, Sept. 25, 1863; Joseph Walter Raleigh Amesbury, Oct. 12, 1863; Charles Stewart, M.D., deceased, Oct. 16, 1863; Edward M'Kellar, Dec. 18, 1863; James Bedford Allen, Dec. 20, 1863; Annesley Charles Castrick de Reuzy, Dec. 20, 1863; Alexander Christison, M.D., March 8, 1864; James Macnabb Cuningham, M.D., March 12, 1864; Joseph Christian Corbyn, M.B, March 24, 1864; George Moncrieff Govan, M.D., April 1, 1864; Richard Henry Perkins, April 8, 1864; Edward Taylor, June 15, 1864; Henry William Spry, June 15, 1864; Alfred James Dale, M.D., July 11, 1864; Arthur Young, Aug. 7, 1864; Benjamin Simpson, M.D., Sept. 26, 1864; George Hickie Daly, M.D., Oct. 24, 1864; Peter O'Brien, Nov. 1, 1864; George Barnard, Nov. 15, 1864; Robert Faure Hutchinson, M.D., Jan. 27, 1865; John Picthall, M.D., Jan. 28, 1865; Alfred Godley Crewe (retired), April 2, 1865; Nathaniel James Grant, April 15, 1865; Marcus William Mott, M.D. (retired), May 24, 1865; Joseph Ewart, M.D., June 3, 1865; Robert Moir, M.D., June 14, 1865; Theodore Duke, M.D., June 24, 1865; George Vernon Currie, July 25, 1865; Lachlan Hector John Maclean, M.D. (retired), July 27, 1865; Francis Hugh O'Donel, M.D., Aug. 1, 1865; Sir John James Trevor Lawrence, Bart. (retired), Nov. 24, 1865; Henry Martineau Greenhow, Jan. 1, 1866; Henry William Graham, Jan. 1,

1866; John Elliott, M.D., Jan. 1, 1866; Thomas Beard Farncombe, Jan. 3, 1866; Frederick John Earle, Feb. 14, 1866; Theobald Ringer, M.D., Feb. 24, 1866; Samuel Delpratt, March 29, 1866.

MADRAS ARMY.—To be Surgeon-Major: Surgeon Lestock William Stewart, May 28. To be Surgeons: Assistant-Surgeons James Kees, M.B.; Robert Wilson, M.D.; Robert William Cockerill; Charles Robertson, M.D.; Alexander Gamach, A.M., M.D.; Jacob Wilkins, M.D., August 4.

BOMBAY ARMY.—To be Surgeon-Major: Surgeon Joseph Salter Rimmington, July 20. To be Surgeons: Assistant-Surgeons Charles Johnson, July 16; Cameron Joseph Francis M'Dowal, James Kearney, August 4. Her Maiesty has been pleased to dispense with the services of Assistant-Surgeon J. Shillito, M.D., Bombay Army. The name of the undermentioned Assistant-Surgeon, Madras Army, should be as follows, and not as stated in the *London Gazette* of September 4:—Alfred Eugenius Dalgairns.

BIRTHS.

BATT.—On December 13, at 215, Camden-road, N.W., the wife of Dr. Batt, of a son.

ROCHE.—On December 11, at Rectory-place, Woolwich, the wife of W. S. Roche, M.B., B.A., Surgeon, R.N., of a daughter.

TURNER.—On December 10, at Market Bosworth, the wife of E. Fulham Turner, M.B., of a daughter.

WAUGH.—On October 4, at Brisbane, Queensland, the wife of Dr. John Neill Waugh, of a son.

WOODMAN:—On December 4, at Deal, the wife of Frederick Woodman, M.D., of a daughter.

MARRIAGES.

BARNES—WALL.—On December 10, at St. Anne's Church, Highgate, Christopher H. Barnes, Esq., M.D., F.R.C.S., of Beech-house, Tottenham, to Mary Anne, daughter of the late William Wall, Esq., of Great Prescott-street, and Grosvenor Lodge, Highgate. No cards.

JACKSON—TAYLOR.—On December 12, at St. Mark's, Kennington, John James Jackson, M.R.C.S., of London, only son of John Jackson, Esq., St. Helier's, Jersey, to Elizabeth, eldest daughter of George Taylor, Esq., Foxley-road, North Brixton. No cards.

LOVEJOY—MACLEAN.—On December 10, at St. Philip's Church, Kensington, W., William Henry Lovejoy, M.D. (late of New York), of 24, Portman-street, Portman-square, to Catherine Mary, daughter of John Maclean, Esq., of 4, Pembroke-gardens, Kensington, and 10, Billiter-street, E.C.

PURCELL—KENNETT.—On December 15, at the British Consulate, Boulogne-sur-Mer, and afterwards by the Rev. James Bewsher, John S. Purcell, Esq., second son of John F. Purcell, M.D., late Poor-law Inspector for Ireland, to Alice Fanny, youngest daughter of Captain Charles Leighton Kennett, of H.M.'s 41st Regiment.

DEATHS.

BOOTH, ANNIE WHITE, wife of Charles Booth, M.D., at St. Mary's House, Chesterfield, on November 28, aged 29.

COLLINS, ROBERT, M.D., J.P., of Ardsallah, Navan, Ireland, and Garvery Lodge, county Fermanagh, at 4, Ely-place, Dublin, on December 11, aged 68.

DE LA GARDE, JOHN LEMPRIERE, M.B., F.R.C.S., Surgeon to the West of England Eye Infirmary, at his residence, Gandy-street, Exeter, after a protracted illness, on December 15, aged 35.

HUNTER, SARAH SELINA, widow of the late John Hunter, Surgeon (No. 11, Hart-street, Bloomsbury-square, London), at her residence, Cam House, Duxford, near Cambridge, on November 23.

LEACH, JAMES, M.D., of Clough Cottage, Crompton, at his father's residence, Cowlishaw, on December 12, in his 32nd year.

O'RYAN, MRS. HANNAH SANT, relict of the late John O'Ryan, M.D., M.R.C.P., and during twenty-five years Surgeon in H.M.'s Royal Navy, at Wandsworth, on December 5.

SMITH, CHARLES, M.D. of Heath Cottage, Staplers, Newport, Isle of Wight, formerly of Fyfield, near Andover, on December 13, in his 42nd year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Forehoe Incorporation.—The Fourth District is vacant; area 8445; population 3426; salary £50 per annum.

Kingsbridge Union.—The Seventh District is vacant; area 16,203; population 3587; salary £56 10s. per annum.

Reading Union.—Mr. F. Workman has resigned the St. Mary District; area 1890; population 10,941; salary £94 per annum.

Thrapston Union.—The A District is vacant; area 11,263; population 4331; salary £84 14s. per annum. Also the Workhouse; salary £25 6s. per annum.

Wandsworth and Clapham Union.—Dr. James C. Pritchard has resigned the Putney District; area 2281; population 6481; salary £80 per annum.

APPOINTMENTS.

Bramley Union.—Thomas L. Craister, M.R.C.S.E., L.S.A., to the Bramley District.

Havant Union.—Edmund Holland, M.D. Lond., M.R.C.S.E., to the Third District.

Manchester Township.—Richard D. Fox, M.R.C.S.E., L.S.A., as Assistant at the new Workhouse.

Penrith Union.—Benjamin D. Taplin, M.R.C.S.E., L.R.C.P. Edin., to the First Division of the Second District.

Wareham and Purbeck Union.—Charles Willcox, M.R.C.S.E., L.S.A., to the Morden District.

UNIVERSITY INTELLIGENCE.—Oxford, December 10.—In a congregation holden this morning, at 10 o'clock, the following degrees were conferred:—*Doctor in Medicine:* William Selby Church, Christ Church. *Bachelors in Medicine:* William Swan, Queen's College, and William Henry Corfield, Pembroke College. The examiners for the Radcliffe Travelling Fellowship (Professors Acland, Rolleston, and Brodie) have given notice that the next examination for a Fellowship will commence on Monday, February 1, at 10 a.m. Candidates are requested to send their names on or before Wednesday, January 20, by letter, addressed to the Regius Professor of Medicine, Museum, Oxford.

UNIVERSITY OF CAMBRIDGE NATURAL SCIENCE SCHOLARSHIPS.—Trinity College offers a foundation scholarship (value £80 to £100 a year) for Natural Science. The examination will be held in Easter week, and will be open to all undergraduates members of any college or hall in Oxford or Cambridge. To qualify himself, therefore, a gentleman need only place his name upon the boards of a college or hall. Further information may be obtained from the Rev. E. Blore, Trinity College, Cambridge.

UNIVERSITY OF DUBLIN.—At the winter commencements, held on the 16th instant, the following degrees and licence in Medicine and Surgery were conferred:—*Baccalaurei in Medicinâ:* Henricus Courtnay Atwool, Robertus Waller Biddulph, Nesbitt Petrus Browne, Robertus Browne, Franciscus Theobaldus Butler, Edvardus Jones Cooke, Edvardus Rossborough Floyd, Jacobus Ricardus Nicholas Murphy, Robertus Harrison Supple, Gulielmus Jephson Weldon. *Magistri in Chirurgiâ:* Robertus Harrison Supple, Gulielmus Jephson Weldon. *Doctores in Medicinâ:* Gulielmus Nolan *(in coloniis)*, Henricus Courtnay Atwool. *Licentiatus in Chirurgiâ:* Nesbitt Browne.

GLASGOW LYING-IN HOSPITAL.—At a meeting of the directors of this Hospital held on the 15th inst., the following gentlemen were elected Medical officers:—*Consulting-Physician:* Dr. A. Anderson. *Consulting Surgeon:* Dr. George Buchanan. *Physicians-Accoucheurs:* Dr. J. G. Wilson, Professor of Midwifery, Anderson's University, and Dr. R. D. Tannahill.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The next meeting will be held this evening (December 19) at half-past seven o'clock at the Scottish Corporation Hall, Crane-court, Fleet-street. Alexander Redgrave, Esq., H.M. Inspector of Factories, will be present, to confer respecting the operation of the Workshop Regulation Act. Dr. Odling, F.R.S., will read a paper "On the Combustion of Gas in Houses." Dr. Odling was prevented by illness from reading this paper at the last meeting. Dr. John Swift Walker, Officer of Health for Hanley, Staffordshire, will be proposed and balloted for as an honorary member.

LARGE BEQUESTS.—Mr. John Bairstow, of Preston, recently deceased at 90 years of age, has bequeathed £20,000 to the Preston and County of Lancaster Royal Infirmary, £5000 to the Northern Counties Asylum for Idiots at Lancaster, £200 to the Royal Medical Benevolent College, Epsom, and large sums to numerous charities not Medical.

THE annual meeting of the South Devon and East Cornwall Medico-Chirurgical Society was held at the Athenæum, Plymouth, on the 11th inst. The report, which was read by the Secretary, stated that the number of members (who are all registered Medical Practitioners) is now forty-two, and that fifteen meetings had been held during the past year. The officers elected for the ensuing year were:—*President:* Mr. William Swain. *Vice-President:* Mr. Eccles. *Committee of Management:* Mr. Morris and Dr. J. Wilson. *Secretary and Treasurer:* Dr. C. A. Hingston.

POOR-LAW MEDICAL SERVICE.—*Marylebone.*—A committee of the whole Board reported their opinion in favour of the office of public vaccinator remaining in the hands of the Medical officers as at present, and that the sum to be paid for primary vaccination should be 1s. 6d. per case, and for revaccination 1s. The report was unanimously adopted. *Greenwich.*—The Poor-law Board have sanctioned the appointment of Dr. Henderson as Medical Officer for North Deptford for one year. *Woolwich.*—There was only one applicant for the new office of Assistant Medical Officer for East Woolwich—viz., Dr. William Harris Butler, who had been acting as deputy to Dr. Purland. He was therefore duly elected. The salary is only £80. *Wandsworth and Clapham.*—The election of Medical Officer for the Putney district will take place December 24. *Clerkenwell.*—Mr. E. Goddard and Mr. Brown were appointed public vaccinators for the North and South districts respectively. Dr. Griffiths, Medical Officer of Health, was appointed Vaccination Inspector. *St. Pancras.*—Mr. Evans, Medical Officer for Females, tendered his resignation, which was accepted. *St.*

Luke's, Middlesex.—A formal and unanimous resolution was passed that the explanations of the Medical Officer, Dr. Harris, in reference to an alleged case of ill-treatment by him, were perfectly satisfactory. *City of London Union.*—The Poor-law Board insist on the Medical officer, Mr. Brown, residing within his district if the guardians appoint him permanently.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the ordinary meeting of the Council on the 12th ultimo, after the confirmation of minutes of the previous meeting, and adoption of the recommendations of the Court of Examiners to admit Drs. Russell, Dickson, Horsey, and Kelaart to examination for the diploma of Membership in the case of the three first-named gentlemen, and to the Fellowship for the latter, without undergoing an examination in Medicine, the Councillors had submitted to them a letter from the Chairman of the Committee of the Leeds National Exhibition thanking the Council for the pictures lent to that Exhibition. A letter, to which we have already alluded, was then read from Dr. Edwin Morris, of Spalding, a Fellow of the College, in reference to the right of discussion by the Fellows of the College at the annual meeting for the election of members of the Council, and to further privileges which in his opinion should be extended to the Fellows; whereupon it was resolved—"That Dr. Morris be informed that his letter has been read to this Council." It was then moved and seconded—"That the making, altering, or abrogating any by-law or standing rule shall be in the following manner, viz.—Notice of making, altering, or abrogating any by-law or standing rule must be given at a meeting of Council. The summons convening the meeting at which such notice shall be considered shall contain such notice at full. Any proposed new by-law or standing rule, or alteration in or abrogation of any existing by-law or standing rule, must be confirmed at a subsequent meeting of Council to the one at which it may have been carried, and the summons convening such second meeting shall also contain the proposed new by-law or standing rule, or alteration or abrogation of any existing by-law or standing rule." The votes of the Council having been taken on such motion, a majority was against the same. Moved and seconded—"That the names of those voting for and against any motion put from the chair be always entered on the minutes, except in cases where the votes shall be taken by ballot." As an amendment, it was moved and seconded—"That the names of those voting for or against any motion put from the chair be entered on the minutes when a desire to that effect shall be expressed by any two members of the Council before or after the motion is put, except in questions decided by ballot." The votes of the Council having been taken on the amendment, a majority was in favour thereof. The amendment was then put and carried as a substantive motion; the original motion was consequently not put. Mr. Busk reported that Mr. Edward Thomas, a son of the late Mr. Horatius Leigh Thomas, who filled the President's chair in 1829 and 1838, had requested him to state to the Council that he was desirous of presenting to the College a portrait of his grandfather, the late Mr. Cruikshank, the celebrated anatomist. The offer of Mr. Thomas was accepted with thanks. Mr. George Canney, of Bishop Auckland, who passed his examination for Membership on June 28, 1841, was elected a Fellow of the College.

THE COLON IN YOUNG INFANTS.—At a meeting of the New York Obstetrical Society, Dr. Smith stated that he had measured the colon in thirty cases of children under six months, and discovered that from one quarter to a third of the large intestine lies below the brim of the pelvis. Dr. Jacobi observed that the descending portion in the young infant was nearly twice the length of that of the adult. It crosses over diagonally towards the right side, instead of lying parallel to the long axis of the body. There is no proper sigmoid flexure as in the adult, but on account of the great length of the colon a number of flexures are found.—*Boston Medical and Surgical Journal*, November 12.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. H. Wathen's case of Rupture of the Bladder shall be published in an early number.

Errata in Dr. Cotton's Letter on the Hypophosphites.—In Dr. Cotton's letter published in our last number, the word *two* was unfortunately printed instead of *ten*, referring to the number of years during which the mortality from phthisis had decreased; in the 25th line from the bottom for "1868" read "1860."

THE SUBSCRIPTION FOR THE FAMILY OF THE LATE MR. JUMP.

Additional subscriptions for Mrs. Jump and family, received by the Rev. G. W. Winter:—

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Mr. James Allen	1	1	0

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Anonymous	0	10	0
T. Good, Esq., Launceston	1	1	0
T Langton, Esq, London	0	10	0
W. J. Square, Esq., Plymouth	1	1	0
R. J. Laity, Esq., Devonport	1	1	0
Dr. Bulteel, Plymouth	1	1	0
J. Thompson, Esq., M.D., Bideford	1	1	0
R. Griffin, Esq., Weymouth	0	5	0
W. P. Simpson, Esq., do.	0	5	0
Joseph Harper, Esq, Barnstaple	1	1	0
A. Hingston, Esq., Liskeard	1	1	0
J. H. May, Esq., Plymouth	0	10	6
Rev. H. J. Morshead, Kelly	1	0	0
H. T. Woold, Esq., Gunnislake	1	1	0
W. A. Little, Esq., Bletchingley	0	2	6
— Trimmer, Esq., Okehampton	1	1	0
T. Harper, Esq., Plymouth	0	10	6
T. S.	0	7	6

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WATER SUPPLY WITHOUT DRAINAGE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am desirous of ascertaining what has been the effect upon the *health* of towns in which a "water supply" has been introduced *without* "artificial drainage." Will any of my Medical brethren who reside in towns so circumstanced oblige me by stating in your next number the name of the town, the year when the water-supply commenced, and whether the *natural* drainage is good or otherwise? As I shall be enabled to obtain the other particulars from the Registrar-General's Report, I will not trespass further on their time, though I should be glad of any information bearing on the subject.

I am, &c. M. C.

SIR CHARLES BELL AS A PHYSIOLOGIST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Forty years ago, when a pupil at the London University—now University College—I enjoyed the privilege of listening to the prelections of that famous physiologist, Sir Charles Bell, whose discoveries on the functions of the cerebro spinal nerves rank with the noblest made in the whole circle of the sciences. Since John Hunter, no physiologist of equal pretensions has appeared in any country. Notwithstanding all this, somehow or other the Medical Profession appears to be very little acquainted with the labours of this great man. The teachers even of this metropolis rarely mention his name. I am led just now to make these observations from the perusal of a report in your journal of a meeting of the Royal Medical and Chirurgical Society of the 24th ult., at which Dr. Julius Althaus read a paper, "On certain Points in the Physiology and Pathology of the Fifth Pair of Cerebral Nerves." Strange to say, the name of Sir Charles Bell is not once mentioned by him in this paper, and, stranger still, not by any of the gentlemen who took part in the discussion that ensued. This case, brought to the notice of the Society by Dr. Althaus, is a very interesting one, and tends most remarkably to the establishment of the views entertained by Sir Charles Bell of the functions of the fifth pair of nerves, of the olfactory, and of the glosso-pharyngeal.

Dr. A. is reported to have said:—"We had therefore, until now, been obliged, with respect to them, to trust almost exclusively to one of the two sources of our knowledge as regards nervous function—namely, the results of vivisections in animals—while the corrective influence of pathological observations had been wanting." This statement would almost lead to the conclusion that the Doctor was not familiar with the works of Sir Charles Bell, who devoted twenty years to the investigation of the functions of the nerves, guided entirely by the light of pathology, before he made a single vivisection; and this was done with reluctance, simply with a view of verifying the notions he had previously arrived at of the functions of the motor and sensory nerves. Again and again have I heard him blame in no measured terms the cruel and worse than useless vivisections so wantonly practised on the Continent. Again, I find these words in the report:—"Alluding to the researches of Magendie and Claude Bernard, who had endeavoured to prove that the olfactory was not the only nerve of smell, but the fifth had a great deal, if not everything, to do with it, the author considered his case to prove the contrary."

Bell's criticisms upon this absurd notion of Magendie were perfectly withering. I can almost fancy I see him now, with his peculiar sarcastic smile, denouncing, at the same time, the Frenchman's cruelty, and exposing the weakness of his logic. It would be just as reasonable to attribute sight to the third nerve, and not to the optic, because in ptosis blindness is the result. One more quotation:—

"The question whether the sense of taste was dependent upon the glosso-pharyngeal nerve or upon the lingual branch of the fifth, was one about which the greatest discrepancy existed amongst the best observers."

Here surely the authority of Sir Charles Bell might have been appealed to with propriety, as he always maintained that the special sense of taste was seated in the glosso-pharyngeal nerve, although, like smell and sight, this sense might be damaged if the common sensibility of the tongue was impaired by injury to the lingual branch of the fifth, or its motions impaired by injury done to the ninth (the motor) nerve, or to the portio dura—the latter nerve controlling the muscles in the acts of respiration and deglutition—for he classed this nerve with those of respiration and expression. It is satisfactory to find that Sir Charles Bell's views on the functions of the nerves are every day being confirmed by fresh pathological observations. A few years ago some physiologists denied that the motor nerves took their origin from the anterior column of the spinal marrow, and yet now it is universally admitted that such is the fact. Sir Charles Bell was not understood during his life; in fact, he was far in advance of his age—an age when the study of mental philosophy, metaphysics, and nerves was neglected in favour of the more practical locomotive and railway. Dr. Marshall Hall, too, was allowed to claim many of his discoveries for his own, when, in fact, he only changed the nomenclature—*e.g.*, motor nerves became efferent, sensory afferent, and automatic action was termed reflex.

In spite of present appearances, I look forward with full confidence to the day when posterity will do full justice to the discoveries of this great man, and when the name of Sir Charles Bell will be enrolled high upon the pedestal of fame.

I am, &c.

J. Jones.

53, Blenheim-crescent, W.

COMMUNICATIONS have been received from—

Dr. Barnes; Dr. B. W. Richardson; Dr. Lionel S. Beale; Mr. J. Chatto; Dr. J. Hughlings-Jackson; Dr. Wilks; A Poor Dispensing Assistant; Mr. Henry Pitman; Mr. J. Hancocke Wathen; Dr. F. J. Brown; R. T. W.; Dr. C. A. Kingston; Mr. C. S. Bradley; A would-be M.B.; Dr. A. Shears; Mr. Clifford Allbutt; Dr. Buckell; Dr. Moriarty; Dr. Leadam; Mr. Ernest Hart; Dr. Lowe; Mr. Edward L. Fenn; Dr Gervis; Mr. T. M. Stone.

BOOKS RECEIVED—

Hooper's Physician's Vade-Mecum, eighth edition—Thorowgood on the Climatic Treatment of Consumption—Harvey's Four Letters on Homœopathy—Bell's Manual of Surgical Operations—Pavy on Diabetes—The Nuisance of Street Music, by a London Physician—Glasgow Medical Journal, No. 1—Bray on the Science of Man—New York Medical Journal, No. 45—Huberwald on Diarrhœa and Cholera—Maclaren on Physical Education.

NEWSPAPERS RECEIVED—

The Standard—Saunders' Newsletter—Gazette Hebdomadaire—Aberdeen Journal—Salford Weekly News—North British Daily Mail—Aberdeen Free Press.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 12, 1868.

BIRTHS.

Births of Boys, 1145; Girls, 1038; Total, 2183.
Average of 10 corresponding weeks, 1858-67, 1962·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	755	731	1486
Average of the ten years 1858-67	713·7	682·8	1396·5
Average corrected to increased population	..	..	1536
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	..	3	35	2	5	0	1	..
North ..	618,210	..	12	8	5	13	10	2	..
Central	378,058	..	5	12	2	2	8	2	..
East ..	571,158	..	6	27	1	9	16	1	..
South ..	773,175	..	8	26	5	14	19	1	..
Total ..	2,803,989	..	34		15				..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·586 in.
Mean temperature	47·6
Highest point of thermometer	57·8
Lowest point of thermometer	32·7
Mean dew-point temperature	44·1
General direction of wind	Variable.
Whole amount of rain in the week	1·30

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 12, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Dec. 12.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Dec. 12.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2183	1441	1486	57·8	32·7	47·6	1·30	131
Bristol (City)	167487	35·7	119	75	*66	..	..	..	..	..
Birmingham (Boro')	352296	45·0	264	171	150	56·8	31·3	46·8	1·52	154
Liverpool (Borough)	500676	98·0	349	290	266	58·0	32·5	45·4	1·78	180
Manchester (City)	366835	81·8	271	208	*233	..	..	..	..	..
Salford (Borough)	117162	22·7	81	59	60	55·2	30·9	45·4	1·83	185
Sheffield (Borough)	232362	10·2	198	122	100	54·5	33·7	44·9	3·65	369
Bradford (Borough)	108019	20 3	65	55	83	..	..	..	..	..
Leeds (Borough)	236746	11·4	187	120	166	59·0	35·0	47·0	2·49	251
Hull (Borough)	108269	34·4	67	50	53	54·0	30·0	43·2	2·26	228
Newcstl-on-Tyne, do.	127701	23 9	97	68	75	57·0	33·0	42·2	1·39	140
Edinburgh (City)	177039	40·0	127	85	94	54·7	28·0	43·4	1·10	111
Glasgow (City)	449868	88·9	359	262	279	54·3	27·6	42·2	0·80	81
Dublin (City and some suburbs)	319985	32·8	125	157	111	56·7	36·6	45·5	1·35	136
Total of 14 large Towns	6391080	34·9	4492	3163	3222	59·0	27·6	44·9	1·77	179
					Week ending Dec. 5.	Week ending Dec. 5.				
Vienna (City)	(1863) 560000	..	..	..	282	..	..	34·3	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·586 in. The barometrical reading increased from 29·38 in. on Sunday, Dec. 6, to 30·17 in., its highest reading during the week, on Wednesday, Dec. 9, and decreased to 29·08 in., its lowest reading during the week, by 3 p.m. on Friday, Dec. 11.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

December 19. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Dr. Odling, F.R.S., "On the Combustion of Gas in Houses."

21. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Society of Arts, 8 p.m. Cantor Lectures: "On the Aniline or Coal Tar Colours," by W. H. Perkin, Esq., F.R.S. Lecture III.—Various Aniline, Phenol, and Naphthalin Colours—Application of the Coal Tar Colours to the Arts.

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society of London, 8 p.m. Meeting.

23. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

25. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m. Central London Ophthalmic Hospital, 2 p.m.

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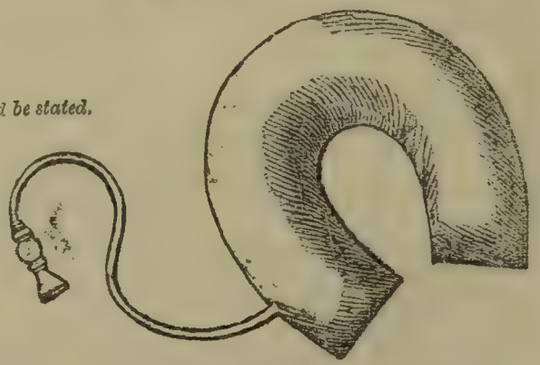


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ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Follow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XIX.—Part III.

THE CÆSARIAN SECTION CONCLUDED.—THE OPERATION. THE DANGERS ATTENDING IT, AND THE PROGNOSIS.

The Instruments and Assistants.

The *instruments* required are:—1. A sharp bistoury. 2. A bistoury having a blunt end. 3. A director such as is used in ovariotomy. 4. A large probang armed with sponge. 5. Artery-forceps and ligatures in case of bleeding from the abdominal wound. 6. New sponges. 7. Ice. 8. Two powerful apparatuses for inducing local anæsthesia by congelation, or chloroform. 9. Silver or silk-sutures for uterine and abdominal wounds. 10. Lint. 11. Many-tailed bandage and adhesive plaster.

Assistants.—Skilled assistants should stand one on each side of the patient. Another should be free to hand instruments and assist in sponging, etc. A nurse or two to help will complete *the necessary staff*.

Preparation.—The bowels should be emptied by castor-oil or by enema on the morning of the operation.

The Operation.

Position.—The patient is laid on a table on her back, with the head and shoulders slightly raised. The operator stands on the patient's right; an assistant stands on each side.

The *catheter* is introduced to empty the bladder. If the case be one of osteomalacia, explore for the last time carefully to ascertain if the pelvis can be opened up by dilatation by the hand. In this way, twice at least, the operation has been avoided. It is related that a young Surgeon, burning with the ambition to perform the Cæsarian section, invited his *confrères* to assist. Everything was ready, when Osiander requested permission to examine. He opened up the pelvis, turned, and extracted a live child; and thus, says he, "I saved the woman from the Cæsarian section and from death." Dr. Tyler Smith has also related a case in which he was able to dilate the pelvis with his hand, and deliver after craniotomy.

In cases of great distortion, the uterus is not seldom found considerably displaced. Where there is great prominence of the sacral promontory, and squatting of the chest down upon the flanks, the uterus is necessarily thrown much forward, sometimes so as to overhang the symphysis. With this there is occasionally marked lateral obliquity; and, what is less common, but still likely, a twisting of the uterus on its long axis, bringing one of its sides to look more or less forward. This was noticed in Dr. Hicks's case.

It is also desirable to take note, by auscultation, of the seat of attachment of the placenta. Assistance may also be obtained by laying the hand flat on the uterus, when, if the walls are thin, a peculiar thrill or vibration marks the seat of the placenta, which is confirmed by feeling the part bulging a little, as if a segment of a smaller globe were seated on a large spheroid. This has been pointed out by Dr. Pfeiffer (*Monatsschr. f. Geburtsk.* 1868).

The uterus is then brought into proper relation with the linea alba, so that the two incisions may correspond, unless it be found that the placenta can be avoided by cutting a little on one side of the median line. The abdominal incision is best made in the *linea alba*, extending from below the umbilicus to within about three inches of the symphysis pubis. When nearly through, it is desirable to get a finger through a small opening, and, using this as a director, to cut from within outwards, so as to avoid scratching the uterus. The assistants support the abdominal wall on either side, looking out to prevent the escape of intestine. The *uterine incision* is made in the middle line, sparing the fundus and lower segment as much as possible, as these parts are not well adapted to close by contraction. Circular fibres predominating near the cervix tend to make the wound gape. A manœuvre described by Winckel, and forced upon him by his being often called upon to operate with insufficient assistance, here deserves attention. An assistant hooks the forefinger of each hand in the upper and lower angle of the uterine wound, and, lifting them up, fixes them in contact with the corresponding angles of the abdominal wound. This shuts out the intestine effectually, and tends to prevent the blood from running into the abdominal cavity.

If the placenta is found directly behind the wound, the hand of the operator is insinuated between the placenta and the uterine wall, detaching it until the edge is felt, when the membranes are pierced, and *the child is seized by the feet.* This point obstetricians will pardon me for prominently emphasising, because I have seen a Surgeon pull at the arm and fail to extract the child. Sometimes the neck is tightly grasped by the uterine wound. If the constriction does not soon yield, it is better, says Scanzoni, to extend the incision than to drag overmuch, lest the wound be torn.

When the child and placenta are removed, attention is required to watch the bleeding; this generally takes place from the cut sinuses in the uterine walls, less frequently from the inner surface from which the placenta has been separated. Hæmorrhage is best checked by direct compression of the uterus with the hand; if the uterus contract well, the hæmorrhage ceases. Ice may be applied to the wound, and a piece placed in the uterine cavity.

Before closing the wound, *thrust the probang through the os uteri and vagina*, to make sure that the natural passages are clear for the discharges from the uterus.

The Closure of the Wound.—When the bleeding has ceased, and any blood that may have found its way into the abdomen is removed, we have to consider the question of applying sutures to the uterine wound. It is a matter of observation that in many fatal cases the edges of this wound have been found flaccid and gaping. But in the majority of, if not in all, these cases the operation had been performed on women exhausted by protracted labour; and, on the other hand, in women operated upon at a selected time, when the powers are unimpaired, the uterus commonly contracts well. Winckel says he has never lost a case from hæmorrhage, and has not stitched the uterine wound. Mr. Spencer Wells has had a successful case in which he used a long piece of silk as an uninterrupted suture, leaving one end hanging out through the cervix and vagina. By pulling on this end the suture was removed after several days.

Another mode of suture would be to carry the same suture through the uterine and the abdominal walls, so as to secure adhesion between the two parts. A serious source of danger is from vomiting: the straining and relaxation attending this accident tend to promote the opening of both wounds, and to force the discharges through them. This risk would be lessened by uterine sutures. Upon the whole the case may be stated thus:—If the patient is operated upon at a selected time, if the danger of vomiting is lessened by not taking chloroform, and if the uterus contracts well during the operation, the sutures may be dispensed with; but under the opposite circumstances, it would be better to stitch the uterus as was done in Mr. Spencer Wells's case.

Closure of the Abdominal Wound.—The methods adopted in ovariotomy may be followed. I am inclined to prefer the uninterrupted silk suture. Winckel's cases were closed by the more common method of interrupted sutures, with intermediate skin-sutures. The important point is to *close the wound completely.*

After-treatment.—A full dose of opium should be given immediately either in form of pill or suppository. Light nourishment and perfect repose are the things to be observed. The dressings should not be removed for five or six days. To obviate foulness, sprinkling with Condy's fluid or weak carbolic acid may be resorted to. The sutures may be removed on the seventh or eighth day. The bowels may be relieved by enema on the fourth or fifth day.

What is the risk to life attending the Cæsarian section, numerically expressed? I have already made some remarks upon this, the statistical aspect of the question. I doubt if any satisfactory answer can be given. Can any quasi-analogical deduction be drawn from the mortality attending ovariotomy? Take this to be one death to two or three recoveries; may we expect a similar result from the Cæsarian section—I mean, of course, when performed at a selected time? It would be rash to expect an equal success; and there is a consideration which, I think, is generally neglected by obstetricians. It is this: we are not justified in treating the particular patient whose

case is before us as an abstract entity, a mere arithmetical unit. Her fate is not to be decided by what are called statistical laws, but which are in reality too often nothing better than the accidental issues of blind gropings. We must study case by case; compare them; analyse clinically. "Non numerandæ, sed perpendendæ sunt observationes."

The Dangers of the Operation and Prognosis.

The principal risks run are as follows:—

1. If the operation is performed as the last resource after protracted attempts to deliver by other means, the woman is liable to sink from shock and exhaustion within a few hours; or if she survive beyond a few hours, there is the risk of hæmorrhage, of peritonitis, and of puerperal fever. It may be said that the prospect of recovery, when the operation is performed under these circumstances, is very small.

2. If the operation is performed at a selected time, the woman escapes the shock attendant upon the protracted labour, and encounters the shock of the operation with unimpaired strength. Still, the shock is very great, and is not seldom fatal *per se*. This is the first and most pressing danger. Could it be in any way modified or controlled, the Cæsarian section might be undertaken with more confidence. But shock necessarily attends all severe abdominal injury. It affects different persons in different degrees. Nor can we readily predicate of any given person that she will bear shock well or badly. It is an uncertain element, and must probably ever perplex all calculation as to the result of the Cæsarian section in any particular case. I do not think that chloroform materially lessens the shock; and it adds the danger of vomiting.

3. The next danger is *hæmorrhage*, and as hæmorrhage is often associated with prostration as cause and as effect, the danger is serious. This may come on within a few hours. It might be expected that hæmorrhage would be liable to come from the inner uterine surface, as after ordinary labour, but the more common source is probably from the sinuses divided in the uterine wound. The quantity lost may be enough to cause a fatal anæmia. But the more common evil is from the irritation caused by the blood collecting in the abdominal cavity giving rise to

4. *Secondary shock* and *peritonitis*. That secondary shock precedes peritonitis I have no doubt. Intense pain, even tenderness on pressure, rapid small pulse, accelerated and impeded breathing, suggest the diagnosis of peritonitis; but if at this stage the patient die and is examined, probably no trace of peritonitis, as revealed by redness or effusion, is discovered. Peritonitis may come on the day following the operation. It may be met by fomentations to the abdomen, by opiate suppositories; and the prostration soon ensuing must be combated with wine, brandy, beef-tea, chicken-broth. Salines are often useful, especially at first.

5. If the patient escapes the preceding dangers, there is still the risk of septic infection, of *septicæmic puerperal fever*. The source of this is the absorption of septic matter from the cavity of the womb or from the edges of the wound; or it may arise from general blood-dyscrasia resulting from the accumulation in the circulation of effete matters which the excreting organs are unable to dispose of.

6. In addition to the dangers incident to the operation and to the puerperal state, there is the danger inherent to the disease which rendered the operation necessary, liable in some cases, as in cancer, to be aggravated by the operation, which may accelerate the fatal issue.

Winckel says that osteomalacia is much more unfavourable than rickets in connexion with Cæsarian section. Still osteomalacic patients bear wounds well, and the power of repair is often great.

The uterus often contracts adhesions with the abdominal wall during repair. These adhesions do not appear to entail any serious inconvenience; and should pregnancy again occur, and the Cæsarian section be again necessary, they render the operation less dangerous. The peritoneal cavity is shut off; the incision through the abdominal wall leads directly through the adhesions to the uterus. Thus the dangers of hæmorrhage, of effusions into the abdomen, are eliminated, and it is even probable that the shock is less. On the other hand, no adhesions may be found, and the wound in the uterus heals so completely that years after no trace of cicatrix is found (Radford).

Several cases are now known in which the Cæsarian section has been performed twice, thrice, and even four times on the same woman.

These cases of repeated success would seem to indicate a special tolerance of severe injury in the subjects, and cannot wisely be taken as evidence, absolute or cumulative and statistical, in reduction of the danger of the operation. This is further illustrated in the following history:—Dr. Freericks (*Nederl. Tijdschr. v. Geneeskunde*, 1858) performed the section on account of contracted pelvis. Mother and child recovered. When again pregnant, premature labour was induced about the eighth month. When labour had begun, collapse set in; the uterus had ruptured. The child was removed from the abdomen by gastrotomy. Vomiting caused extrusion of the intestines. To effect reposition, numerous pricks were made in them to let gas escape, without effect until an incision was made with a bistoury, and much thin pappy matter was evacuated. The intestines were then replaced, and the wound was closed. She recovered completely. How many women would be as tolerant?

ORIGINAL COMMUNICATIONS.

NOTICE OF A CASE OF HÆMORRHAGIC PHTHISIS.(a)

By ANDREW CLARK, M.D., F.R.C.P.,
Physician to the London Hospital,
and PETER MARSHALL, Esq.

Our account of the following case is so imperfect that it would not have been submitted to the consideration of this Society but for the cardinal circumstance that it illustrates a form of pulmonary phthisis of such rare occurrence that in these days its very existence is denied. We indulge the hope, too, that the citation of one case may lead to the communication of other cases equally authentic and less faulty.

The subject of our case was a butcher of Newport Market, 55 years of age, married, and well to do. Sprung from healthy parents, with no family history of consumption, and of moderately temperate and active habits, he enjoyed, notwithstanding a delicate constitution, fair health till the summer of 1864. His chief complaints had been a slight pleurisy, occasional diarrhœa, and recurring attacks of relaxed throat. At this time, however, he was a large somewhat corpulent man, with brown hair, blue eyes, rosy cheeks traversed by stellate veins, and a peculiarly thin, white, blue-veined skin. His chest was broad and deep, his abdomen was rather full, his limbs were fleshy and well formed.

In July patient was seized with an attack of what was called by his then Medical attendants (Drs. Walshe and Rogers) congestion of the lungs. In the course of it he twice coughed up blood, amounting on each occasion to more than a quarter of a pint. The attack was tedious and convalescence tardy. It was not until after seven months' residence in the country that he returned to town in good health. He remained, according to his own account, well up to the Christmas of 1866, when he took cold. According to the account of his family, however, signs of failing health appeared before this time. He was noticed to have got paler, to have been rather short-breathed, to have coughed occasionally, and to have complained rather often of chilliness.

In January, 1867, our patient had become quite ill. He complained of distressing cough, with muco-purulent expectoration; of dyspnœa upon the slightest exertion; of disturbed nights; of loss of appetite, flesh, colour, and strength. From this time, under the treatment of one of us (Mr. Marshall), patient made during the next two months several partial rallies, with less partial relapses, and so, in the main, not only held his ground, but got somewhat better.

In April the patient was seen by the writers of this notice in consultation, and here follows a short account of his condition at that time:—Patient was exceedingly pallid, with the exception that upon each cheek there was a patch of red made up of ramifying blood-vessels. His skin hung loosely about him; his countenance wore a look of suffering and exhaustion; the veins of the neck were distended; and movement made him breathless and coughy. Patient's sole complaints were weakness, harassing cough, and breathlessness. Tongue watery white and indented; uvula elongated; pharyngeal mucous membrane varicose and granular; some flatulence; bowels open from medicine; lithates and a little albumen in the urine; liver large. Chest broad and deep; slight lividity about base of neck; superficial veins large and tortuous; respiration hurried. Left lung: Slight flattening and lessened mobility of thoracic wall between the second rib and the nipple; dulness in this region; dulness also over the posterior base;

(a) Read before the Medical Society of London, October 26, 1868.

vocal fremitus between clavicle and nipple increased. Auscultation: Over apex, in front and behind, breath-sounds feeble; expiration prolonged; vocal resonance normal. Between second and fourth ribs, breathing bronchial and accompanied by coarse moist crepitation; voice bronchophonic. Over the fourth rib near the sternum, and above the same rib in front of the axilla, were two circumscribed spots where bronchial breathing and bronchophony were strongly marked. Below this, the respiratory murmur was feeble and accompanied, occasionally on ordinary and invariably on forced inspiration, by moist crepitation. About the middle of the lung, posteriorly, the breath-sounds were of the blowing bronchial variety, and accompanied by crepitation. Over the base the breath-sounds were feeble; forced inspiration produced coarse crepitation and wheezing; both tactile vocal vibration and vocal resonance were slightly impaired. Right lung: Beyond slight dulness at posterior base, where the breath-sounds were feeble and accompanied occasionally by coarse moist crepitation, no evidences of disease were discovered. Heart: No distinct apex beat. Cardiac dulness slightly increased in every direction, but more particularly to the right. Distinct pulsation in epigastrium. Heart sounds quick, flapping, and feeble; no bruit at apex or base. Over mid sternum the second sound is peculiarly abrupt and loud. Both radials are of equal volume, but one is at intervals a little hard. Signs of venous obstruction in the neck; pupils symmetrical; no difficulty of swallowing; no alteration of voice. There is a large arcus in each cornea. Pulse over 100, of small volume, unequal, and compressible. Nutrition failing; patient everywhere exhibits signs of textural deterioration. Skin very pale, thin, dry, and cold; says, however, that at times he gets hot and sweats profusely. No symptoms referable to disturbance of the nervous centres. Intelligence good and clear.

After a careful review of the whole circumstances of the case, we came to the conclusion that in a man with a large and degenerated heart we had to deal with an aneurism, a primary cancer, or a congested lung containing two or more masses of extravasated and coagulated blood; and on weighing the evidence in favour of each supposition, the one sustaining the idea of a hæmorrhagic extravasation seemed by far the heaviest. We, however, reserved formal judgment for a second trial.

Meanwhile, we ordered the patient to be well fed, but restricted in the use of liquids, to be placed in favourable hygienic circumstances, to be kept scrupulously quiet, and to be treated first with mineral acids and bitters, and next with iron and other astringents. Furthermore, counterirritation was directed to be kept up over the base of the chest.

Patient now went for a very short time into the country, and for some weeks afterwards slightly improved. On May 18, 1867, however, a marked change occurred in the patient's symptoms, and we again saw the patient together. He looked better than at the date of our former conference, but his breathing was more hurried, his cough more harassing, and his expectoration not only more abundant, lumpy, and purulent, but at parts it was greenish, and exhaled a gangrenous odour. Lung tissue was sought, but not found, in the expectoration. It contained, however, much mucin, pus globules, granule cells, and enormous numbers of disintegrating blood discs.

An examination of the chest yielded results not very different from those recorded at the first examination. The apex of the left lung was still free from any positive evidence of disease. Between the clavicle and nipple, from sternum to axilla, dulness, though discontinuous, was more extensive and more complete, and at the spots where before there were bronchial breathing and bronchophony there were now cavernous breathing and pectoriloquy. Moist crepitation also was more general and coarser. Over the inferior half of the posterior surface there was uniform dulness, and the ordinary breath sounds were replaced by humid, crackling, and sibilant râles. There was, however, no increase either of vocal vibration or of vocal resonance. Dulness on percussion existed over the whole base of the right lung. Throughout this region were heard coarse moist crepitation, together with sibilant and a few sonorous rhonchi. In the upper part of the lung nothing notable was discovered. The condition of the heart was likewise much the same as when last examined—if there was any change, it was that the contractions were quicker, and the sounds feebler. Now and then, too, it intermitted. The pulse was correspondingly small, compressible, and irregular. In the night patient was drenched with profuse sweats, and in the morning he was troubled with relaxation of bowels. The patient was worse than he looked, and we feared that death, though not perhaps at hand, was still not distant.

This second examination resolved, as we thought, many of the difficulties in the case. It led us to set aside cancer and aneurism, and to ascribe our patient's sufferings to weak heart, to congested lungs, and to the disintegration of cheesified blood clots therein. To what the gangrenous odour of the sputum was due—to retained secretions at the base of the left lung or to sphacelus of a blood clot—we were not sure. We hoped the former, but feared the latter.

Upon a generous dietary and a more liberal supply of stimulants, upon mineral acids, quinine, and iron, upon counter-irritants and inhalations, patient once more rallied, though portions of the expectoration continued from day to day fœtid. The rally, however, was of but short duration. On May 30 patient became suddenly much weaker. He, nevertheless, insisted upon getting out of bed, and spent the greater part of the forenoon propped up in his armchair. The afternoon he passed reclining upon his bed, and holding occasional converse with his wife. Later he had a fit of coughing of unusual severity and duration. Towards its close he began to cough up blood, and then, the blood flowing faster into the air-tubes than he could cast it out, he speedily died.

At the autopsy made twenty-four hours after death, we observed that the integuments were still loaded with unhealthy fat, that the muscles were pale and flabby, and that the costal cartilages were ossified. After a necessarily hurried examination of the abdominal viscera, which, without exhibiting any definite organic disease, looked texturally degenerated, we made a careful examination of the chest. The heart was large, soft, sodden, and shapeless. The ventricular cavities were dilated, and through their rather attenuated walls one's finger could without much difficulty be pushed. There was no valvular disease. The ascending aorta was much dilated, and the walls of it and, as far as its branches could be followed, of the pulmonary artery were studded with atheromatous patches. There were some loose pleuritic adhesions of right lung, which, at its base, was dense and loaded with blood. The apex of left lung was simply congested. The middle part, firmly adherent to the ribs, contained numerous more or less solid masses varying in magnitude from the size of a Spanish nut to that of a pigeon's egg. The lower part of the lung, also containing a few deposits, was in a state of tough splenisation, and contained but little air. In the trachea and larger bronchi of both lungs lay strings of clotted blood. The masses above described appeared to have had a common origin in extravasated blood. One or two resembled old apoplectic clots surrounded by a pneumonic ring; some were more or less completely transformed into yellow friable masses; three had broken up into small cavities; one was distinctly gangrenous and partially filled with blood. From this last had probably sprung the hæmorrhage which terminated our patient's life. The bronchial glands were much enlarged.

Remarks.—We have ventured to call this case one of Hæmorrhagic Phthisis, *meaning thereby a disease the dominant anatomical feature of which is the suppurative, ulcerative, or gangrenous destruction of circumscribed blood-clots in the lung.* But we have not done this without considerable hesitation; for, though plainly enough the disintegrating transformations of blood-clots played an important part in the earlier history of the case, and though as plainly the gangrenous destruction of a clot proved the immediate cause of death, it might be held that the degenerated heart was the ruling influence in the evolution of the disease. It is hard, therefore, to determine to which organ shall belong the right of bestowing a distinctive name. Still, as weak hearts are common enough without disintegrating pulmonary blood-clots, and as disintegrating blood-clots are found without peculiarly weak hearts, it is probable that in such cases the vascular or other structural elements of the lung are from the first at fault. Though the disease, therefore, may have a constitutional or distant local origin, practical convenience would associate it with the lung, inasmuch as it is through this organ that its results become visible and life is threatened. But now it may be asked—Are we justified in using the term "phthisis" in this generic manner? We reply that in the present state of knowledge there is no alternative for the use of some such nomenclature but the confusion of things which are essentially distinct, and the sacrifice of all that is most practical in the results of recent clinical and pathological research. We must go back, in short, to the idea of the unity of phthisis. By "phthisis" we must understand the progressive destruction of progressive

consolidations in the lungs.(b) And when we examine the cases comprehended by this term we see that they are capable of division into groups, and that for each group there is a tolerably well-defined anatomical state. In one group the leading anatomical feature is tubercle; in another it is an unabsorbed pneumonic exudation; in a third it is a fibroid invasion. Each group differs more or less from the others in its origin, alliances, method of progression, and issues. While a tubercular phthisis runs its course in three or four years, a fibroid phthisis may be still slowly advancing at the end of twenty; and whilst the former is attended with fever, intercurrent pneumonias, and bowel ulcerations, the latter is apyretic, allies itself with constitutional fibroid changes, and is attended at its close by some degree of albuminuria and dropsy. Now our contention is that to each of these distinct groups a distinctive name should be applied. We have much to gain by doing this, and nothing to lose: it is at once a demand of common sense, and a requirement of scientific method. To let slip the recognition of such separate forms of disease under the common designation phthisis, would be, in fact, to let slip also all rational chance of any but the most empirical management of the disease. Admitting, then, that we may with sufficient propriety speak of a hæmorrhagic phthisis, the question arises, "Can we distinguish its presence during life?" Or, after all, is it merely a rare pathological curiosity to be discovered after death? Now, we are ready to confess that the diagnosis is more difficult in this than in any other variety of phthisis. Still, we think that it is not in some cases impossible, and we believe that when greater attention is given to the subject the recognition of the disease will become more easy. Still, at the best a certain residue of cases will be got at only by happy scientific guessing. In the case recorded, a correct diagnosis was framed during life; but then the cardinal points of the case were singularly clear and simple, and all the rays of evidence collected and converged towards one point. So happy a concourse of circumstances could scarcely be expected to recur with frequency. The absence of any great retraction of chest after so long a duration excluded the idea of fibroid phthisis. Had tubercle been the cause of our patient's symptoms, the left apex and all the right lung would not have been free from signs of disease. Aneurism was set aside by reason of the seat of the dulness, of the flattening of the chest, of the absence of pulsation, murmur, pain, and of other signs of compression. The most difficult point was to distinguish between hæmorrhagic phthisis and cancer; and to the last a vague uncertainty rested upon our minds. We were determined in favour of the former by the existence of several deposits in the lungs, by the supposed existence of two cavities, by the quantities of decomposing blood-discs in the expectoration, by the evidences of vascular tissue degeneration, and by the absence of any positive evidence of cancer in other parts of the body. And now, in the last place, having discovered or suspected the existence of hæmorrhagic consolidations or disintegrations, how shall we proceed to treat them? At the root of the malady lies natural fragility of the vascular tissues, or if not this, then the fragility that comes from vascular tissue degeneration. In the one case we have to strengthen, in the other to renew; and in both we have to effect our purpose without strain upon the vascular system. At the one extremity we must restrain the sudden entrance into the blood-vessels of large quantities of fluid; at the other we must avoid those physical and emotional agencies which excite and disturb the heart. We must strengthen by a highly animalised diet, by fresh air, by careful attention to the skin, by gentle excercise, by frequent change, by mineral acids, strychnia, quinine, and iron, and perhaps by the inhalation of sprays of weak astringent solutions. We must renew by the enforcement of a similar hygiene, and by the substitution for acids of such combinations of tonics and alkalies as will promote the metamorphosis of matter and the replacement of degenerated by regenerated tissue. We are of opinion that many of the curable cases of phthisis belong to this variety, and we believe that a recognition of its intimate nature, and a closer following of physiological principles in its management, would render still less deadly than they are a class of affections which takes prematurely from among us many of the best as well as of the ablest of our race.

(b) The definition is not ours. It is the definition originated by Bayle, sanctioned by long usage, and employed even now by Williams. We have adopted it because it is simple, convenient, practical, and because it does away with the necessity of introducing a new and necessarily complex terminology at a time when our knowledge of pathological processes is too confused and contradictory to admit of any congruous adjustment.

ON THE EXCRETION OF UREA IN EXANTHEMATOUS TYPHUS, IN ITS RELATION TO THE FEVER.

By Professor S. ROSENSTEIN, of Groningen.

Translated from the *Nederlandsch Archief voor Genees en Natuurkunde*, IV. Deel, I. Aflevering,

By WILLIAM DANIEL MOORE, M.D. Dub. and Cantab., M.R.I.A., L.K.Q.C.P.I.,

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The modifications which the excretion of urine undergoes in exanthematous typhus are as yet but very little known. The principal writers on this disease (Murchison and Griesinger) have made communications upon the subject, according to which a great irregularity in the diuresis seems in all respects to prevail; and Keith Anderson, who even endeavours to explain the origin of the delirium from insufficient renal secretion (conf. *Edinburgh Medical Journal*, 1866), has stated so little with respect to the food of his patients, that it is difficult to build upon the facts on which his results depend, although the facts themselves are too clear to admit of their being looked upon as incorrect. Now, of the sixteen cases in which I have determined the quantity of the urine, the amount of common salt, the urea, and in four cases also the proportion of phosphoric acid, and have particularly investigated with accuracy the relation of these excretions to the fever, I communicate six in fuller detail, and connect therewith a review of the results. Of the individual cases themselves I do not give further particulars, because these have no bearing upon the subject, and I only take leave, on account of its great practical value, to revert in conclusion to the treatment.

Case 1.—Anna Plaat, aged 16, of anæmic appearance.

Day of the Disease.	Mean Temperature.(a)	Cubic contnct. of Urine.	Sp. grav.	NaCl per cent.	Amount of Urea.	Amount of PO^5.	Quantity in twelve hours of NaCl.	Quantity in twelve hours of Urea.	Quantity in twelve hours of PO^5.
4th to 5th day.									
12 at noon to 12 midnight	102·16	600	1·031	0·48	5·2	0·40	2·68	31·20	3·92
12 midnight to 12 at noon		380	1·031	0·62	5·4		2·35	20·42	
Urine bright yellow; much sediment.		980					5·03	51·62	3·92
5th to 6th day.									
Urine bright yellow; copious deposit of urates.	101·3	180	1·031	0·46	5·3	0·29	0·72	9·90	1·62
		380	1·031	0·30	5·4		1·14	20 52	
		560					1·86	30·42	1·62
6th to 7th day.									
Copious deposit in the urine.	102·92	235	1·030	0·30	3·15	0·26	0·70	7·39	1·15
		210	1·030	0·28	2·70		0 58	5 67	
		445					1·28	13·06	1·15
7th to 8th day.									
Urine reddish brown, without sediment.	102·74	250	1·030	0·28	2·18	0·18	0·70	5·45	1·008
		310	1·025	0·16	1·90		0·49	5·89	
		560					1·19	11·34	1·008
8th to 9th day.									
Urine free from sediment.	103·28	220	1·025	0·12	1·82	0·144	0·26	3·90	0·54
		160	1·022	0·10	1 83		0·16	2·92	
		380					0·42	6·82	0·54
9th to 10th day is wanting.									
10th to 11th day.	102·92	150	1·014	0·12	2·0	0·08	0·18	3·00	0·44
		410	1·014	0·08	2·2		0·32	9·02	
		560					0·50	12·02	0·44
11th to 12th day.									
Patient commences to use some milk and fluid nourishment.	103·1	170	1·012	0·12	2 3	0·104	0·20	3·91	0·94
		740	1·012	0·28	2·25		2·07	16·65	
		910					2·27	20·56	0·94
12th to 13th day.	101·12	240	1·015	0·8	2·9	0·104	1·92	6·26	0·759
		490	1·016	0·12	2·85		0·58	13·26	
		730					2·50	19·52	0·759
13th to 19th day.	98·78	300	1·018	0·16	3·4	0·11	0·48	10·20	0·61
		260	1·010	0·12	2·85		0·31	7·58	
		560					0·79	17·78	0·61

(a) Reduced from the Centigrade to Fahrenheit's scale.—W. D. M.

An elevation of temperature now again ensued, caused by the occurrence of the first menstruation, on which account, moreover, the investigation of the urine was omitted. The estimation of the several constituents was effected in this, as also in the following cases, by the volumetric process, the chloride of sodium being determined by nitrate of silver; the urea, after the removal of the chloride of sodium, by nitrate of mercury; and the phosphoric acid, when it was determined, by a solution of oxide of uranium.

Case 2.—Geesje van Lier, 22, a moderately strong person.

Day of the Disease.	Mean Temperature.	Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Percentage of PO^5.	Quantity in twelve hours of NaCl.	Quantity in twelve hours of Urea.	Quantity in twelve hours of PO^5.
8th to 9th day.									
12 noon to 12 midnight		600	1·028	0·36	5·3		2·16	31·8	
12 midnight to 12 noon	103·28	800	1·028	0·32	3·0	0·20	2·56	24·0	2·8
		1400					4·72	55·8	2·8
9th to 10th day. Urine reddish-brown, without sediment.	102·74	365	1·022	0·20	4·2		0·73	15·3	
		855	1·023	0·16	4·1	0·164	0·56	14·5	1·18
		720					1·29	29·8	1·18
10th to 11th day. Urine without sediment.	103·46	275	1·017	0·10	3·0		0·27	8·25	
		395	1·016	0·012	2·9	0·12	0·047	11·45	0·80
		670					0·317	19·70	0·80
11th to 12th day. Urine brownish-yellow, without sediment.	103·1	300	1·016	0·12	1·78		0·36	5·34	
		420	1·017	0·12	1·60	0·10	0·54	6·72	0·72
		720					0·90	12·06	0·72
12th to 13th day. Urine bright reddish-yellow, without sediment; parotitis dextra.	103·46	1340	1·015	0·12	0·85		1·60	11·29	
		850	1·011	0·08	0·68	0·102	0·68	5·78	2·29
		2190					2·28	17·07	2·29
13th to 14th day. Urine contains a copious sediment of urates.	102·74	300	1·014	0·20	2·2		0·66	6·60	
		530	1·013	0·12	2·4	0·08	0·53	12·72	0·69
		830					1·13	19·32	0·69
14th to 15th day. Parotitis sinistra.	103·46	750	1·014	0·20	2·8		1·50	21·0	
		560	1·016	0·12	3·0	0·14	0·67	16·1	1·83
		1310					2·17	37·1	1·83
15th to 16th day.	102·74	440	1·017	0·28	3·00		1·23	13·20	
		380	1·017	0·26	3·85	0·20	0·98	14·63	1·64
		820					2·21	27·83	1·64
16th to 17th day.	100·58	180	1·021	0·20	4·4		0·36	7·92	
		320	1·023	0·22	4·23	0·18	0·66	12·69	0·864
		500					1·02	20·61	0·864
17th to 18th day. Patient begins again to eat.	99·86	300	1·022	0·24	4·5		0·72	13·5	
		320	1·024	0·38	4·5	0·16	0·91	14·4	0·99
		620					1·63	27·9	0·99
18th to 19th day. Soup and meat.	99·86	350	1·024	0·32	4·2		0·70	14·7	
		500	1·025	0·60	4·3	0·17	3·00	21·5	1·44
		850					3·70	36·2	1·44

The following quantities, excreted five days later, under the daily use of soup, half a pound of meat, milk, and bread, may serve as a measure of the ordinary excretion of this individual. The weight of the body is now 38 kilogrammes one ounce.

Temperature.	Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	In twelve hours of NaCl.	In twelve hours of Urea.
99·14°	900	1·025	1·26	3·0	11·34	27·0
	600	1·020	0·92	2·9	5·52	17·4
	1500				16·86	44·4

Case 3.—Wilhelmina Zijlstra, 17, of rather delicate frame.

Day of Illness.	Mean Temperature.	Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Quantity in twelve hours of NaCl.	Quantity in twelve hours of Urea.
7th to 8th day.							
12 noon to 12 midnight	105·656	300	1·012	0·32	5·1	0·96	15·30
12 midnight to 12 noon		380	1·013	0·21	4·8	0·79	17·32
		680				1·75	32·62
8th to 9th day.	105·26	320	1·020	0·16	5·0	0·51	16·00
		280	1·023	0·12	4·5	0·33	12·60
		600				0·84	28·60
9th to 10th day.	104·486	270	1·024	0·12	3·5	0·32	9·45
		180	1·023	0·12	3·0	0·21	5·40
		450				0·53	13·85
10th to 11th day.	103·82	260	1·021	0·08	4·0	0·208	10·40
		280	1·023	0·08	3·5	0·22	9·80
		540				0·428	20·20
11th day in 24 hours	99·86	445	1·020	0·12	3·82	0·534	16·99
11th to 12th day.	103·712	280	1·018	0·08	2·9	0·224	8·02
		180	1·015	0·07	2·8	0·126	6·04
		460				0·35	14·06
13th to 14th day.	103·586	200	1·014	0·12	3·00	0·24	6·0
		250	1·015	0·12	2·80	0·30	7·0
		450				0·54	13·0
14th to 15th day.	103·46	320	1·019	0·22	3·36	0·70	10·75
		300	1·018	0·18	2·91	0·54	8·73
		620				1·24	19·48

In the following days the urine could not be fully collected. On the 17th day of the disease the normal temperature was attained. The following numbers, obtained five days later, under the daily use of soup, half a pound of meat, milk, etc., may serve to indicate the normal excretion of this individual:—

Temperature.	Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	In twelve hours of NaCl.	In twelve hours of Urea.
98·96°	400	1·015	0·88	1·7	3·52	6·80
	720	1·020	1·20	2·5	8·64	18·00
	1120				12·16	24·80

Case 4.—Johanna Bulthuis, aged 36. Bodily weight 47 kilogrammes.

Day of Illness.	Hour.	Temperature.	Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Quantity in twenty-four hours of NaCl.	Quantity in twenty-four hours of Urea.
9th to 10th day.	3 p.m.	103°1	100	1·030	0·26	5·0	0·26	5·00
	7 ,,	105·44	165	1·031	0·26	5·0	0·42	8·25
	12 ,,	102·56	130	1·029	0·60	4·5	0·78	5·85
	10 a.m.	102·2	300	1·028	0·14	4·4	0·72	13·20
	1 p.m.	104·9	120	1·025	0·20	4·25	0·24	5·10
Mean temperature	..	103·64	815				2·42	37·40
10th to 11th day.	4 p.m.	103·28	160	1·024	0·26	4·35	0·41	6·93
	9 ,,	104·9	100	1·026	0·24	4·00	0·24	4·00
	9.30 a.m.	104	230	1·023	0·26	4·24	0·59	9·75
	12 noon	104·18	170	1·017	0·22	3·50	0·37	5·95
Mean temperature	..	104·09	660				1·61	26·66
11th to 12th day.	3.30 p.m.	104	220	1·021	0·60	3·40	1·32	7·48
	9.30 ,,	104·9	90	1·021	0·53	2·95	0·48	2·65
	12 ,,	102·56	90	1·020	0·60	2·98	0·54	2·68
	9.30 a.m.	102·38	300	1·019	0·56	3·20	1·68	9·60
	12 noon	103·82	60		0·58	2·85	0·34	1·68
Mean temperature	..	103·44	760				4·37	24·09
12th to 13th day.	3 p.m.	105·44	140	1·017	0·52	2·45	0·72	3·43
The patient drinks largely.	6 ,,	104·9	280	1·018	0·52	2·80	1·45	7·84
	9.30 ,,	103·64	80	1·016	0·50	2·64	0·40	2·11
	9.30 a.m.	102·38	210	1·020	0·42	2·70	0·88	5·67
	12 noon	103·82	320	1·016	0·40	2·65	1·28	8·48
Mean temperature	..	104·036	1030				4·73	27·53
13th to 14th day.	3 p.m.	102·74	165	1·015	0·40	2·30	0·66	3·79
	6 ,,	103·1	380	1·010	0·24	1·90	0·91	6·62
	9 ,,	103·46	500	1·010	0·20	1·55	1·00	7·75
	9.30 a.m.	101·3	210	1·010	0·20	1·54	0·42	5·33
	12 noon	102·02	350	1·010	0·20	1·50	0·70	5·25
Mean temperature	..	102·524	1605				3·69	28·74
14th to 15th day.	6.30 p.m.	103·28	300	1·010	0·24	1·45	0·72	5·25
	9.30 a.m.	100·76	510	1·009	0·24	1·33	1·22	7·68
	12.30 p.m.	100·76	220	1·010	0·28	1·51	0·61	3·32
Mean temperature	..	101·6	1030				2·55	16·25
15th to 16th day.	6.30 p.m.	102·38	50		0·24	1·32	0·22	0.66
	9 a.m.	99·5	315	1·010	0·30	1·38	0·94	4·33
	12 noon	99·86	600	1·010	0·28	1·00	1·68	6·00
Mean temperature	..	100·58	965				2·84	10·99

The temperature subsequently became normal, and, after the lapse of eight days, with the use of soup, half a pound of meat, and milk, the following quantities were excreted :—

Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Quantity in twenty-four hours of NaCl.	Quantity in twenty-four hours of Urea.
1020	1·013	0·68	1.5	6·93	15·3
1070	1·008	0·44	1·1	4·70	11·7
2090				11·63	27·0

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR DISEASES OF THE SKIN.

A FEW CURIOUS FACTS RESPECTING HERPES ZOSTER.

(Communicated by Mr. HUTCHINSON.)

Herpes zoster is a disease which offers to the clinical observer some very interesting and important problems. Its non-symmetry and non-contagiousness, its observance of stages and spontaneous disappearance, and its occurrence but once in the patient's life, are well established as general facts, though none of them without occasional exceptions. The first two seem to connect it with the neuroses, the others to ally it to the exanthems. Such being the puzzling position which it occupies, I think the following facts and remarks worthy of publication.

I regard it as certain that special conditions of the blood may so irritate the roots of the sensory nerve trunks as to induce those trunks to cause at the periphery herpetic inflammation. Thus we have a syphilitic herpes zoster, in which the patches are located exactly as are those of common herpes zoster, and clearly under the influence of nerve distribution. But these cases differ from the common herpes zoster in that the eruption is usually on both sides of the trunk and on other parts of the body. It may also last much longer than common herpes zoster does. These circumstances, symmetry of eruption and long persistence, are what we should expect in connexion with the blood cause. Some facts which have recently come under my notice incline me to believe that herpes zoster, in its most typical form, and following its usual course, may be produced by a blood cause. *A priori*, we should have thought it most improbable that a non-symmetrical eruption could occur in connexion with such a cause. The facts to which I refer are a group of cases in which herpes zoster has occurred in patients who were at the time taking arsenic. They have been so numerous that I think their occurrence must be something more than a coincidence. Should further experience confirm my present suspicion, we shall have gained a step in our knowledge of the pathology of herpes zoster, and shall, perhaps, have also furnished another fact to those modern neurologists who hold that the nervous system is less symmetrical in function than has hitherto been supposed.

Case 1.—*Partially Symmetrical Herpes Zoster occurring in a Patient who was taking Arsenic.*

The following notes were taken about three years ago, and describe the condition of a patient who was kindly sent to me by Dr. Hughlings-Jackson. It was of special interest both as an example of symmetrical herpes, and because it came on during an arsenic course. I have described its positions in more detail than would otherwise have been requisite because of its occurrence on both sides.

"A robust man, aged 67, is attending at the London Hospital, under Dr. Hughlings-Jackson, for sciatica, and has been taking five-minim doses of liquor arsenicalis. He is now the subject of herpes zoster, which began a few days ago. He says he had very trifling pain when the rash began to come out. It first appeared behind his right ear. It now covers the right side of his neck, his right shoulder as low down as the spine of the scapula and the right side of the front of his chest as low as the upper border of the third rib. On the front of the right arm it extends as low as about two inches below the axilla. The vesicles are quite characteristically those of herpes zoster, with some tendency to ulcerate in parts. Looking at the front of his chest, the inflammation of his skin stops abruptly at the middle line, but at a distance from this, on the left side, there are a few isolated small patches of vesicles over precisely the same area as is affected on the other side. There are a few isolated vesicles on the left side of the neck, but they are only to be seen when looked for very carefully. There are none on the left side of his cheek nor behind the left ear; none on the left front of his neck. Thus the disease is fairly symmetrical as to the areas affected, but occurs very much more severely and copiously on one side than the other. The amount of irritation has been much less than usual."

Case 2.—*Arsenic administered in a Case of Eczema—Herpes Zoster on the Trunk a Fortnight later.*

A man, aged 32, was admitted at the Hospital for Skin Diseases in January, 1866, for eczema, etc. Three-minim doses of Fowler's solution were ordered. A fortnight later he had a free eruption of shingles on the right side of the chest. The arsenic was continued. The shingles went through the usual course, and soon disappeared. On November 30 he again attended for a relapse of the original eruption. On examination it was found that the shingles had not left any perceptible scars. It had been a mild attack.

Case 3.—*Herpes Zoster on Lower Part of Abdomen one Week after beginning an Arsenical Course.*

A man, aged 66, was admitted on September 7, 1866, with eczema rubrum of the legs, and amongst other treatment arsenic internally was ordered. On September 18 there was a free eruption of herpes zoster on the right side, in the iliac region, and side of abdomen. He had taken the medicine about a week before the herpes showed itself.

Case 4.—*Herpes Zoster Six Weeks after beginning an Arsenical Course.*

A woman, aged 48, who attended in December, 1866, had been taking arsenic six weeks for eczema. At the end of that time herpes zoster showed itself on the right side of the chest, and went through its usual course.

Case 5.—*Herpes Zoster Frontalis Three Months after commencing the Use of Arsenic.*

A woman aged 44, admitted on April 9, 1867, on account of psoriasis, had six minims of Fowler's solution ordered three times a day. On June 14 the dose was reduced to three minims. On July 12, her psoriasis being now nearly cured, she was attacked by herpes zoster frontalis in the right side. The herpes was of no great severity, and it disappeared as usual although the arsenic was continued.

Case 6.—*Herpes Zoster of the Buttock after Three Months' Use of Arsenic.*

A boy, aged 8, the subject of complicated and chronic skin diseases (lichen, etc.), took small doses of arsenic from November to March, when he had herpes zoster on the left buttock.

Case 7.—*Herpes Zoster during the Use of Arsenic.*

A girl, aged 14, admitted on January 1, 1867, with psoriasis of the scalp, took arsenic from that date to the 29th, when she had herpes zoster on the right side of trunk.

Case 8.—*An Eruption resembling Herpes in Arrangement, but not Vesicular, during Treatment by Arsenic.*

A man, aged 50, who was taking arsenic, had a curious unsymmetrical eruption arranged just like shingles, but which remained papular, and never showed vesicles. It disappeared, as usual with shingles, after about ten days' duration.

GERMAN HOSPITAL, DALSTON.

TWO CASES OF BASEDOW'S (GRAVES') DISEASE.

(Under the care of Dr. SUTRO and Dr. HERMANN WEBER.)

Among other interesting cases which we saw in the wards, we particularly noticed two cases of Basedow's disease, and with a few short notes on them we shall conclude this report.

The one, under the care of Dr. Sutro, is a typical case of that disease in a woman, T. S., 43 years of age, and the exophthalmus, pulsating goître, and acceleration of the heart's action, are as well marked as the nervousness and excessive general debility which are no less characteristic symptoms than those which first drew the attention of Physicians to this disease. She is married, and lives in comfortable circumstances, and none of those causes which the history of such cases generally presents, such as long-continued mental anxiety, a great fright or excitement, loss of blood, or rheumatism, can here be distinctly made out. There were some causes for mental anxiety four years ago, but without producing at that time any of the present symptoms, which have only come on since last spring. The first symptom was the

swelling of the thyroid gland, which was soon followed by the exophthalmus; palpitation has only quite recently come on. The catamenia have always been quite regular until the last period, when they did not appear. She has had no children. In October her legs began to swell, and since about that time she has been much troubled by vomiting and irritable throat. There is a good deal of œdema of the legs, but the urine does not contain albumen, and there is no evidence of any organic disease of the heart, except dilatation, and although there is no murmur, yet a strong double pulsation of the veins on both sides of the neck seems to indicate not only insufficiency of the valves in the jugular veins, but regurgitation of the blood through the right auriculo-ventricular orifice. Venous pulse has been observed in several cases of Basedow's disease. The patient is about leaving the Hospital again, somewhat benefited as to her general health. She took quinine in two-grain doses three times a day.

The other case is a man, L. R., aged 42, a tailor, under the care of Dr. Weber. The peculiarity in this case is the entire absence of any symptoms on the part of the eyes, whilst the palpitation and goître and the general debility are well marked. Another feature of interest is this—that the goître, which is not pulsating, has in this case existed ever since he was a boy, so that a slight deformity of the larynx has been caused by it. The palpitation, dyspepsia, and general debility only supervened last summer, without any apparent cause, if it is not to be found in the enlarged thyroid pressing on the pneumogastric nerves. He had always enjoyed good health, and lived in good circumstances. Although there is no exophthalmus, there cannot be any doubt that this case also belongs to the same class as the preceding one, and it is not improbable that the exophthalmus may appear at a later period. He is now taking digitalis, his pulse being sometimes as high as 144. Iodine has been applied to the goître repeatedly, without much effect.

For the particulars of the preceding cases we are indebted to Drs. Port and Wibel, the resident Medical officers of the Hospital.

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Medical Times and Gazette.

SATURDAY, DECEMBER 26, 1868.

ANNUS MEDICUS 1868.

With the echoes of the din and strife of the late elections to Parliament still lingering on the ear, it is natural that, in attempting a retrospect of the year 1868 from a Professional point of view, we should first of all note the fate of our brethren in the late contests, and the amount of direct representation Medicine has obtained in the new Parliament. It is undoubtedly disappointing that not one of the three new university constituencies has returned a member of our Profession. Had the graduates in Medicine and science united, in each instance, to support a Medical candidate, they would in all probability have carried some, if not all, of the three seats. But several causes combined to prevent this. It is difficult to persuade Medical men of the highest standing to become candidates for Parliamentary honours. The successful barrister naturally seeks to enter the House of Commons, for it is the direct road to the highest honours and the most lucrative prizes of his profession; but to the distinguished Surgeon or Physician a seat in the House can only bring additional labour and responsibility, and, at present at any rate, can lead to no Professional promotion or reward. Then, again, the late contest was in a specially marked degree a political one. And, finally, Medical men have not yet learned to sink minor differences and combine together for one special definite end. Some such reasons as these must, we imagine, account for the fact that no Medical man was brought forward to contest the seats for the University of London and the united Universities of Glasgow and Aberdeen. For the seat given to the Universities of Edinburgh and St. Andrews, two Medical gentlemen did appear—Dr. Prosser James and Dr. B. W. Richardson. The former was early in the field, but did not receive sufficient support to warrant his going to the poll. Dr. Richardson was brought forward very late in the day; for as he was president of the St. Andrews Medical Graduates' Association (which body was fighting for the extension of the franchise to all the Medical graduates of their University), it was felt that it would be highly injudicious to name him as a candidate for the seat before the Scottish Reform Bill had become law. On canvassing the constituency it was found that so many votes were already promised, that he also withdrew, and the contest for the seat lay finally between Mr. Campbell Swinton, LL.D., formerly an advocate at the Scottish bar, and Mr. Lyon Playfair, LL.D., Professor of Chemistry in the University of Edinburgh; and the latter gentleman was the successful candidate. He will be a valuable authority in the House on all matters affecting the public health, and he has long been so intimately connected with our Profession that we may confidently expect to find in him an enlightened advocate of our interests. For borough seats several Medical men came forward, and the majority of them were successful. Drs. Brady, Brewer, Sir John Gray, and Lush, and Messrs. Clements, Dalrymple, and Vanderbyl were returned for Leitrim, Colchester, Kilkenny, Salisbury, Shrewsbury, Bath, and Bridgewater; while Mr. Mitchell Henry failed at Manchester, Mr. Alfred Smee at Rochester, Dr. Lees at Northampton, Dr. Humphry Sandwith in Marylebone, and Sir Dominic Corrigan in Dublin. The last-named gentleman received more than 5500 votes, losing the seat by only 300, and would almost certainly have succeeded had the Profession in Dublin unanimously supported him. And they would probably have done this on almost any other occasion. But the most prominent question of the day—the Church question—made the political fire, always hot enough in Ireland, burn with unusual vigour and heat, and Sir Dominic's very "advanced" political platform alienated from him a large and very influential body of his Medical brethren. It is said, however, we know not with what truth, that Meath will provide him with a seat, and in that case we shall have eight direct representatives of the Profession in the House. A contemporary states, moreover, that Mr. Watkin Williams, who is for the first time in the House, passed through a Medical training in early life, and is "to be counted on for a clear appreciation of the value of arguments dealing with sanitary and Medico-political subjects." Were we to adopt the tone of some of our daily contemporaries, we should hail the advent of a Medico-hygienico-political millennium, and assert that the reformed Parliament will at once listen with appreciative intelligence to, and take vigorous and rapid action on, all our representations and complaints—that legislative ignorance of and indifference to Medical subjects will be things of the past, and delay and negligence be known no more. But, alas! experience has incapacitated us for such a delightful

creed, and we must confess to a suspicion that for some time to come Parliament will be much too busy with subjects of purely political interest, and with works of—well we will say of analysis rather than of synthesis—to have time or sympathy for the kind of measures the Profession would like to see dealt with.

Last session Parliament had very little time to spare for the consideration of measures for the promotion of the public health and well-being. But a useful Act "to provide better Dwellings for Artisans and Labourers" was passed; also an "Act to amend the Sanitary Act, 1866;" an "Act to amend the Contagious Diseases Act, 1866," extending its operations; an "Act to provide for carrying out capital Punishment within Prisons;" an "Act to amend the Law relating to Medical Practitioners in the Colonies;" and an "Act to regulate the Sale of Poisons, and to alter and amend the Pharmacy Act, 1852." We need not here detail the provisions of these Acts, as they have been duly noted and described in our columns; but the last-named Act will, as usual, require amending, as we pointed out in our number for October 31. As the Bill at present stands, no Medical man who is not "a legally qualified apothecary" can, after this year, "sell, or keep open shop for retailing, dispensing, or compounding," the articles mentioned in Schedule A, which schedule includes chloroform, ergot of rye, belladonna and its preparations, and opium, and all preparations of opium or of poppies. The Bill as introduced, and as it passed the House of Lords, expressly saved the rights of Medical Practitioners, but the alteration was effected in the House of Commons. The change may be made, however, to interfere so seriously with the rights and customs of the general Practitioner, and may, in poor and thinly populated districts, be productive of such grave inconvenience, that it is clear that a short Amendment Act must be passed. The Medical Practitioners (Colonies) Bill threatened to inflict a great injustice on the registered Practitioners of the British Empire, by making their right to practise in the colonies entirely subject to enactments by colonial legislatures, and it even gave this clause in the Bill a retrospective effect. In consequence however, we believe, of the remarks we made on the subject, the Medical Council, the Medical Corporations, and the British Medical Association had interviews with the Colonial Minister, and the Bill was amended, so that "any person who has been duly registered under 'the Medical Act' shall be entitled to be registered in any colony upon payment of the fees (if any) required for such registration, and upon proof, in such manner as the said colonial legislature shall direct, of his registration under the said Act." An Act was also passed "to extend the powers of Poor-law inspectors and Medical inspectors in Ireland," and "an Act to make further Amendments in the Laws for the Relief of the Poor in England and Wales." This Bill, introduced into the House of Lords by the Earl of Devon, President of the Poor-law Board, is a very moderate measure, and contains no provision for any special Medical inspection of workhouse infirmaries. It was referred to a Select Committee, who struck out a clause enabling the Poor-law Board, in case of any shortcomings on the part of the visiting committee of a union, to appoint a special visitor for a year, and reported, by a majority of seven to one, that in their opinion it was desirable "that the number of inspectors should be increased, and that a certain number of such inspectors should be specially qualified by Medical knowledge to report as to the relief of the sick poor." The President of the Poor-law Board was, it is believed, the glorious minority of one; and he certainly acted on the opinion of that minority, for he quietly waited till Parliament had risen, and then appointed as additional inspectors two barristers, one bearing his own family name, and the other the name of the permanent Secretary to the Board. This act, ignoring totally the opinion of his brother peers, of the Profession, and of the public, evinces, no doubt, courage of a certain kind, but will, we should think, subject his Lordship to some not very pleasant questions and remarks when Parliament meets.

Besides the direct representatives of the Profession in the House, several of its members are pledged to give serious attention to Medical questions, and to support measures in which we are specially interested; and more than one of the members of the new Ministry is unusually instructed and interested in Medical education.

The General Medical Council met on June 24, and sat for thirteen days, or, excluding Sundays, for eleven working days, a long session for them, but relieved and enlivened by the hospitalities of their President and of the Society of Apothecaries. Some of the debates were lengthy and interesting; the most brilliant of them, however, was—like the most exciting and brilliant debates in "another place" this year—on reform. It was brought on by a memorial from the British Medical Association on the subject of "the direct representation of the Profession in the Council," and a motion by Dr. Andrew Wood that the Council should take into consideration its present constitution, with the view of determining whether it is advisable that it should be placed on a more popular basis. The result was very different from that obtained in the other place alluded to, for the Council rejected the motion by a majority of sixteen to four. Of course, however, the subject may be expected to come up again next session. It is true that the Council cannot alter its own constitution though it should think any reform ever so desirable, but the topic is far too exciting and too congenial with the temperament of some members to be allowed to sleep. The complaint is that the General Council represents, not the Profession, but the Colleges. Surely it would be a more fruitful piece of reform to make the Colleges represent their own members in their own councils, and so to represent them in the General Medical Council, than to add to the number of this already too numerous body, and to introduce new members who would be powerless against the number of Corporation representatives. The Council achieved some good and valuable work, and laid the foundations for more, by its hard-working and most useful committees. Perhaps one of their best acts was their agreeing to send a memorial to the Home Office suggesting that an Act applicable to the United Kingdom should be passed on the subject of lunacy certificates; but all will agree that they did an excellent and most wise thing in persuading their President to allow himself to be re-elected. With regard to Medical education, the Council, after much debate and opposition, made one important step in advance by appointing a committee to consider how the subjects of Medical education may be most advantageously taught. This committee will, we may hope, receive valuable aid from the Medical Teachers' Association. There was, of course, no chance of getting Parliament to give any attention to a Medical Act Amendment Bill last session, but there seems some reason to hope for better success next year, as two members of the new Cabinet—Mr. Lowe and Mr. Austin Bruce—have interested themselves in the subject of Medical education, and Mr. Bruce the new Home Secretary, in a speech he made on distributing the prizes in the Faculty of Medicine at University College, called on the Medical Council to revise the whole system of Medical education and examination, and advised their applying to Parliament for the power which he acknowledges they do not at present possess.

The British Medical Association continues to prosper, and to increase in strength and influence. Its annual meeting, a very successful and brilliant one, was held at Oxford, and naturally the fame, beauty, and hospitality of the city of spires and cloisters attracted an unusually large assemblage of members, who must have been highly gratified by their scientific holiday. We fully reported the proceedings at the time, and it is sufficient to remark here that the addresses,

were well worthy of the place and the occasion, and that the meeting was also specially marked by the "inauguration" of a section of Public Medicine.

The British Association for the Advancement of Science met at Norwich, where it was most hospitably received and entertained. The meeting was not, we believe, so large a one as has been usual of late years, but many admirable and valuable papers were produced, and some excellent discussions excited. The most remarkable paper was, perhaps, that by Miss Becker, on the perfect equality of men and women in everything but *physique*, and the unjust and degrading repression women have always been subjected to by the coarser animal man. She is a very "emancipated" lady, in thought and deed, and said her say boldly and well. But we venture to hope that she will not gain many disciples, at least in our day.

The National Association for the Promotion of Social Science also had a successful gathering at Birmingham, the meeting being opened by a very able address from the Earl of Carnarvon. Its Medical and sanitary departments occupied themselves with discussions on Medical charities, of which we will only say that so long as it seems to any section of our body to be to their interest to give away their professional services to all comers, so long will it be impossible to organise Medical charities on any sound basis, and to restrain the multiplication of institutions got up for the benefit of the Medical officers. The sanitary debates brought out into appalling relief the filthy disease-generating state of many large towns, and the evils arising from the reckless introduction of the air- and water-polluting watercloset system without the provision of means for the safe disposal of the liquid sewage. One thing we regret in connexion with this meeting is, that the exigencies of space prevented our giving a report of the excellent address of the President, Dr. Rumsey. His remarks on the functions of air, water, and earth in maintaining health or propagating disease, were well fitted to impress the practical minds of our manufacturing towns, and to procure him success in his labours for the amendment and more effectual operation of those sanitary laws "by which the safety of the whole community may be protected against the errors and neglects of a part."

The Royal College of Physicians has been compelled to depart somewhat from the even tenor of its way. For years there has been an ever-growing dissatisfaction excited by the way in which its Fellowship elections were managed, but the College persisted in its stolid and determined resistance to any change. This year the meagre and inexplicably selected list nominated by the Council caused even deeper and wider-spread discontent than usual, and led to a proposal, moved by Dr. C. J. B. Williams at one of the quarterly *comitia* of the Fellows, for the adoption of a much more open and liberal mode of nomination. Part of the scheme was accepted, which provides that the Council, before preparing the list of members to be nominated for the Fellowship, shall be open to receive the names of any Members of a certain standing, nominated by two or more Fellows, with a statement of the grounds of recommendation. This is undoubtedly a great step in advance, and may help much to make the College more popular and prosperous.

Some of the best known and most successful of the general Practitioners in the metropolis presented a memorial to the College, praying to be admitted to its Licentiateship for a moderate fee and without examination, but the Fellows decline to accede to their request.

It is worthy of note that the House of Commons of Victoria has passed an Act making the use of the British Pharmacopœia compulsory in that colony after January 1 next.

The Fellows of the Royal College of Surgeons again seized the opportunity afforded by the annual election into the Council of infusing fresh and younger blood into that body instead of re-electing the outgoing members, as was once almost a matter of course. This year there were four vacancies, caused by the death of Sir William Lawrence, the resignation of Mr. Joseph Hodgson, and the retirement, in due order, of Professor Partridge and Sir William Fergusson. The two latter gentlemen offered themselves for re-election, and seven other candidates also went to the poll. Sir William Fergusson was re-elected, and headed the poll, and the other successful candidates were Mr. Simon, Professor Humphry (of Cambridge), and Mr. Luther Holden. Mr. Gay missed the desired honour by but a very few votes, and the large amount of support received by Professor Partridge proved how thoroughly the Fellows appreciated his long-continued, able, and diligent services to the College; but he had filled all the offices of honour and dignity that body had to offer, and it seemed well that a younger man should now enter into his labours.

The pressure from without has continued to make the College move onwards, though very slowly, every step in advance being taken with extreme caution and deliberation. The regulation requiring that all candidates for its Membership should possess a Medical licence or diploma, or pass an examination in Medicine, came into force this year, and the Council elected Dr. Samuel Wilks and Dr. T. B. Peacock, who are both members of the College, their Examiners in Medicine. Some marked improvements have also been made in the examinations, but the Council rejected Mr. Paget's motion for the appointment of two extra examiners in physiology and physiological anatomy.

The Society of Apothecaries, with most judicious and praiseworthy liberality, appointed Professor Roscoe to give in their Hall a public course of lectures on spectrum analysis. They could hardly have chosen a more interesting and important subject, or a more able expositor, and they must have felt rewarded and gratified by the crowded audiences attendant on all the lectures.

It cannot, we fear, be said that anything further has been done towards making the Army and Navy Medical services popular, or towards satisfying the requirements and just complaints of their officers. Of the Navy Medical Department we can only report that it has been as eminently mismanaged as usual. The treatment of Dr. Stirling, to which we have frequently called attention, is of itself sufficient to deter any one from entering the service.

In the Abyssinian war the Medical officers of the army rendered eminently good service, and some honours and rewards were in consequence dealt out among them, though with but a very niggardly hand. The success of the campaign depended in an unusual degree on the good health and physical strength of the troops, and they were watched over and attended by the Medical officers with admirable care, prevision, and skill—services which were freely and honourably acknowledged by the Commander-in-chief in his despatches, but were not considered worthy of mention in the votes of thanks by the Houses of Parliament, and were thought sufficiently rewarded by a couple of C.B.'s, and the promotion of Deputy Inspector-General Dr. Currie to an Inspector-Generalship, Staff Surgeon-Major Dr. T. Guy to a Deputy Inspector-Generalship, Surgeons C. D. Madden, N. H. Stewart, and J. Sinclair to Surgeon-Majorships, and Surgeon J. A. Dick, R.N., to a Staff-Surgeoncy. The Indian Medical service received only one promotion, Surgeon John Lumsdaine, Bombay army, being made Surgeon-Major. And yet the authorities affect to wonder that the services are not content and grateful.

Drs. Watson and Young, of H.M.SS. *Challenger* and *Galatea*, were also promoted in consideration of their services to H.R.H. the Duke of Edinburgh, when he was so basely shot at and wounded at Sydney.

We have had the pleasure of recording that several of our brethren have received well-won honours and distinctions from their Sovereign, and from the Profession. Thus, Dr. John Harley received a testimonial from the Associates of

King's College, and his pupils, "in token of their sincere regard, esteem, and regret," when the authorities of King's College Hospital, with that strange perversity which leads to their ridding themselves of their most eminent *élèves*, declined his further services as Assistant-Physician. Dr. Chowne received a valuable testimonial on his final retirement from the Charing-cross Hospital and School; and Dr. B. W. Richardson was honoured by such a recognition, from the Profession and the public, "of the scientific work he had done, and of the spirit in which he had done it," as might make the heart of any man, however eminent, glow with pride and gladness. Mr. Skey has received the distinction, very rarely awarded to a civilian Practitioner, of the Companionship of the Bath; Dr. Hood, of Bethlem Hospital, Dr. Carroll, Lord Mayor of Dublin, and Dr. Fayrer, of Calcutta, have been knighted; all the Profession rejoiced when her Majesty made Dr. Jenner a Baronet; and the high distinction of the Honorary Degree of D.C.L. of the University of Oxford was conferred on Sir C. Locock, Dr. Gull, Professor Haughton, and Messrs. Paget, Simon, and Syme, during the meeting of the British Medical Association. The Court Medical appointments have, during the present reign, been almost invariably made with such excellent judgment and care, that they have excited the most general approval and satisfaction. Nearly as great and widely spread was the surprise caused by the appointment of Dr. Oscar Clayton as Surgeon in Ordinary to H.R.H. the Duke of Edinburgh, and Extra Surgeon in Ordinary to H.R.H. the Prince of Wales. One of our contemporaries has endeavoured more than once to extract an explanation of the appointment, but in vain; "speech is silvern, but silence is golden."

A Regius Professorship of Surgery has been established in the University of Dublin, and Dr. Robert Adams has been most fittingly appointed to it, having thus the honour of being the first Regius Professor of Surgery in the United Kingdom.

In January this year the Nightingale Midwifery Ward in King's College Hospital was closed after six years' painful experience. Everything that could be thought of was done to make it healthy. A convalescent ward was provided apart from the lying-in ward, each patient was allowed the very large amount of 3200 cubic feet of breathing space, and every precaution, regulation, and arrangement that could be devised to keep the air pure and prevent contagion and infection rigidly enforced; but the average mortality for the six years was 1 in 28·9, and during the last year it had risen to 1 in 13·8, so that at last the authorities felt compelled to close it. They had fairly and most fully tried the experiment of having a midwifery ward in a general Hospital, but had altogether failed.

In May, her Majesty laid the foundation-stone of the new St. Thomas's Hospital, with considerable ceremony. The building is now rising rapidly, and will be the grandest Hospital of modern days, on one of the finest sites possible.

The Great Northern Hospital now occupies its new premises, which the skill of its honorary architect, Mr. Somers Clarke, has converted into a very admirable and convenient little Hospital. We hope to have the pleasure of noticing its continuous prosperity and increase in size.

We have given in our Students' Number (September 12) a description of the alterations and additions made at the London, the Middlesex, and St. George's Hospitals, and an account of the changes that have taken place in the *personnel* of the various schools.

The many Medical Societies have been active and flourishing. The Medical Society of London has shown, under its present able and energetic President, Dr. B. W. Richardson, a remarkable increase of life and vigour. The Clinical Society has published its first volume of *Transactions*, and shows great promise of a most useful and active career; but constant watchfulness must be exercised to keep the Society to its main object—the study of the application of remedies to the cure or relief of disease. The St. Andrews Medical Graduates' Association has also published a highly creditable volume of *Transactions*, and must be congratulated on having so fully achieved one of its main objects—the obtaining the franchise for all the Medical graduates of the University. To the Pathological Society we must repeat the warning we gave last year. The number of specimens brought forward every evening is so large that all the proceedings are hurried and rushed through at high pressure. Hardly any attempt at deducing any connexion between pathological anatomy and treatment is allowed, and the specimens follow each other so rapidly that discussion is almost impossible. It is true that the Society is not intended to deal primarily or chiefly with therapeutics; but, after all, our main and general object in life is to improve our treatment of disease. And if the Society does not take some new order in the matter, perhaps by presenting only selected specimens, and merely tabling the rest, so as to gain time for fuller examination and discussion, the discontent at present smouldering may gain force and heat dangerous to the welfare of the Society.

One of the most remarkable Medical incidents in the year has been the revival and rapid acceptance of the use of nitrous oxide as an anæsthetic. Introduced from America, its safety and efficiency, at first rightly doubted, have been well established, and it has now been very largely used, almost solely, so far, in Dental Surgery, and it seems most probable that its employment will be nearly confined to that branch of Surgical art.

Death has, as usual, been busy harvesting in our ranks, and each week we have had to record his conquests and our losses, and to tell of "names once heard, but heard no more" in the toil and struggle of Professional life. Some have fallen at the very threshold of their Professional career, as Mr. E. Maundrell, who entered on his work as Resident Surgeon at the New Bridge-street Workhouse, Manchester, on the 9th of last month, and died of typhus fever on the 3rd inst.; and some, like Dr. Edwards, of St. Bartholomew's, and Dr. Hillier, of University College Hospital, have, to our great regret, been taken away when they had well proved their high worth, and, after years of toil and struggle, were beginning to reap the reward of their labours. Many, like Dr. Cowan, of Reading, Dr. Collins, of Dublin, Dr. Kennion, of Harrogate, Dr. S. L. Hardy, Dr. T. Barratt, Dr. Tisselton Dyer, and Mr. W. Williams, having conquered fame and achieved assured success, have left a still deeper gap in a yet wider circle of friends and patients; while many more, like Mr. Pridgin Teale, Mr. N. W. Bloxam, of Ryde, Mr. B. Travers, Mr. N. B. Ward, Mr. W. Herapath, Dr. R. G. Mayne, Dr. Page, Dr. W. Mackenzie, and others, have happily lived and worked on to nearly and even much beyond the threescore and ten of man's space of life, and been still active and vigorous workers when called to their rest. And again, not a few have had the happiness of enjoying a few years of dignified and well-earned rest and peace here before departing "to join the many." Among such we may name Dr. J. Davy, who died at the age of 77, Dr. W. Stevens at 82, Inspector-General Mahoney at 79, Dr. R. Hobson at 73, Mr. Windsor at 81, Mr. T. Eld Baker at 77, Dr. Elliotson, Dr. Judd, and Sir J. Gibson. Obituary notices of these and others of our brethren, whose deaths we have had the sorrow to record this year, have appeared from time to time in our columns. And we have had also to note many losses to Medicine and science abroad by the death of Matteucci, Serres, Sichel, Griesinger, and other eminent Practitioners and teachers.

In our pages we have diligently endeavoured to record and reflect the life and growth of our science and art, and have been anxiously watchful to keep our readers well acquainted not only with everything of importance or interest in the

Medical world, but also with all events in the world of general science or in public life that may especially affect or interest them. And this is no light or easy task. Medical life is infected with the rush and hurry, the feverish reachings-out on every side and strivings onwards, the restless energy, the impatience of delays, and the intolerance of obstacles and restraints that characterise the times; our table groans with the mass of Medical literature poured out upon us at home and abroad; and the Medical and scientific societies are almost innumerable. To make sure that in all this activity and life we miss nothing of importance needs all our powers, and all the help our able and valued contributors can give us; but, looking over our volumes for this year, we venture to think that we may feel some honest pride in the results of our labours. We have had the satisfaction of publishing a large number of valuable lectures by some of the most able and active workers and thinkers in the Profession—such as Dr. Wilks's "Lectures on Diseases of the Nervous System;" Dr. Barnes's on "Obstetric Operations;" Dr. B. W. Richardson's on "Experimental and Practical Medicine;" Dr. Lionel Beale's "On the Germinal or Living Matter of Bodies;" and Dr. Clifford Allbutt's "On Optic Neuritis as a Symptom of Diseases of the Brain and Spinal Cord;" Lectures on "Parasitic Fungi," by Mr. Tuffin West; a "Lecture introductory to a Course of Physiology," by Dr. Beale; and abstracts of the "Gulstonian Lectures" by Dr. J. Harley, Mr. Le Gros Clark's Lectures at the College of Surgeons, and those of Professor Roscoe and Dr. Symes Thompson. Under the title of "Original Communications," we have been able to present our readers with very many important and interesting papers, of which we will only mention here a few—as, a "Proposal to stamp-out Small Pox," by Sir J. Y. Simpson; "Growth of the Kidney," "Our Modern Medical Practice," and on "Cohnheim's New Doctrine," by Dr. L. Beale; the "Artificial Production of Certain Organic Forms," by G. Rainey; on "Neuritis," and other subjects in the higher departments of Surgery as practised in India, by Dr. J. Fayrer; on "Optic Neuritis in Cerebral Disease," and on the "Physiology and Pathology of the Nervous System," by Dr. J. Hughlings-Jackson; on "Typhoid in the Tropics," by Dr. W. H. Stone; on the "Treatment of Typhoid Fever," by Dr. I. Burney Yeo; on "An Epidemic of Ophthalmic Disease," by Sir W. R. Wilde; on the "Early Treatment of Insanity," by Dr. Maudsley; on "Some Anomalous Cases of Acute Phthisis," by Dr. Sydney Ringer; the "Treatment of Wounds on Antiseptic and Subcutaneous Principles," by Mr. W. Adams; "Syphilisation," by Dr. Öwre, of Christiania; "Treatment of Tumours by Electrolysis," by Dr. Althaus; "Copper Poisoning," by Dr. Clapton; "Craniotomy," by Dr. Radford; "Animal Parasitic Diseases of the Skin," by Dr. Balmanno Squire; "Blood Printing, or Phantom Blood," by Dr. W. B. Jago; "Early Progress of Army Sanitation in India," by Dr. G. A. Gordon; the valuable cases by Mr. Poland; "Relation of Food to Work," by Dr. Broadbent; on "Diseases of Joints associated with Locomotor Ataxy," by Dr. B. Ball, of Paris; "On a Case of Complex Basic Disease of the Lung," by Dr. A. Clark and Mr. P. Marshall; and papers by Drs. Heslop, C. M. Tidy, Morell Mackenzie, David J. Breckenridge, Beveridge, J. D. Brown, Donkin, R. Payne Cotton, W. H. Dickinson, A. Leared, etc., and Messrs. Henry Smith, A. Bruce, Alfred Poland, and other well-known authorities.

In the "Hospital Reports," which form so prominent a part of each of our numbers, we have sought to give not only or even chiefly rare or specially interesting cases, but a clear picture of the modes of treatment most in favour among the teachers of the day, of the *practice* of the most eminent and of the rising Physicians and Surgeons of our London and provincial Hospitals. We have given reviews and notices of all the most noteworthy books and essays published at home and abroad; notices of the most important articles in the French and German Medical journals; and valuable papers on what we may call miscellaneous subjects, such as "Notes of a Short Visit to the Paris Hospitals," by Mr. Jonathan Hutchinson; a "Special Report of the Epidemic at Terling," by Mr. Haviland; "Medical Notes on Prisons, Prisoners, and Punishments," "The Microscope, the Scalpel, and the Balance," and so on. In the "Topics of the Day," and the "Notes," and "Week," we have noticed and commented on all events interesting to the Profession, and all subjects of Medical policy; and we have given a *résumé* of such proceedings in Parliament as concerned or affected the Profession, and abstracts of the meetings of the various Medical societies. These latter we have indeed been obliged to give very briefly, for they are now so numerous, and the demands on our space so great, that it has been difficult to find room, or nearly sufficient room, for all claimants.

In our editorial articles we have ever had at heart the honour and the interests of our brethren, and been anxious to foster and encourage a high tone of Professional morality and honour; and we have also been able to give as "editorials" valuable essays on many of the subjects and theories most prominently before the Profession. Among these we may mention the papers on "Childless Marriages;" "Aloes;" on "Organic Matter in Water;" on "Prisoners of War;" on "Amputation at the Hip-joint in Military Hospitals;" on "Torsion;" "Heat, Drought, and Mortality;" and "Ventilation *v.* Cubic Space;" on "Protagon and its Relations in the Organism;" on the "Passage of the Blood-corpuscles through the Walls of the Arteries;" and on the "Connexion between Brain-work and the Urine." Also Dr. Parkes's "Scheme of Medical Education," and the series of papers on "Medical Education in Germany," on "Midwifery Education," and on the "Theories of Cholera."

We have enumerated thus much of the contents of our volumes for the year as some justification for the confidence that has been placed in us; and we will only add that by that confidence, as well as for all the aid and the support we have received, we have felt deeply honoured and gratified. So encouraged, we shall certainly not relax our efforts in the future, and, meanwhile, we most heartily wish our brethren, all the world over, a happy and prosperous new year.

THE WEEK.

TOPICS OF THE DAY.

It is stated on good authority that great changes are to be made at the Admiralty, and that the Board is to be entirely reconstituted. We believe it to be intended that the heads of departments should in future be brought into direct contact with the First Lord without any intervening medium. If this most desirable arrangement be perfected, the Medical Director-General will be relieved from the incubus of a "Medical Lord," and the entire responsibility of the Medical administration will, as it should, rest upon himself. On the reconstruction of the Board of Admiralty, we hope that attention will be directed to the government of the great Naval Hospitals at Portsmouth and Plymouth. The observations which we lately offered upon the government of the Army Hospital at Netley apply with equal force to that of the great Naval Hospitals. At both of these Hospitals there are captains, superintendents, and naval lieutenants, whose duties would be more appropriately and efficiently discharged by the superior Medical officer and his subordinates. These duties are already performed by Medical officers at the Royal Naval Hospitals of Yarmouth, Haulbowline, Chatham, and Woolwich, and there is no ostensible reason why uniformity in this respect should not prevail. The present Government are pledged to retrenchment, and we hope that amongst their first acts will be to do away

with posts which, if they are sinecures, unnecessarily increase the estimates, and which, if they are not sinecures, should be held by officers whose Professional training can alone enable them to decide upon and regulate Hospital management.

The *Gazette* of Tuesday last contains an announcement of the appointment of Joseph Fayrer, Esq., M.D., Surgeon of the Bengal Establishment, Professor of Surgery in the Medical College, and *ex officio* First Surgeon of the College Hospital, Calcutta, to be a Companion of the Most Exalted Order of the Star of India. Our readers, as well as we ourselves, who are under such great obligations to Dr. Fayrer, must welcome the announcement of honour having been rendered by the Indian Government where honour is so thoroughly merited.

Mr. Syme will no longer represent the Universities of Edinburgh and Aberdeen in the Medical Council. He was nominated by the University of Edinburgh, but the University of Aberdeen preferred Dr. Macrobin, Dean of the Faculty of Medicine. The matter was referred to the Government, who chose Dr. Macrobin. Professor Syme's absence from the General Medical Council is to be regretted. He is a man of few words.

Gent *v.* Glennie and Ray, which was decided last week in the Court of Common Pleas, was one of those actions, of which there have been so many lately, which illustrate the enormous practical risk of putting lunatics under restraint. The plaintiff brought an action against his brother-in-law, who was the active agent in his confinement, and against a policeman who assisted in his removal. The plaintiff was a farmer, and had suffered several times from delirium tremens, and ample proof was given by his Medical attendants—Mr. W. P. Somerset, of Steeple Clayton, and Mr. W. F. Price, of Lorrimore-street—that at the time of his removal to Dr. Armstrong's Asylum he was suffering from delusions, that he was highly excited, and even dangerous. This evidence was confirmed by Dr. Armstrong and the Lunacy Commissioners, and we are glad to add that at the termination of the case the jury, after two minutes' consultation, returned a verdict for the defendant.

The Council of the Royal College of Surgeons have again declared, although by the narrow majority of two, against the appointment of special examiners in anatomy and physiology in addition to the ordinary Court of Examiners. We apprehend that the majority of the Council consider that all Surgeons appointed to the Court of Examiners must of necessity possess a minute acquaintance with the latest facts, observations, and theories in physiology; although, from the action of the Court in appointing special examiners in Medicine, it seems they tacitly admit that Surgeons do not possess an equivalent knowledge of internal disease and of the action of drugs. The fact is that satisfactory examinations in the different branches of Medical knowledge can only be conducted by examiners who are content to restrict themselves, as in University examinations, to special subjects. It is not necessary that examiners should be professors in the sense of great teachers, or original workers in their special branches; but, to insure really careful and searching examinations, the examiner should not have to range over the whole field of Medical science. His knowledge ought to be accurate and minute in the highest degree, and it is scarcely possible that he can possess such knowledge in all the subjects of Medical education. Subdivision of Medical examinations ought, in our opinion, to be one of the first recommendations made by the Medical Council.

On Thursday, December 17, Mr. Thomas William Popplewell, a Medical Practitioner, of Peter-street, Mile-end, was tried at the Central Criminal Court for the manslaughter of Hannah Clifford, and was acquitted. The case is one of the highest Medico-legal interest. The deceased was a married woman, in decent circumstances. She was delivered by Mr. Popplewell of a living child with the help of forceps; she afterwards became faint from hæmorrhage, Mr. Popplewell administered stimulants, and shortly after proceeded to remove the placenta. He brought away a mass which he said was a tumour, and the woman rapidly sank and died. The post-mortem examination proved that the uterus was entirely wanting, having been taken away with a part of the broad ligaments and of the vagina. There was, however, fatty degeneration of the heart, liver, and of some of the other organs. The "tumour" removed by Mr. Popplewell consisted of the uterus with the placenta attached, and funis, a portion of the lateral ligament containing one ovary, and about three inches of the vagina. Mr. Phillips, who made the post-mortem examination, also examined the condition of the uterus. He stated that the organ was hypertrophied, "that the muscular fibres of the uterus were diseased, that much fat was deposited in the interstices of the tissue, and there were present many granular cells." He, nevertheless, believed that the organ had retained "a fair amount of its original force and integrity," and thought that "considerable force" must have been used to produce the lacerations found in the post-mortem examination. This opinion was concurred in by Dr. Thomas Sarvis. On the other side it was urged that the defendant, pulling on the cord with one hand, whilst pressing on the abdomen with the other, to remove the adherent placenta, found the uterus and placenta come away together. The uterus was not inverted, therefore he could not have seized the uterus itself. Dr. Barnes, who was called for the defence, said that, having heard the evidence, he was of opinion that there was no proof of neglect or improper treatment. He believed that the degenerated tissues predisposed to laceration; that a slight laceration took place when the child's head was in the vagina, under the spontaneous action of the uterus, as had happened in many instances; that a laceration once begun would easily extend; that such extension took place as the child's head emerged from the vagina; and that complete separation occurred from dragging on the cord to remove the placenta. It could not be supposed that simple traction on the cord could tear away a healthy uterus. The cord had been tested, like a chain or rope, by weights, to determine what strain it would bear. It would only bear a few pounds. It often broke by the simple traction required to extract the placenta. It even required great care not to break it. It was reasonable to infer that it would give way before the mother's structures could be injured. With reference to the mode in which the uterine ligaments were ruptured, he stated that these had been known to be ruptured during inversion of the uterus. The defendant had, by drawing on the cord, done what was usual, and not more, and could not be held responsible for the rupture. Dr. Braxton Hicks, who was also in court, was, we understand, prepared to give evidence to the same effect.

The Profession will probably accept Dr. Barnes's explanation of the case. Rupture of a healthy uterus is, we believe, almost impossible. A case, similar in several respects, is recorded in the second volume of Caspar's "Forensic Medicine," published by the New Sydenham Society. A Berlin monthly nurse illegally attended a woman in her labour. After four hours' attendance she became alarmed, and sent for a Medical man, who found the woman dying, and extracted the child with the forceps. After death a rupture six inches long was found in the posterior wall of the uterus. The experts came to the conclusion that the rupture was spontaneous. It is to be regretted, however, we think, that Mr. Popplewell should not have frankly avowed the nature of the accident which had taken place at the time. A straightforward announcement that rupture had occurred, and that the uterus had come away with the placenta, would probably have saved him much of the annoyance and obloquy to which he has been subjected.

THE VACANCY AT ST. BARTHOLOMEW'S.

THE unexpected decease of Dr. Edwards has caused another vacancy in the staff of St. Bartholomew's Hospital. We understand that several gentlemen intend coming forward as candidates for the post of Assistant-Physician, in lieu of Dr. Andrew, about to be made full Physician. Dr. Dyce Duckworth, the Medical Tutor to the Hospital, has been mentioned as probably most deserving the support of the Governors. From his published writings on the anatomy of the suprarenal capsules, which earned him the high distinction of gold medallist when graduating at the Edinburgh University, and from many other original articles on therapeutics, etc., some of which have appeared in our columns, we think Dr. Duckworth will succeed in establishing his claim.

FROM ABROAD.—ANNIVERSARY MEETING OF THE ACADÉMIE DE MÉDECINE.

AT the anniversary meeting of the Académie de Médecine, held on the 15th instant, M. Dubois, the perpetual secretary, read an able summary of the decisions come to in respect to the various prizes to be adjudged, founded on the elaborate reports of the different committees to which the consideration of the competing essays and claims had been referred. With respect to these prizes of the Académie, M. de Ranse, editor of the *Gazette Médicale*, but echoes a very general feeling when he states that the results obtained from offering these incentives, some of which are even of considerable pecuniary value, are disappointing.

"Does the Academy," he asks, "march boldly at the head of scientific progress? We may be allowed to doubt whether the honourable secretary himself would venture to answer this question affirmatively; and yet every one must acknowledge with him that in these prizes of which it is the awarder, the Academy possesses a powerful lever for stimulating research, extending the limits of science, and establishing its own authority. How comes it, then, that such happy results have not been attained, and that such indifference is shown for the academic crowns that every year there are prizes which cannot be awarded for want of competitors? Does this indifference betray apathy or intellectual torpor among the members of the Medical family, or must we seek for its explanation in the manner in which the Academy utilises its resources and disposes of its means? What we have already said sufficiently exhibits our own opinion upon this point; and, however this may be, there is between the resources and materials of which we have spoken, and the results that are obtained, an absence of proportion that it is of importance to indicate."

M. Dubois' report also relates to the results derived from the performance of the functions entrusted to the Academy by the Government. Among these are the reception, analysis, and estimation of the reports sent in from certain Medical officials scattered all over France, termed "Physicians of Epidemics." For this last year he says his general report is more satisfactory than usual, no epidemic having prevailed extensively in France save cholera. Indeed, almost the only other visitations met with now are those of typhoid fever, which has established its title to be considered as indigenous, in such diverse localities does it prevail. In respect to variola, he says that France has been more just to the discovery of Jenner than has been his own country, where, strange to say, it finds more opponents than elsewhere.

"So far from seeking to diminish the glory of Jenner, she has sanctioned it, and does sanction it every year by means of the rewards the Academy bestows upon those who have distinguished themselves by their success in vaccination. It is doubtless in part from our having accomplished this duty that a notable diminution of small-pox has been observed in France during these later years."

Another class of Medical reports the Academy has to consider are those sent in by the Inspectors of Mineral Waters. Here, again, medals, which seem to have such an attraction on the other side of the Channel, are distributed with no niggard hand. Moreover, this year the Academy has had to adjudge the Capuron Prize, which relates to this matter, its subject being "The Treatment of Affections of the Uterus by Mineral Waters." It has been awarded to M. Charmasson for what is stated to be an excellent essay founded on eighty-six cases, most of them under his own care.

The Academy's own prize had for its subject "Effusions of Blood into the Substance of the Tissues," but for this only one essay was sent in, by M. Fajole; and as this does not rise above the rank of a very useful compilation, the Academy contents itself with presenting its writer with 1000 fr. as an "encouragement." For the Godard Prize for the best work in Medicine, properly so called, or in Surgery, eight competitors appeared in the field; and the Academy divides the prize between MM. Prévost and Cottard for their work on "Cerebral Ramollissement," and M. Larcher for his on "The Pathology of the Annular Protuberance." Two of the ten competitors for the Barbier Prize only were deemed worthy each of a reward of 500 fr., M. Legros for a work on "Scrofula and Tubercle," and M. Besnier for his "Researches on the Nosography and Treatment of Cholera." The Orfila Prize, "Digitaline and Digitalis," has been again postponed, in consequence of neither of the memoirs sent in possessing sufficient merit. The Civrieux Prize, again—subject, "The Psychological Phenomena before, during, and after the Induction of Anæsthesia"—has met with only an insufficient response, 600 fr. only being presented to Professor Lacassagne, of the Val de Grâce, his conclusions at the same time receiving only a very qualified approval. For the Portal Prize, "Tumours of the Encephalon," no memoir was sent in. Altogether, the result is a very meagre one, and fully justifies the criticisms of M. de Ranse.

The prize questions for 1869 are as follows:—1. The Academy Prize of 1000 fr., "Tumours of the Cerebellum." 2. The Portal (600 fr.), "Sclerosis of the Different Organs." 3. The Civrieux (1000 fr.). "The Clinical History of Grandiose Delirium, studied especially from a therapeutical point of view." 4. The Barbier (3000 fr.), for a cure of incurable diseases, or the nearest approximations. 5. Capuron (1500 fr.). "The Return of the Uterus to its Natural Condition after Delivery," the results of the investigations to be stated in their Medico-legal bearings in determining how long a time has elapsed since delivery. 6. Godard (1000 fr.), for the best work on External Pathology. 7. Amussat (1000 fr.), for the work which, based on anatomy and experiment, has realised or prepared the way for the greatest amount of progress in Surgical Therapeutics. 8. Lefèvre (2000 fr.), "Melancholia." 9. Argenteuil Sexennial Prize of 8000 fr. will be given to the author of the most notable improvement in the treatment of stricture during this fifth period (1863-68); or, in default of such work, to the author of the greatest improvement in the treatment of the other diseases of the urinary organs. 10. Rufz-Lavison (2000 fr.), "Establish by exact and sufficiently numerous facts the modifications and alterations, whether functional or organic, which man and animals undergo in passing from one climate to another, and which may be attributed to acclimatisation."

The meeting of the Academy terminated by an eloquent *éloge* on Professor Velpeau, delivered by M. Béclard, to which we will advert on a future occasion.

POOR-LAW MEDICAL SERVICE.—*Colchester.*—The Poor-law Board have sanctioned the appointment of the two relieving officers as vaccination inspectors. *Woolwich.*—Dr. Markham, on the part of the Poor-law Board, urges the establishment of a dispensary—there being 3500 poor in the union—and also of a vaccination station. *St. Pancras.*—The guardians have decided to apply to the magistrates of the county that Medical officers of the workhouses may be prohibited from receiving fees for giving evidence in the cases of death occurring under their treatment.

GRESHAM LECTURES.

By E. SYMES THOMPSON, M.D., F.R.C.P.

ON EDUCATING THE BODY.

The cultivation of all the faculties, both mental and physical, is as essential for the *preservation of health* as good air, water, food, and sleep.(a) We must not cultivate one set of organs or functions to the detriment of others. Such is the interdependence of mind and body that the maladies of the one may be warded off by due care of the other. For the sedentary classes of this city, the importance of physical education can scarcely be overestimated.

Health varies vastly short of actual disease. The standard of health sufficient for a clerk or shopman is miserably deficient for a sailor or a colonist. Yet it is not well to be satisfied with such a state of health as will just enable us to accomplish the light labour of our daily occupation; but try and secure such vigorous condition as will fit us for unusual effort when required.

The appointed work of a man backed to fight or run a long-distance match is very severe, and if his body is not to hinder his task or his task injure his body, his standard of health must be for the time exceedingly high. The term "condition" has been applied to "health measured by an athletic standard," and to secure this the art of "training" has been developed. This art originated in Greece, where every young citizen was a member of a great university of physical education. No Greek town was without its gymnasium; Athens had three. The ancients were convinced that the mind could not be healthy unless the body was in perfect health. Well-regulated exercise was the chief restorative and preservative. Persons of all ages cultivated gymnastics, and the transgression of the laws of the gymnasia was punishable with death (Solon). The honours coveted were intensely valued, and the competition most keen. Nine months were often devoted to the training for these solemn contests. The victors gained, besides the olive wreath, certain privileges and exemptions (from payment of taxes, for instance), which, even in these practical days, would be esteemed of value.

In Rome the citizens and the high-born did not, as in Greece, vie for garlands, but the contests were performed by trained slaves from the lowest ranks. The diet of the Roman boxers was restricted to pigs' kidneys and new cheese, washed down with a minimum of water. They were forced to gorge themselves with food, and were literally fattened to lessen the effect of their adversaries' blows. These men were dissolute and shortlived; the overfeeding of the body tended to the development of the animal passions, and, the mind being dormant, they were often described as hardly human.

Training was first cultivated in England at the time of the rise of pugilism, in the beginning of the last century. About sixty years ago it was made into a system by Jackson, the celebrated trainer. Having arisen quite independent of all physiological theory, the practice of training gains a greater value from comparison with advanced scientific knowledge than could otherwise be claimed for it. The plan of training adopted by the celebrated Captain Barclay (who was the first to walk 1000 miles in 1000 hours) was very severe, though a great improvement on the systems previously in vogue. The pedestrian began his course of training with an ounce or two of Glauber's salts every four days and an occasional emetic. At five in the morning he was expected to run half a mile at the top of his speed uphill, and walk for six miles or so before breakfast, which consisted of chops or steaks and beer. Between this meal and dinner he had to take two walks of about five miles each, going to bed between the walks. The dinner was of steaks and beer—precisely like breakfast; no third meal and no variety in diet (beer was the only drink) was permitted. This plan might prepare a man for "the Captain Barclay feat," but would make him slow and spiritless; and the aged haggard look of the man thus prepared served to indicate how wearing and injurious was the practice. Judging by results, the present system is a great improvement, though it too needs the light of physiological science to bring it to perfection, especially in the matter of interdicting fluid, which should not be so rigorously denied when thirsted for, and in avoiding muscular aches (especially the "skin sore" state), which it is the practice to promote and regard as evidence of sufficient work, rather than as indicating that the muscles have been too unpreparedly called upon for excessive exertion. The practice of "rubbing down," now so wisely insisted on, not only serves to keep the skin in action, but, like shampooing, it hastens the removal of waste products from the hard-worked muscles, prevents and removes stiffness, and prepares for renewed exertion. The sense of muscular fatigue is due to the accumulation in the tissues of the products of disintegration, which are absorbed and carried off during rest. Hence the increase of urea, etc., in the secretions after active muscular exertion is not observed till some hours after the exertion. The failure to detect this increase has been used as an argument to prove that no increase in the disintegration of nitrogenous tissues follows great muscular exertion. The force developed certainly is not, as was formerly supposed, the result of muscular disintegration, but that this disintegration is an accompaniment of the development of muscular power, and proportionate to it, seems more than probable.

The interesting question, into which time will not allow me to enter, as to the kind of food best calculated for the production of muscular force, is part of this inquiry. If the digestive organs are unsound, they cannot supply sufficient force for the machine, and, as the stomach of the most hearty can receive but a limited supply at a time, training *régime* prescribes nourishing food in small compass. The diet of those in training is, as a rule, almost exclusively animal, not because strength cannot be secured, and endurance too, on a vegetable diet, but because more force is needed to digest the latter, force which a man in training needs for his daily exercise. A man accustomed to vegetable diet, and with a very strong digestion, might vie with others. But animal nutriment is less bulky as well as more easy of digestion, and thus interferes less with the hours of exercise. The horse, ox, and deer get great muscular strength and endurance from vegetable diet, but flesh food, which is rapidly converted, gives the aptitude and power for rapid and sudden exertions, as with the cat, leopard, and like animals which spring upon their prey. The Lancashire labourer has long found out the value of his apple dumplings as fitting for continuous labour—a knowledge which our London labourers are slow to acquire; but meat seems best fitted for rapid effort, whether of mind or body. The value of fatty food as a generator of force is not yet fully understood. (*Vide* Lecture on Food, *Medical Times and Gazette*, February 8, 1868.)

No exercise is equal to running for expanding the chest and increasing the respiratory power. The greater the size of the chest, the more free and effortless is the breathing. Running should be quietly and gently begun, and if, day by day, the speeed and distance are increased, the chest expands, so that a youth with a chest twenty-six or thirty inches may thus increase his circumference to thirty-six or forty inches.

The size of all the limbs may also be increased by exercise, as in the familiar example of the blacksmith's arm. Regular exercise gradually increased does not exhaust and deteriorate, "take it out of man," but consolidates his tissues, and prepares him for greater effort, the tissues taken out being replaced with interest. What may not be accomplished by preparation and by practice? A quarter of a mile has been *run* in 48 seconds; a mile in 4 minutes 17½ seconds; ten miles in 52 minutes 20 seconds; twenty miles in two hours. Eight miles have been *walked* in 62 minutes. Of rowing feats, four and a quarter miles (Putney to Mortlake) has been sculled in 23 minutes 13 seconds; one hundred and fourteen miles (Oxford to London) was rowed by a gentleman and waterman in 18 hours and 42 minutes.

The lecturer pointed out how far training might be adopted by amateurs without interfering with their daily avocations, quoted the statements of practical trainers on the injurious effect of smoking on the wind, and explained the action of tobacco on the heart and circulation. Much of the discredit that has fallen upon training is due to the way in which it is left off, great abstemiousness being followed by sudden excesses of every kind, just as a drunkard who has kept the pledge for a few weeks "treats resolution" by an unchecked debauch, health and condition, that have cost so much to obtain, being rapidly (often within forty-eight hours) thrown away.

The lecture concluded with an allusion to recent newspaper correspondence on the injurious effects of boat-racing on the health.

In a letter on this subject by a well-known London Surgeon, it was stated that numberless undergraduates at the Universities are permanently disabled, if not killed outright, by the

(a) Previous lectures published in this journal have been delivered in Gresham College on each of these subjects.

strain of racing, especially in the Oxford and Cambridge contest on the Thames. If this were not an effort, it would certainly be unworthy of the Universities. Those who are selected for these great contests are chosen with especial reference to their powers of endurance, of heart and lung as well as of muscle. Professor Humphry, of Cambridge (perhaps the greatest authority in England on the subject), states that even this great trial is most rarely productive of bodily mischief. Men of unsound physique early show their constitutional incapacity; sound men, well trained, benefit by the racing. To train a hardy, brave, independent race, we must allow our youth to encounter some risks. Rowing exercises far less strain on the heart and lungs than running or walking. In a race the supply of breath goes before the heart and lungs have got into full play and adapted themselves to extra pressure. When this adaptation occurs, no more gasping is experienced, and the athlete can breathe and speak with ease, though the race be long and the limbs weary. The "second wind" comes in a foot race in the second minute, in a boat race in the fourth.

GENERAL CORRESPONDENCE.

THE HYPOPHOSPHITES IN PHTHISIS.

LETTER FROM DR. J. F. CHURCHILL.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am not aware that I have questioned Dr. Cotton's motives. I am quite ready to give them that courteous and charitable interpretation which should underlie all scientific discussion, but which, I think, is barely extended to myself. Dr. Cotton contradicts my assertion as to the number of patients improved and cured by him in 1863 with my own hypophosphites. Upon this point I can only again refer to my book published five years ago, where such of your readers as please will find all Dr. Cotton's cases and arguments reported in full. Dr. Cotton reminds me that Dr. Quain and Dr. Risdon Bennett have, like himself, tried the hypophosphites, and with like unfavourable results. There was no need to remind me of that, for in my book both of those gentlemen's cases and arguments are reported at length (in fact, with Dr. Cotton's they fill more than forty pages), and, in my humble opinion, are, like Dr. Cotton's, completely demolished, and, "like the baseless fabric of a vision, leave not a wrack behind."

The point at issue between these gentlemen and myself may be made plain in a very few words. I maintain that the hypophosphites are the specific remedy of tuberculosis, but I at the same time add that their action, like every fact in science, is subordinated to certain limitations—that it is dependent upon a series of pathological, chemical, and therapeutic conditions, deduced from extensive clinical research, and which I have pointed out with great minuteness. Drs. Cotton, Quain, and Risdon Bennett take no account of these limitations; they ignore them throughout, or openly and flagrantly violate them altogether. I submit that, under such circumstances, their negative results prove nothing whatever against my position, while all their successes must be carried to my credit, for the very simple reason that, although there may be but one way of successfully carrying out a scientific experiment, there are a hundred means of spoiling it. I have pointed out that way; if my adversaries willingly take another path and go astray, I cannot be held responsible. As Dr. Cotton calls in Drs. Quain and Bennett to the rescue, in my turn I must remind him that two years ago I published a collection of reports(a) from nearly thirty Medical Practitioners of all countries, with details of nearly a hundred cases in favour of my discovery. Of these numerous opinions, all concurring in the same favourable conclusions, I shall be satisfied with quoting only one, taken from the *Medical Times and Gazette* of December 23, 1865. After noticing the conclusion of a paper read before the Royal Society of Medical Sciences of Brussels, in which an eminent Physician says that "any treatment hitherto in use may well envy the results he has obtained by the use of the hypophosphites," the reviewer adds—"We can state most positively that this opinion will be confirmed by competent observers in England."

I had intended to add more in reply to Dr. Cotton's allusion to my pet theory, the advertising of my specific, and his claim of having improved the treatment of consumption at the Brompton Hospital; but I must reserve this for another opportunity, as I am afraid I have already exceeded your limits. I wish only to add one word of practical importance as a comment upon Dr. Thorowgood's proposed test for the hypophosphites. Heating a salt, as he advises, will, it is true, show whether it contains a certain quantity of hypophosphite or not, but that is altogether insufficient for Medical purposes. As long as ten years ago I showed, as a result of extensive clinical experiment, that it was indispensable the hypophosphites should be perfectly neutral to produce their complete remedial effects.(b) An excess of base modifies the physiological action of these salts to such a degree that it may be manifested slowly, incompletely, or even fail altogether, according to the degree of impurity. Since then I have shown(c) that this was probably dependent upon a remarkable modification produced upon the affinity of hypophosphorous acid for oxygen by the presence of an excess of base. I must therefore again insist upon the fact that the primary condition for success in the use of the hypophosphites is that they be chemically pure.

I am, &c. J. F. CHURCHILL.

Paris, 7 Rue Scribe, December 16.

[*** There is a statement made or implied in Dr. Churchill's letter in reply to Dr. Cotton, which appeared in the *Medical Times and Gazette*, December 5, to the effect that "the hypophosphites supplied by Mr. Swann" were used in a series of cases which were improved, whilst "the hypophosphites supplied by the Brompton Hospital" were used in Dr. Cotton's less successful cases. To our mind, the inference is clear—that Dr. Churchill believes the hypophosphites used at Brompton Hospital on two occasions to have been of different composition; and that, therefore, any comparative experiments with them were worthless. Now, we venture to suggest that the onus of proving this lies with Dr. Churchill, and that the matter ought to be submitted by him to the arbitrament of an independent pharmaceutist. Specimens of hypophosphite as used at Brompton and as prepared by Swann ought to be submitted to comparative analysis. We would call especial attention to the fact that phosphorus has never yet received full trial as a remedy, in consequence of the difficulty of preparation and administration; the virtue of the hypophosphites must depend upon their unoxidised phosphorus. Hence it is of the greatest importance to the Practitioner to know to what extent the hypophosphites are to be trusted.]

DISPENSING ASSISTANTS AND THE PHARMACY ACT.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your number for November 28 appears a letter from Mr. T. Weaver, of Wolverhampton, respecting the injustice of the Pharmacy Act as applied to Hospital and Surgeons' Dispensing Assistants. I will give you my case as an example of many. For the last eighteen years I have been dispensing assistant to Medical men—to the first four years, and the second fourteen—and I think that after dispensing all those years a man ought to be admitted to the same privileges as a dispensing chemist, or chemist and druggist, that was in business previous to the passing of the Act; and if not to those, the very least they could do would be to admit us to the modified examination. Now, suppose the Act was to be strictly enforced, it would exclude me from dispensing, and compel me to seek a fresh source of livelihood to support a wife and family, which would be very hard after so many years. Now, Mr. Editor, I think that if our case could be brought before the Pharmacy Committee they would have the power to remedy our grievance by the passing of a by-law, for which they have the power. But the thing is—how could we have it brought before them? and who would represent us? Perhaps, Mr. Editor, you could instruct us, and lend us a little help.

I am, &c.

December 10. A POOR DISPENSING ASSISTANT.

(a) "Recueil d'Observations et de Rapports sur le Traitement des Maladies de Poitrine par les Hypophosphites." Paris. 1866.

(b) *Moniteur des Hôpitaux*, April 3, 1858.

(c) See "Cause Immédiate de la Phthisie," p. 672.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 2, 1868.

Dr. HALL DAVIS, President, in the Chair.

(*Concluded from page* 710.)

DR. MARTYN read a paper on

A CASE OF TEDIOUS LABOUR, AND DEATH ON THE THIRD DAY.

The patient was 38 years of age, tall and stout; and the present was her second confinement. After much tedious labour, during which but little real progress was made in spite of the use of ergot and stimulants, the long forceps were used, and a very large male child extracted, the perineum being ruptured, although all possible care was taken. On the following day, May 19, the patient appeared to be progressing favourably, sutures were put into the perineum, and the parts dressed with a mixture of oil and carbolic acid. The vagina was washed out with diluted Condy's fluid. On the 20th she complained of pain in the lower part of the abdomen; the uterus was large and tender; the lochia were offensive; the pulse 120. At midday diarrhœa set in; at night respirations were forty in a minute; at about every fifth breath an inspiration as deep as possible was taken—still she wanted air; breath coldish; face and extremities coldish and slightly dusky; belly very tympanitic. Breath sounds throughout the chest loud, without râle, cough, or dulness; no cardiac bruit, but complained of distress in sternal region. Perineum sloughy. On the 21st it was evident, both to the author and to Dr. Playfair, who had met him in consultation, that there was plugging of the pulmonary arteries. Ether and ammonia were constantly given, brandy, and Liebig's essence of meat, etc. In the evening the patient was in a hopeless state, her breathing taxing all her powers. She was sensible, but occasionally wandered. Her state very like that of the collapse of cholera. She died at six p.m. No post-mortem was obtainable.

Dr. WYNN WILLIAMS gave the details of a case up to a certain point analogous to the one just related, in which the forceps was used, and a slight rent of the perineum had occurred, for which two or three sutures were inserted. The patient progressed favourably until the second night, when symptoms of puerperal fever appeared; the mucous membrane of the vagina was gangrenous, and the stitches were sloughing out. The parts were washed out again and again with Condy's fluid until all smell was removed, and the internal treatment included the administration of sulphite of soda. The case did well, and this he attributed to the timely use of the disinfectant. That blood-poisoning had taken place was shown by the fact that two secondary abscesses formed, one in the left mamma and one in the buttock.

Dr. BARNES was disposed to attribute the source of the offending matter in the blood which caused the thrombosis to the change wrought in the uterine tissues and blood by protracted labour, and not to the injury of the perineum. He had lately seen a case of pulmonary thrombosis after labour, the symptoms in which were so alarming that rapid death was anticipated. He prescribed six leeches to the region of the heart, and to his great surprise the patient recovered.

Dr. SQUIRE said, with reference to a passing allusion to the effect of ergot on the life of the child, that while a drachm of the preparation of the present Pharmacopœia was an efficient dose, it had been proved that an ounce of it would have no deleterious effect on the child's life.

Dr. PLAYFAIR said that the rupture in the perineum and its sloughy condition were probably the starting-point of the morbid condition of the blood in this case. He quite agreed with Dr. Williams that such septic states strongly predisposed to this accident, and thrombosis almost always occurred where there was some special state of the blood favouring the separation of fibrine, probably the most common cause being the alteration of the blood resulting from hæmorrhage during or after labour. Indeed, he considered thrombosis in the right side of the heart to be precisely analogous in its causation to the coagulation of the blood which takes place in phlegmasia dolens—the difference being that in one case the fibrine is deposited in the central organs of circulation, in the other in some of its peripheral vessels. Thrombosis was often confounded with embolism; but true embolism was always secondary to thrombosis, not of the heart, but of some portion of the peripheral circulation; and it was not until the clot so formed had had time to change and soften that a portion of it became detached and carried to the right side of the heart, forming there a nucleus round which fibrine was subsequently deposited. Hence thrombosis of the right side of the heart was always met with, as in the present instance, a few days after delivery, while embolism, on the other hand, was never observed until a much later period—generally after the fourteenth day. The cases can be further distinguished by the presence of a portion of fibrine corresponding in structure to the clots found in the peripheral vessels, which can always be detected as a nucleus in true cases of embolism.

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH.

DECEMBER 2, 1868.

Deputy Inspector-General Dr. GORDON, C.B., in the Chair.

SURGEON FRANKLYN, Royal Artillery, exhibited in the microscope a Guinea Worm extracted from the ankle of a soldier recently returned from Abyssinia, where he had probably become affected with the parasite.

Staff-Surgeon ROCH read a paper on

HEAT APOPLEXY.

He expressed the opinion that insolation or sunstroke and heat apoplexy are different diseases—that not only were the symptoms dissimilar, but so also were the post-mortem appearances in fatal cases, and the treatment applicable during life. Of seven cases of those affections treated by him on board the *Golden Fleece* in Annesley Bay in May, 1868, six occurred as secondary diseases in persons debilitated by various causes, among which were dysentery, diarrhœa, fever, and delirium tremens. He believed that the disease depended more upon a stagnant state of the atmosphere than on actual increased temperature. In one case the rise of the temperature in the axilla reached 113° Fahr. In five cases the treatment consisted of the cold douche, the application of ice to the head and spine, mustard to the lower extremities, stimulating enemata, etc. All the men so treated died. In the sixth case the patient was bled from the temporal artery; he recovered consciousness, but was unable to articulate, had a relapse six days afterwards, and died in six hours. The seventh patient was also bled from both temporal arteries, and for a time was restored to consciousness; he, however, relapsed the following day and died.

Dr. ELLIOTT, late Royal Navy, read a paper on

THE COMMUNICABILITY OF PHTHISIS.

He alluded to the fact that, about eighteen months ago, Dr. Budd, of Bristol, called attention to the idiosyncrasy of phthisis and zymotic diseases, and to its capability of being transmitted from one person to another. He noticed some of the experiments that have been instituted in this country and on the Continent in regard to the subject, mentioning in particularly those of Cheauveau, and expressed an opinion that up to the present time the weight of evidence was in favour of the disease being communicable. The great questions for consideration, he believed, were—whether it is not unjustifiable to allow healthy persons to be in such frequent contact with the diseased as to run the risk of becoming themselves affected; under what circumstances may such communication with the affected take place without risk, and what are the means of prevention? His own attention was drawn to the subject in 1854, when a very strong healthy young man, without hereditary taint of scrofula or tubercle, married a woman in an advanced stage of phthisis; the wife died, and three months afterwards the husband was found to be labouring under the disease that had proved fatal to her. From that time his attention had been directed to the possibility of the disease being thus communicated, and he has met with so many confirmatory instances as now to have no doubt on the subject. This view is further confirmed by the frequency of phthisis among the nurses of Brompton Hospital, and by the fact that the danger is recognised among the class who usually furnish the nurses for it and similar institutions. He did not believe that phthisis ever is cured; it may be for a time arrested, but never cured; and he questions if, in any case of reputed cure, tubercular deposit had really existed. Finally, he alluded to the observations lately put forward by the

Registrar-General of the decrease of cases of phthisis in districts that have been recently drained—a circumstance which he believed affords some hope that by this means much may yet be done to mitigate the prevalence of the scourge in question.

Surgeon Lamprey, 67th Regiment, described a method of making interrupted sutures by means of fine cambric needles. These he inserted as close as possible to the margin, securing close apposition of the lips of a wound by means of a single noose of silk round the projecting extremities of each, the points being snipped off. He introduced somes cases illustrative of the readiness with which incised wounds treated in this way united.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 17, 1868 :—

Boalth, William Hope, Millman-street, W.C.
Greene, Walter, Boulogne-sur-Mer.
Hall, Francis De Havilland, Tottenham.
Holderness, William Brown, Windsor.
McCann, Charles, Parliament-street, S.W.
Matthews, James Forrester, Royston, Herts.
Moore, Joseph, Upper Brook-street.
Edmund Vialls, Peckham.

The following gentlemen also, on the same day, passed their First Examination :—

Adcock, Hugh, Guy's Hospital.
Farnfield, Walter Edmund, Guy's Hospital.
Hendley, Thomas Holbein, St. Bartholomew's Hospital.
Salt, George, London Hospital.

As Assistants in Compounding and Dispensing Medicines :

Ellis, Henry Brook, Bideford, Devon.
Jones, John Griffith, Newington, S.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bell, J. Albert, M.R.C.S., L.S.A.—House-Surgeon to St. Thomas's Hospital.

Cox, Edgar, M.R.C.S., L.S.A.—House-Surgeon to St. Thomas's Hospital.

Davies, W. R., M.R.C.S.E. — Senior House-Surgeon to the Liverpool Southern Hospital, *vice* Mr. A. Trubshaw, resigned.

Little, W., L.R.C.P. Edin. — Junior House-Surgeon to the Liverpool Southern Hospital, *vice* Mr. W. R. Davies, promoted.

Robertson, R. T. C., M.B., L.R.C.S. Edin.—Surgeon to the Great Northern Railway Locomotive Sick Society, Doncaster.

NAVAL AND MILITARY APPOINTMENTS.

M'Donogh, Dr. George V.—Surgeon to the *Valiant*.

Whitley, Alfred W.—Assistant-Surgeon to the *Cumberland*.

India Office, Dec. 8.—Her Majesty has been pleased to nominate and appoint Joseph Fayrer, M.D., Surgeon Bengal Establishment, Professor of Surgery in the Medical College, and *ex-officio* First Surgeon of the College Hospital, Calcutta.

58th Foot.—Staff Assistant-Surgeon James O'Reilly, M.B., to be Assistant-Surgeon, *vice* George Fearon, appointed to the Staff.

Medical Department.—Assistant-Surgeon George Fearon, from the 58th Foot, to be Staff Assistant-Surgeon, *vice* James O'Reilly, M.B., appointed to the 58th Foot.

BIRTHS.

Dobie.—On December 20, at Chester, the wife of Wm. M. Dobie, M.D., of a son.

Gooding.—On December 15, at Cheltenham, the wife of J. Callender Gooding, M.D., of a son.

Lyall.—On December 19, at H.M.'s dockyard, Pembroke, the wife of Dr. Lyall, Staff Surgeon, R.N., of a daughter.

Spencer.—On December 16, at Oxford, the wife of Henry Banks Spencer, M.D., of a daughter.

MARRIAGES.

Brett—Kersey.—On December 17, at Fakenham, Suffolk, Albert Lyney Brett, I.C.M.C., youngest son of the late F. Harrison, M.D., Bengal Medical Staff, to Agnes Catherine, youngest daughter of the late Thomas Kersey, of Fakenham.

Carver—Day.—On December 17, at St. John's Church, East Dulwich, by the Rev. W. Foster Elliott, Edmund Carver, A.M., M.B., of Cambridge, to Emily Grace, elder daughter of the late Robert Day, Esq., of Streatham, Surrey. No cards.

Ellis—Peirce.—On December 16, at St. Stephen's Church, Dublin, Edward Ellis, son of the Rev. E. Ellis, Rector of Cranmore, to Jeanin, daughter of the late Geo. Peirce, M.D., Tullamore, King's County. No cards.

Newstead—Wright.—On December 16, at St. John's Church, Stamford-bridge, by the Rev. E. Jenner, George Newstead, Surgeon, Eccleshill, Bradford, son of the late Mr. Newstead, Surgeon, Rubwith, to Susan, daughter of the late Mr. John Wright, Surgeon, Stamford-bridge, York.

Taylor — Thorndike.—On November 24, at St. Stephen's Church, Chambly, province of Quebec, William Taylor, Esq., of Moorfield, Ayrshire, Staff Assistant-Surgeon, to Ann Campbell, second daughter of the Rev. Charles Faunce Thorndike, rector of the above parish, and granddaughter of General Thorndike, of the Royal Artillery.

Thornton—Paton.—On December 22, at St. Peter's Church, Onslow-gardens, S.W., the Rev. John Thornton, curate of Hanworth, Middlesex, eldest son of John Thornton, Esq., late Bengal Civil Service, to Agnes Mary, eldest daughter of George Paton, Esq., M.D., late Bengal Medical Service. No cards.

Warner—Hastings.—On November 12, at St. Mary Magdalene Church, Mean Meer, Anthony H. Warner, Captain 41st (the Welsh) Regiment, to Leila E. S., second daughter of T. Hastings, Deputy Inspector-General of Hospitals, Lahore Circle.

DEATHS.

Allen.—On the 19th instant, at Longton, Staffordshire, Ellen, the beloved daughter of John Allen, M.D., aged 5.

Burges, Eliza, widow of the late Dr. Ynyr Burges, M.D., and second daughter of the late Richard Samler, Esq., at her residence, Jersey Villa, Ernscote, Warwick, on December 14, aged 70.

Marshall, Julia, wife of F. H. Marshall, Surgeon, and daughter of the late John Bryan, R.N., at Moulton, Northampton, on December 20, aged 55.

Stuart, Emma, widow of the late Alexander Stuart, Esq., sometime Principal Medical Officer of the Royal Naval Asylum, Haslar, at Portsmouth, on December 17.

University Intelligence.—Cambridge.—At a congregation held on Thursday, December 10, the degree of M.D. was conferred on Dr. Clifford Allbutt, of Leeds, and on Dr. Thomas Trollope, of St. Leonard's-on-Sea.

Medical Benevolent Fund.—The sum distributed at the last monthly meeting of the committee of this charity was £90, among twelve applicants, one of whom was a Surgeon, aged 84; another a widow, recently left with eight children, entirely destitute, to whom £20 was voted.

The President and Fellows of St. John's College, Oxford, have elected Mr. Fletcher John Woodhouse (son of Dr. Woodhouse, of Hertford) commoner of that College, to a scholarship on the Casberd Foundation. The scholarship is of the annual value of £90, and is tenable for four years.—*Hertford Mercury*, December 19. [We believe Mr. Woodhouse was educated at Epsom.]

Paris Faculty of Medicine.—In consequence of the recent changes in the Faculty, M. Dolbeau has been appointed Professor of Surgical Pathology, and M. Gubler Professor of Therapeutics and Materia Medica.

The Council and Court of Examiners of the Royal College of Surgeons.—The Council met on the 10th inst., when a discussion took place on the motion of Mr. Le Gros Clarke that it was expedient that the primary examinations on anatomy and physiology for the diplomas of Fellow and Member of the College be conducted by examiners specially appointed for that purpose in concert with the President and Vice-Presidents. The motion was seconded by Mr. Hancock, and lost by a majority of 2, the numbers being for the motion 9, and against it 11. The names of those voting for and against the motion were, on the demand of Messrs. Hawkins and Hewett, taken down, and will duly appear in the next published Proceedings of the Council.

Royal College of Surgeons, Edinburgh, and the Pharmacy Act.—At a meeting of the College, held on 19th instant, there was read an opinion by Mr. A. R. Clark, advocate, in regard to the operation of the Pharmacy Act, of which the following is an excerpt :—"I am of opinion that the memorialists and their licentiates are legally qualified apothecaries within the meaning of the Pharmacy Act, and that they are entitled to keep open shop and to dispense medicines. The Pharmacy Act is not of universal application. By the 16th section, it is enacted that it shall not extend to, or interfere with, the business of any 'legally qualified apothecary.' The question, therefore, is, whether the memorialists and their licentiates are within the exception. They hold a diploma which authorises them not only to practise as Surgeons, but also to 'exercise the office of a pharmaceutist.'"

At the last meeting of the Anthropological Society, Dr. Carter Blake made a communication on the skull, jaw, and limb-characters afforded by the specimens recently discovered at Cro-Magnon (Les Eyzies), France, and contrasted them with those of similar, and in one case greater, age from the Belgian bone-caves. He pointed out that whilst the Belgian caves afforded evidence of man in some degree pithecoïd, yet, on the whole, exaggerating the characters of the lower Sclavonian races, the French remains were entirely *sui generis*, and were those of men who, although presenting some simial characters, yet, in cerebral capacity, were superior to most existing races, and in some respects resembled the Celtic crania of the present day.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The request of the Editors of the *Quarterly Journal of Microscopical Science* shall be attended to in our next.

The papers on Army Sanitation in India, by Deputy Inspector-General Gordon, M.D., C.B., etc., will be resumed in our next. The subject—"Soldiers' Rations."

The following lectures, papers, etc., are in the printers' hands, and will be published as soon as possible:—Dr. Wilks on Headache, Epilepsy, Chorea, Hysteria, and the Treatment of Nervous Diseases; Dr. Barnes on Operative Midwifery; Mr. Hutchinson on Skin Diseases; Dr. Powell on Pneumothorax in Phthisis; Dr. Moore on the Excretion of Urea; Dr. Symes Thompson's second Gresham Lecture; Dr. Beale on Germinal or Living Matter; Dr. Hingston on a New Infectious Febrile Disease; Dr. Radford on Craniotomy and the Cæsarian Section; Mr. Poland on Cartilage in the Knee-joint; Dr. Russell on Chorea. Also, Reviews of Ranke's Physiology of Man, Owen on the Mammalia, Agassiz on the Races of Man, etc., etc.

"*Medical College, Epsom.*"—The examinations in Arts, etc., at the Royal College of Surgeons were brought to a close on Thursday last week. We are told that, owing to the great number of candidates, the result cannot be known until at least a fortnight hence.

F. K.—You will find a short notice of the post-mortem examination of the Archbishop of Paris in vol. xviii. of the *Medical Times*, p. 182; it was conducted by Drs. Gueneau de Mussy and Vignolot.

R. R.—If your son should be successful in his preliminary examination in Arts, etc., he could commence his Professional studies at once, and thus save half a session. The Brighton Hospital is recognised. The result of the examination cannot be known until about the middle of January, owing to the great number of papers to be read.

WATER SUPPLY WITHOUT DRAINAGE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If M.C. were to visit Brighton, I suspect he would find what he seeks—*i.e.*, a town with artificial water supply, and no amount of drainage to match. I believe there are many streets—good ones, too—with artificial water supply, and cesspools for the water-closet sewage.

I am, &c. A. B.

EDWARDS THE ORNITHOLOGIST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your readers give me an account of Edwards, Librarian to the Royal College of Physicians, who published several illustrated volumes of ornithology, and dedicated one of them to God?

I am, &c. A. B. C.

COMMUNICATIONS have been received from—

Dr. J. G. WILSON; Dr. RADFORD; Mr. F. WRIGHT; Dr. J. C. GOODING; Dr. C. A. KINGSTON; Mr. THOMAS TROLLOPE; W. W.; Dr. WOODHOUSE; Mr. A. WRIGHT; A NON-COMBATANT; Dr. W. PRATT; Dr. JOHN JONES; Mr. J. HUTCHINSON; Mr. J. CHATTO; THE EDITORS OF THE "QUARTERLY JOURNAL OF MICROSCOPICAL SCIENCE."

BOOKS RECEIVED—

Soelberg Wells' Treatise on the Diseases of the Eye—Marylebone Parish Health Report—Letheby's Report on the Sanitary Inspection of Shipping—Archiv für Dermatologie und Syphilis—Pacific Medical and Surgical Journal, No. 18—Steggall's First Lines for Chemists and Druggists—Acland's Address to the Students of St. George's Hospital, October, 1868.

NEWSPAPERS RECEIVED—

Journal of the Irish Medical Association, No. 47—The Shadow, No. 14—Scientific Opinion, No. 7.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 19, 1868.

BIRTHS.

Births of Boys, 1093; Girls, 1113; Total, 2206.
Average of 10 corresponding weeks, 1858-67, 1896·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	789	769	1558
Average of the ten years 1858-67	709·5	697·1	1406·6
Average corrected to increased population..	..	..	1547
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,283	..	6	23	4	2	4	3	..
North ..	618,210	1	9	18	3	11	15	3	..
Central	378,058	..	5	13	3	..	7	1	..
East ..	571,153	..	4	30	3	5	20	1	..
South ..	773,175	4	9	16	4	12	15	3	..
Total ..	2,803,989	5	33	100	17	30	61	11	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·472 in.
Mean temperature	47·5
Highest point of thermometer	54·8
Lowest point of thermometer	36·7
Mean dew-point temperature	44·6
General direction of wind	Variable.
Whole amount of rain in the week	0·92

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 19, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Dec. 19.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Dec. 19.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2206	1441	1558	51·8	35·7	47·5	0·92	93
Bristol (City) .	167487	35·7	97	75	*75	..	..	..	..	..
Birmingham (Boro')	352296	45·0	272	171	162	..	..	..	..	..
Liverpool (Borough)	500676	98·0	420	290	260	..	..	..	..	..
Manchester (City) .	366335	81·8	235	208	*231	..	..	..	..	..
Salford (Borough) .	117162	22·7	108	59	65	..	..	..	..	..
Sheffield (Borough).	232362	10·2	177	122	105	..	..	..	..	..
Bradford (Borough)	108019	20 3	86	55	86	..	..	..	..	..
Leeds (Borough) .	236746	11·4	218	120	156	..	..	..	..	..
Hull (Borough) .	108269	34·4	79	50	56	..	..	..	..	..
Newcstl-on-Tyne, do.	127701	23·9	95	68	70	..	..	..	..	..
Edinburgh (City) .	177039	40·0	119	85	116	..	..	..	..	..
Glasgow (City) .	449868	88·9	338	262	278	..	..	..	..	..
Dublin (City and some suburbs) .	319985	32·8	160	157	132	..	..	..	..	..
Total of 14 large Towns . . .	6391080	34·9	4660	3163	3350 Week ending Dec. 12.	..	..	..	..	..
Vienna (City) . .	(1863) 560000	..	..	..	317	..	..	Week ending Dec. 12. 41·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·472 in. The highest barometrical reading during the week was 29·75 in. at noon on Thursday, Dec. 17, and the lowest was 29·15 in. at 9 p.m. on Tuesday, Dec. 15.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

December 26. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

28. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

29. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "On the Chemical Changes of Carbon" (Juvenile Lecture).

30. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m. Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

31. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "On the Chemical Changes of Carbon" (Juvenile Lecture).

January 1, 1869. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m. Central London Ophthalmic Hospital, 2 p.m.

ST. MARY'S HOSPITAL RADCLIFFE LIBRARY MANCHESTER

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LIST OF ERRATA.

Page 248, col. 1, line 16, *for* "Chaveau," *read* "Chauveau."
Page 275, col. 2, line 23, *for* "is the same defect," *read* "is speech."
Page 508, col. 1, line 11, *for* "Casturani," *read* "Castorani."
Page 551, col. 2, line 6, *for* "basis," *read* "hairs."

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